

The ORION

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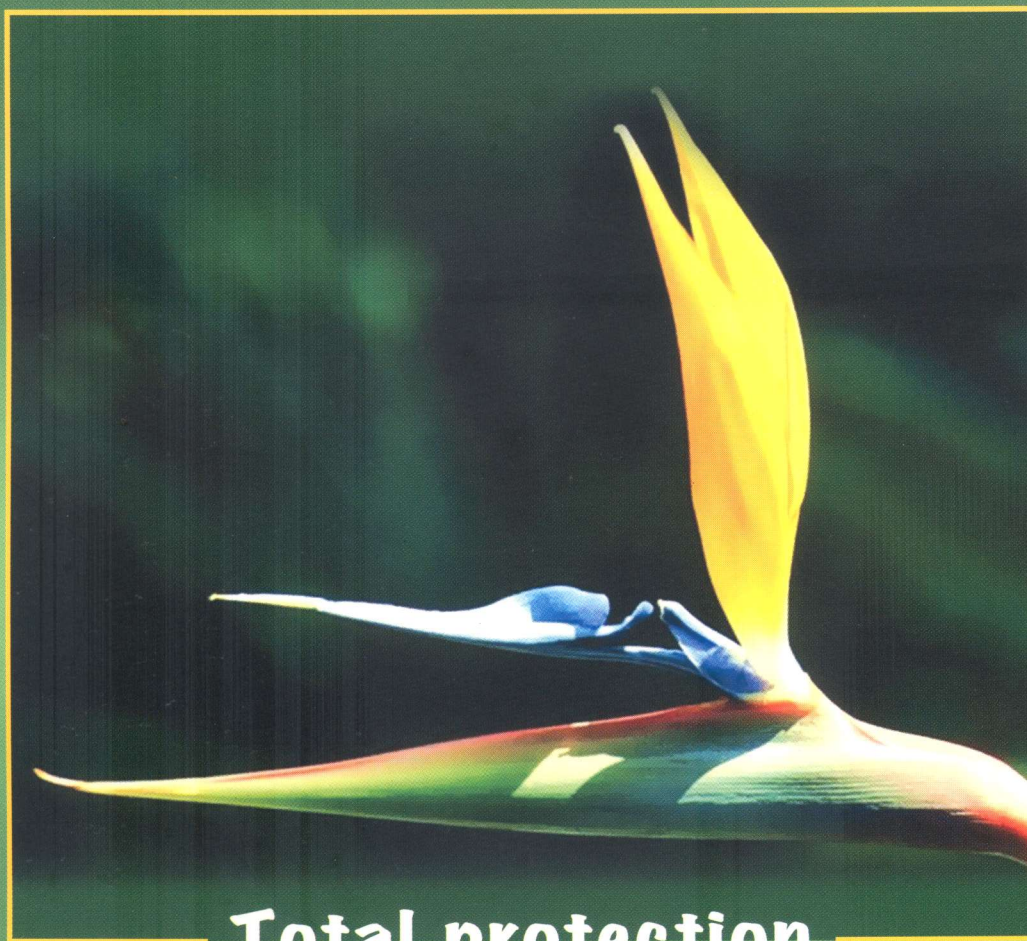


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Editor's Choice

The ORION, Coordination meeting

Superlative dominion of The ORION is expressing thankful regards to all The Advisory and The Review Board members for their active participation and valuable suggestions during coordination meeting. This coordination meeting demonstrates a new era for The ORION medical journal. The ORION salutes all its esteemed readers, valued authors and respective Advisory and Review Board members for their continuous support and endless contributions.

The editorial of this issue points out Mental Health that is an important health issue across the world as well as Bangladesh regarding its limitation of treatment facilities and further development in Bangladesh (P-226).

This issue is also highlighting valuable topics like retrospective study on 1232 infertile men and their semen quality is affected by smoking (P- 227).

A review article nicely sketches a thorough discussion on osteoporosis and osteoporotic fracture that are the silent killer of elderly people (P- 229). An urban study experiences the successful treatment by Laparoscopic Assisted Vaginal Hysterectomy (LAVH) of 40 cases at Lakshmipur District (P- 232).

An interesting case study is focusing the successful surgical treatment of Biliary Ascariasis (P-234). Another review article gives modern information on Enteric Fever (P- 236). An overview on Asthma and Cardiovascular problems flushes the cautionary treatment options for patients suffering from Asthma with Cardiovascular problems (P- 238).

Another review article reveals the brief discussion on renal replacement therapy in developing countries (P- 240). Another interesting article clearly demonstrates Intrauterine Fetal Death (IUD), which is often an unforeseen mishap in the community (P- 244).

A review article nicely points out the fruitful management of children with hymenopetra allergy (P- 246). Another mind-blowing review article elegantly documents the importance of the length of peritoneal catheter in VP Shunt surgery (P- 248).

The case report of this issue has an interesting observation on Lupus vulgaris with perforation of hard palate (P- 250).

The opinion and suggestion of the valued readers are always appreciated to make The ORION medical journal upgraded day by day.

May the Almighty bless all in the spirit of good health. The ORION wishes all a very happy and prosperous New Year, 2005.

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World mental health and Bangladesh perspective

Firoz AHM¹

The ORION 2005 ; 20 : 226

World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". So health care as a humanitarian activity, as a component of human rights protection and as an essential element of poverty alleviation must include mental health in its activity.

There are about 400 million people in the world suffering from neuro-psychiatric disorders and about 1 crore 50 lacs people in Bangladesh (about 10% of the population) are now suffering from mental illnesses. This vast number of people is in immediate needs of mental health treatment. But the facilities for mental health services is very much limited both at the government and private levels. There are about 700 beds in the government hospitals for mental patients and the number of psychiatrists in the country is about 85. This is almost impossible to provide mental health services to this large number of people of the country.

The modern concept of mental health treatment is not treating patients in long stay hospital like mental hospital, Pabna, but treating patients in short stay hospital like National Institute of Mental Health, Dhaka and other general hospitals of the country including all medical colleges. Community psychiatry is another milestone in the development of psychiatry around the globe. National Institute of Mental Health, Dhaka has been training general physicians, health workers, imams of mosques and community leaders for more than last two decades to provide mental health services at the community level of the country. Till now the institute has trained about 5000 health workers, 4000 general physicians, 50 civil surgeons and 200 imams of mosque on mental health. They are now providing mental health services to community people at the rural area. This training programme is an on going process with an aim of covering almost all health workers, physicians and imams working at thana level. In this way Bangladesh has been trying its best to develop mental health in the country keeping harmony with other parts the world.

Chaining and locking of mental patients are back dated concepts violating human rights of the people in general and producing no benefit in respect of modern medical management. In the recent time, Bangladesh has seen introduction of lot of psychotropic drugs in the market and these drugs are making tremendous contribution in the treatment of mental patients including treatment of violent patients. Pharmaceutical companies of the country are playing their parts in this respect.

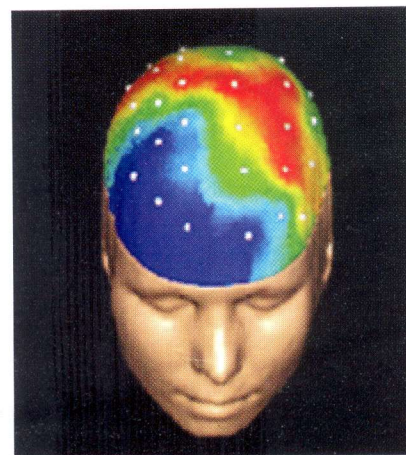
Mental illnesses are highly stigmatized around the globe and Bangladesh is the worst example of world scenario in this regard. Creating awareness regarding magnitude of mental illness and availability of the modern medical treatment is an urgent need of the time. National Institute of Mental Health, Sher-e-Bangla Nagar, Dhaka in collaboration with Bangladesh Association of Psychiatrists and National Forum for Psychiatrists are making tremendous efforts in this regard.

World Health Organization (WHO), as one of its 10 priorities, and Government of Bangladesh are also playing their parts in the development of mental health. With the collective efforts of professionals, media, NGO's, pharmaceutical companies, United Nations Organizations and government of the country mental health in Bangladesh will reach its desired goal in the coming time and this is the people's expectation.

Admissions to Mental Hospital rise by 30% over 10 years

London Zosia Kmietowicz Mental health services in the United Kingdom are in crisis, with more people than ever being detained in hospital under compulsory orders, says a report. Admissions to hospital under the Mental Health Act have risen by nearly 30% in the past decade in England, figures from the Department of Health show. According to a report from three national mental health charities, Rethink, Sane, and the Zito Trust, this figure is a sorrowful reflection of the current state of hospital care for people with psychiatric illness.

The report, *Behind Closed Doors*, says that despite 650 national strategies, guidelines, and frameworks issued by the government over the past five years, little progress has been made in the care of people with serious mental illnesses. Postcode prescribing continues to flourish throughout the United Kingdom, says the report, with many patients still failing to receive modern drugs despite rulings from the National Institute for Clinical Excellence in 2002 and 2003 that atypical antipsychotic drugs should be used as firstline drugs in the treatment of schizophrenia. Of the 20 000 or so people sectioned under the Mental Health Act each year, one in five are readmitted within three months of leaving hospital, confirming the so called "revolving door" of acute mental health care. Feedback from patients also suggests that their experiences were so negative that they would do anything to avoid being readmitted. In particular, they complained about the lack of basic necessities, privacy, dignity, and comfort and of being bored. They also said they were given inadequate information about their condition and excluded from the planning of their care. Paul Corry, head of policy and campaigns at the charity Rethink, blames the lack of effective community mental health services for the rise in section rates. As a result, vulnerable people are left untreated and unsupported.



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Semen quality is affected by smoking : A retrospective study of 1232 infertile men

Chowdhury TA¹, Mahmud N²

The ORION 2005 ; 20 : 227-228

Objective : To determine the affects of smoking on semen parameters such as motility and sperm count in infertile man.

Design : A retrospective observational study.

Setting : Centre for Assisted Reproduction, Dept. of OBGYN, BIRDEM Hospital.

Participants : 1232 male partner of couples were recruited from infertility clinic and of these the case comprised 395 male with history of smoking and who had no known cause of their infertility.

Introduction

Humans are exposed to many environmental agents that may be hazardous to their reproductive capacity. Male reproductive function is known to be highly sensitive to many chemicals and physical agents generated by industrial or agricultural activities^{2,5}. Many studies have reported an association between cigarette smoking and decrease in semen quality, most significantly for sperm concentration and motility^{4,7,8}. Since men who smoke directly inhale a host of toxic substances which can be absorbed, such as nicotine, carbon monoxide, benzo (a) pyrene, mutagenic pyrolysis derived compounds and cadmium, a casual relationship is highly suspected. In addition, it was reported that tobacco smoking, a source of reactive oxygen species, can increase the oxidative DNA damage in leukocytes.

Male reproductive function in the general population has attracted increasing attention due to reports suggesting that the occurrence of several biological problems affecting the male genital tract have increased during the last 50 years. These include an increased incidence of testicular cancer and some congenital anomalies, such as cryptorchidism or hypospadias, and an apparent decline of sperm production in the overall male population.

An obvious undesirable consequence of reproductive toxicants is infertility. Infertility is defined as inability to conceive after 1 year of unprotected intercourse, concerns -15% of couples in Western countries⁶. A male contributory factor is involved in approximately half of these cases. However, in a considerable proportion of men with semen anomalies, no medical or surgical factors are implicated, and the aetiology remains unclear. The involvement of environmental factors in male infertility and the suspected increased incidence of male related infertility induced by such agents are of great concern.

Toxic damage to the testes can result in many effects, namely, reduced sperm production, production of defective spermatozoa and impaired androgen production. In man the non-invasive method for assessing male fertility involves

semen analysis, measurement of reproductive hormones in the blood, and evaluation of previous success in impregnating a partner. We have observed the effect of smoking on semen characteristic and fertility patterns in men having their first infertility consultation in our center.

Materials and methods

Subjects

The study sample comprised of 1232 in numbers and out of them 395 were recruited in this study as they full fill the criteria of smoking. All male partners of couples who were undergoing initial screening for infertility OPD of Dept. of OBGYN BIRDEM Hospital was interviewed during the collection of semen sample. A questionnaire was prepared to elicit :

1. Occupational exposure to agents that are known to affect spermatogenesis
2. Alcoholic consumption
3. History of smoking
4. Past medical history.

History of smoking was classified into : non smoker (individual who never smoking a cigarette before), Ex smoker (individual who had quit for more than a year) Smoker (anyone who was currently smoking). Smoker were also asked how many years they had smoked and the average number of cigarettes smoked per day. Smokers were again classified into two categories light smoker those who smokes <10 sticks per day and heavy smoker those who smokes > 10 sticks per day. None gave a history of taking any hallucinating drug.

Of total 1232 man 395 were included in the study having fulfilled the following criteria.

1. Absence of factor which could possible influence male infertility (defined by WHO task Force in the Diagnosis and treatment of Infertility) included a history of diabetes mellitus, long term medication , urinary tract infection, sexually transmitted diseases and testicular injury.
2. No chemically detected abnormality: none of the men had small testis;
3. None had either testicular volume <10 on varicoceles
4. More than one year of failed altars at conception.

Semen collection and analysis

The man were asked to collect their semen in the morning by masturbation into a sterile wide mouth plastic container, after 3-days of abstinence. Time of ejaculation, abstinence period, spillage(if any) and fever during the last three months were recorded. All semen samples were processed and analyzed by an experienced laboratory assistant of CARE (Centre for Assisted Reproduction, BIRDEM) within one hour of receiving samples. Volume, total sperm count, proportion of progressively motile sperm and proportion of normal and abnormal sperms form were examined according to WHO guidelines for the examination of human semen. At least 100 sperm were assessed for each parameter. In routine motility assessments, sperm from a minimum of five fields were enumerated and classified into rapid linear, slow linear, non progressive and immotile sperm.

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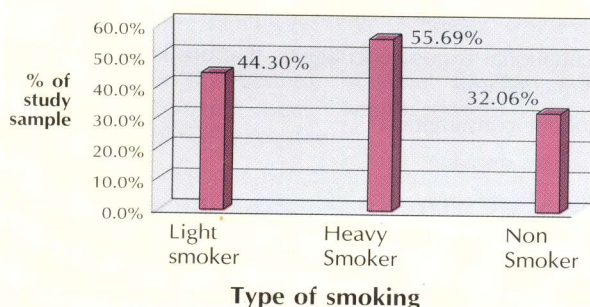
Results

1232 patients attending the Infertility out patient department of BIRDEM Hospital were given the questionnaire and 395 patient fulfilled the criteria. Among them 50.6% patients were suffering from Primary sub fertility and 49.3% suffers from Secondary subfertility. Age ranges 30yrs to 38yrs average 34 yrs.

Patient profile

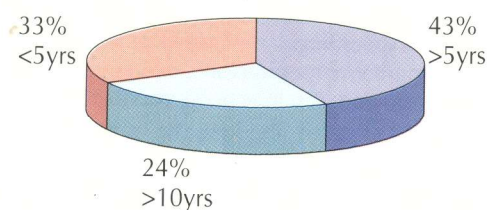
Total number of patients	1232
Number of patient included for the study	395 (32.06%)
H/O Primary Sub fertility	200 (50.6%)
H/O Secondary Sub fertility	195 (49.36%)
Age of the years	34.4 (+/- 5)

Smoking Habit



44.3% patient having history of light smoking and 55.6% with history of heavy smoking. 32% doesn't give any history of smoking. 33% gives history of smoking <5yrs duration and 43% patient gives history of smoking > 5 yrs duration. About 24% patient having history of smoking > 10 yrs.

Duration of Smoking



Comparing the semen results of the study group with WHO norms 21.5% showed sperm concentration <20 M/ml which defines as Oligospermic. Total motility including all the varieties of motility grading, 22.1% showed <40% total motility

WHO norms for semen sample

Parameter	WHO norms	Parameter seen in Study Group	N = %
Total Sperm Conc. $\times 10^6$ M/ml	$>20 \times 10^6$ M/ml	$<20 \times 10^6$ M/ml	85 (21.5%)
Motility % (total)	$>50\%$	$<40\%$ $<20\%$	115 (22.1%) 90 (22.7%)
Rapid linear motility (A) %	$>25\%$	0%-10% 11%-20%	130 (32.9%) 90 (22.7%)

WHO norms for semen sample

Parameter	WHO Norms
Appearance	Gray opalescent
Liquefaction	<60 min R T
Consistency	Low viscosity
Volume	>2.0 ml
PH	7.2-7.4
Concentration ($\times 10^6$ /ml)	$>20 \times 10^6$ /ml
Motility (%)	$>50\%$ (A) + (B) or, 25% (A)
Viability (% live)	$>75\%$
Morphology (Normal forms %)	$>30\%$
WBC's ($\times 10^6$ /ml)	$>1 \times 10^6$
Agglutination	none

and 22.7% showed total motility <20%. Most remarkable observation of this study group is Rapid linear motility is grossly affected. 32.9% patient showed rapid linear motility between (00% to 10%), which is very low, compare to WHO norms. 22.7% showed rapid linear motility between (11%-20%).

Discussion

To our knowledge this is the first study regarding male infertility and effect of smoking in Bangladeshi population. The present study was based on a sufficiently large group of men (n=1235) with infertility. The findings are more likely to be an accurate reflection of sperm parameters and fertility. Ideally, it would have been better to obtain the men's semen as soon as their wives became pregnant as control group, but this would be very difficult to do logistically. Thus it would be difficult to evaluate the effect of smoking on semen sample of fertile men.

There are other limitation inherent in this study. As the interview were not performed blindly, a related bias can not be rolled out. The cases may try to hide the fact that they were smokers and as drunker. It is clear that the cases had poorer semen parameter using the WHO criteria. Seminal analysis result proved the basis to conclude that the cases were indeed infertile. Smoking was found to be a significant risk factor for infertility.

We have seen from our observation that sperm concentration is not very much affected by smoker but the quality of sperm i.e. sperm motility specially rapid linear movement of sperm is grossly affected by smoking and that is in terms influence a fertility status. This downward shift in the distribution of sperm motility any smokers is probably most significant with respect to the potential for reduced fertility than that of non smoker.

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Osteoporosis and osteoporotic fracture: A silent enemy of elderly people

Islam MS¹

The ORION 2005 ; 20 : 229-231

Introduction

As our life expectancy is increasing we are burdened with many health problems. Most of them are preventable, controllable and treatable. Osteoporosis, diabetes, heart disease, cancer and senile dementia are major well-published chronic diseases of aging that afflict us in our later years. Osteoporosis, among the above-mentioned diseases is often called "silent disease" as it is usually a painless disease until a bone fractures, a common eventual result. Fracture is the expression of the underlying symptomless deterioration of the skeletal structures. Osteoporotic fractures occur especially in the hip, spine and wrist, although any bone can be affected.

Definition

Osteoporosis: "a systemic disease characterized by low bone mass and micro-architectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture". (Consensus Development Conference, Am J Med 1993.) Hence osteoporosis represents as a complex multi-factorial circumstance, comprising several important determinants, mainly bone mass and the degree of trauma the skeletal structure has sustained. When the fracture has occurred this becomes a major health problem. It should be noted that, until 1980's one was not considered to have osteoporosis until fracture occurred!

Prevalence

Osteoporosis is a major public health threat for an estimated 44 million Americans, or 55 percent of the people 50 years of age and older. In the U.S. today, 10 million individuals are estimated to already have the disease and almost 34 million more are estimated to have low bone mass, placing them at increased risk for osteoporosis. Of the 10 million Americans estimated to have osteoporosis, eight million are women and 2 million are men. One in two women and one in four men over age 50 will have an osteoporosis-related fracture in her/his remaining lifetime. According to the World Health Organization, the prevalence of osteoporosis among US white women past menopause is estimated to be 14% in those aged 50-59 years, 22% in those aged 60-69 years, 39% in those aged 70-79 years, and 70% in those aged 80 years and older. Significant risk has been reported in people of all ethnic backgrounds. White and Asian racial groups, however, are at a greater risk. Osteoporosis is considered a woman's disease, but the prevalence in men also increases exponentially with age.

Type

They are basically of two types:

Primary osteoporosis:

The following are the types of primary osteoporosis

- Type I (postmenopausal)-Caused by deficiency of the female hormone, oestrogen.
- Type II (senile or age-related)
- Idiopathic (no specific cause identified)- This affects people in the younger age groups ie less than 50 years.

Secondary osteoporosis:

The secondary osteoporosis is connected with the following factors:

- Hormonal or endocrine. This includes overactive thyroid, underproduction of the sex hormones and excessive natural production of steroids.
- Digestive, or gastrointestinal. This includes: malabsorption eg sensitivity to gluten (Coeliac Disease), operations which lead to faster transit of food through the digestive system, liver disease
- Arthritis and joint disease
- Malignant disease
- Certain medications eg steroids

Risk factors

Certain factors are linked to the development of osteoporosis or may contribute to an individual's likelihood of developing the disease. Many people with osteoporosis have several of these risk factors, but others who develop osteoporosis might have no identifiable risk factors. Among the risk factors some are preventable and some unavoidable.

Risk factors that are far-off from our control

- Gender-probability osteoporosis are greater in a woman. Women have less bone tissue and lose bone more rapidly than men because of the changes involved in menopause, which is associated with hormonal change. Women can lose up to 20 percent of their bone mass in the five to seven years following menopause, making them more susceptible to osteoporosis.
- Age-the older the person is, the greater is the risk of osteoporosis. Bones become less dense and weaker with advance in age. Personal history of fracture after age 50, indicates that the person has low bone mass.
- Body size-Small, thin-boned women are at greater risk.
- Family history-Susceptibility to fracture may be, in part, hereditary. People whose parents have a history of fractures also seem to have reduced bone mass and may be at risk for fractures. History of fracture in a 1st relative increases the chance of osteoporotic fracture
- Ethnicity-Caucasian and Asian women are at highest risk. African-American and Latino women have a lower but significant risk.
- Hereditary skeletal diseases- osteogenesis imperfecta, rickets, hypophosphatasia

Risk factors which are avertable or controllable

- Sex hormones: abnormal absence of menstrual periods (amenorrhea), low estrogen level (menopause especially early or surgically induced), and low testosterone level in men.
- An inactive lifestyle or extended bed rest
- Under weight-Weight below healthy range
- Dietary habit
 - Low calcium intake and vitamin D.
- Personal habit
 - Current cigarette smoking
 - Excessive use of alcohol

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- Drug & medications : Corticosteroids, dilantin, gonadotropin releasing hormone agonists, loop diuretics, methotrexate, thyroid, heparin, cyclosporin, depotmedroxyprogesterone acetate
- Presence of certain chronic medical conditions
 - Endocrine and metabolic : hypogonadism, hyperparathyroidism, hyperthyroidism, Cushing syndrome, acidosis, Gaucher's disease, hypercalciuria
 - Anorexia, malabsorption.
 - Marrow diseases: myeloma, mastocytosis, thalassemia
 - Renal insufficiency
 - Hepatic disease
 - Systemic Lupus
 - Cystic fibrosis
 - Spinal cord injury
 - Depression

Fractures

Osteoporosis is often called the "silent disease" because bone loss occurs without symptoms. People may not know that they have osteoporosis until their bones become so weak that a sudden strain, bump or fall causes a fracture or a vertebra to collapse. The most typical sites of fractures related to osteoporosis are the hip, spine, wrist and ribs, although the disease can affect any bone in the body. One in two women and one in four men over age 50 will have an osteoporosis-related fracture in their remaining lifetime. Osteoporosis is responsible for more than 1.5 million fractures annually, including in USA:

- Over 300,000 hip fractures; and approximately
- 700,000 vertebral fractures;
- 250,000 wrist fractures; and
- 300,000 fractures at other sites

Unfortunately there is no such statistics in our country.

Hip fractures

Hip fractures are a major cause of loss of independence in older women and men. Many are discharged into nursing homes instead of back to their previous living situation. The rate of hip fractures is two to three times higher in women than men⁶; however the one year mortality following a hip fracture is nearly twice as high for men as for women. A woman's risk of hip fracture is equal to her combined risk of breast, uterine and ovarian cancer. However, many of the patients who break their hip were frail and would be expected to have a high mortality rate anyway. It is estimated that 14% of deaths following a hip or pelvic fracture in previously ambulatory women were caused or hastened by the fracture. The rise in hip fracture rate occurs about 10 years earlier in women than in men. By the age of 90, about 17% of males have had a hip fracture, compared to 32% of females. Men have a shorter life span than women, so they account for only 21% of all hip fractures.

Overall about half of hip fractures are intertrochanteric and the others are femoral neck fractures. In older women the proportion of trochanteric fractures increases. Trochanteric fractures, but not femoral neck fractures, are related to bone density. Femoral neck fractures, on the other hand, may be more related to mechanical factors. The vast majority of hip fractures occur after a fall. About 5% appear to be "spontaneous" fractures, in which the patient feels a fracture and then falls.

Vertebral fracture

Vertebral fracture prevalence in men is close to that in women.

A European study showed a higher incidence in the younger men, raising the possibility that some of the fractures were not related to osteoporosis, but to trauma sustained during their working life. Collapsed vertebrae may initially be felt or seen in the form of severe back pain, loss of height, or spinal deformities such as kyphosis or stooped posture.

Vertebral compression fractures vary in degree from mild wedges to complete compression. The symptoms also vary, but the degree of compression is not necessarily related to the amount of pain. In fact, about 60% of women with compression fractures do not realize they have had a fracture! It is possible that some of the fractures occurred gradually and therefore did not cause acute pain.

When women and men do suffer painful compression fractures, the pain usually lasts from one to two months, is localized to the back with accompanying muscle spasms, then gradually subsides. Patients with continuing severe pain should be evaluated for other pathologic etiologies of the fracture, especially malignancy or myeloma. Persistent pain can also be caused by continuing fracture, muscle spasms, spinal stenosis, or degenerative joint disease.

Wrist fractures

Wrist fractures are more common in women who are 50 to 60 years old. Falls or other trauma causes these fractures, the commonest is the colles' fracture. Osteoporosis does not appear to impair the healing of the wrist fractures, and they cause only short-term disability and pain. Although spine, hip, and wrist fractures are considered classical osteoporotic fractures, many others are related to bone density and thus are also osteoporotic. These include rib, pelvic and shoulder fractures, but not finger, facial bone, skull, elbow, or ankle fractures.

Symptom

Osteoporosis is often called the "silent disease" because bone loss occurs without symptoms. Patients with decreased bone density usually have no specific abnormal physical findings. People may not know that they have osteoporosis until their bones become so weak that a sudden strain, bump or fall causes a fracture or a vertebra to collapse. Collapsed vertebrae may initially be felt or seen in the form of severe back pain, loss of height, or spinal deformities such as kyphosis or stooped posture. Those with vertebral compression fractures will have kyphosis, protruding abdomen and height loss. Back tenderness is usually only present after an acute fracture. Gait speed and grip strength are often reduced in patients who have or are about to have a hip fracture. Visual acuity should be checked in geriatric patients because it is a risk factor for fall. Secondary causes of osteoporosis may be associated with physical findings, such as nodular thyroid, hepatic enlargement, cushingoid features, skin rashes, jaundice, abnormal dentition, and findings of hypogonadism.

Investigations

- Radiographic findings of the affected part
- Bone densitometry
- Biochemical markers

-CBC	-Serum calcium
-24hr urine calcium	-Serum phosphate
-BUN	-Creatinine
-Magnesium	-Alkaline phosphatase
- Secondary osteoporosis-special test for suspected diseases like thyroid function test for thyroid disease.

Differential diagnosis

Not all fractures are osteoporotic. The differential diagnosis of fractures includes:

- Trauma
- Pathologic fracture from neoplasm
- Osteomalacia
- Paget's disease
- Infections (such as tuberculosis)
- Fibrous dysplasia
- Peripheral neuropathy
- "March" fractures from repetitive stress

Treatment

Although there is no cure for osteoporosis, the following medications are approved by the FDA for postmenopausal women to prevent and/or treat osteoporosis:

1. Bisphosphonates
 - Alendronate
 - Risedronate
2. Calcitonin
3. Estrogen/Hormone Therapy
 - Estrogens
 - Estrogens and Progestins
4. Parathyroid Hormone
 - Teriparatide
5. Selective Estrogen Receptor Modulators (SERMs)
 - Raloxifene

Alendronate is approved as a treatment for osteoporosis in men and is approved for treatment of glucocorticoid (steroid)-induced osteoporosis in men and women.

Risedronate is approved for prevention and treatment of glucocorticoid-induced osteoporosis in men and women.

Parathyroid hormone is approved for the treatment of osteoporosis in men who are at high risk of fracture.

Treatments under investigation include sodium fluoride, vitamin D metabolites, and other bisphosphonates and selective estrogen receptor modulators.

Fracture management

It is very difficult to manage a case of osteoporosis complicated by fracture. Because of the implants are very hard to fix on the osteoporotic bone and added risk of pre, par and postoperative complication and hazard anesthesia in old age.

Hip fracture

The Hip fractures are associated with fall. The best way is prevention.

The risk factors for falls include:

- Use of sedatives
- Previous fall
- Cognitive impairment
- Visual impairment
- Lower-extremity disability
- Foot problems
- Gait abnormalities

At home, elderly or frail people should

- Keep bathroom lights on
- Install grab bars
- Avoid loose rugs, wet floors
- Remove clutter
- Keep wires behind furniture

Recent studies have shown that paying attention to these details significantly reduces the incidence of fall. In addition, gait training or balance training, along with muscle strengthening, to fall on their greater trochanter, which increases the risk of a

fracture by about 6 times compared to falls in other directions. All hip fractures are fixed according to the nature of the fracture necessitates and early mobilization is advised to prevent further osteoporosis and postoperative hazard.

Vertebral fracture

In Osteoporosis bones become weak and easily broken. Osteoporotic fractures can result from a fall, the lifting of a heavy object, or a sudden twisting motion. Sometimes an activity which is not considered stressful or dangerous, such as bending over to pick up a newspaper, sneezing, turning a key in a lock, or receiving an affectionate hug can result in a fractured vertebra, a broken wrist, or cracked rib. These fracture are managed conservatively by analgesics, rest and physiotherapy.

Wrist fracture

The fracture is treated according to the nature of fracture encountered. The fracture usually heals without problem. If left untreated may lead to temporary disability. Early mobilization is the mainstay of treatment because it prevents further osteoporosis.

One should remember prevention is always better than cure no matter how advance the mode of treatment is.

Prevention

Five Steps to Bone Health and Osteoporosis Prevention dictated national osteoporosis foundation USA:

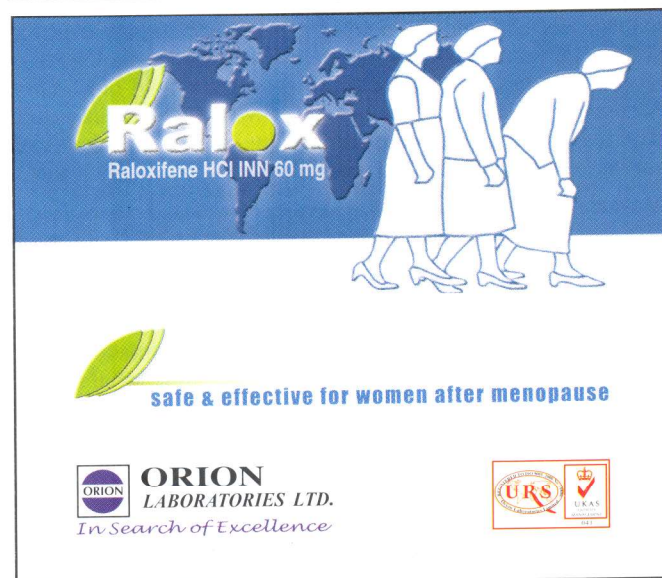
- Get your daily recommended amounts of calcium and vitamin D
- Engage in regular weight-bearing exercise
- Avoid smoking and excessive alcohol
- Talk to your doctor about bone health
- Have a bone density test and take medication when appropriate

Conclusion

Osteoporosis is salient disease. It is not usually unmasked till it is complicated by a fracture. We should develop a national consensus so that this preventable lethal problem can be addressed before it does us any harm.

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Laparoscopic Assisted Vaginal Hysterectomy (LAVH): An urban study

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Abstract

Laparoscopic Assisted Vaginal Hysterectomy (LAVH) begins since 1989. This is a prospective study carried out at City Hospital (Pvt) Ltd. at Lakshmipur district during February 2004 to September 2004 in which 40 patients were selected randomly. Amongst them 20 cases had enlarged uterus with myomata (fibroid uterus) up to 14 weeks size, 10 cases had dysfunctional uterine bleeding, 5 cases had pelvic inflammatory disease, 5 cases had endometriosis.

They were followed up for 6 months and no patient lost during follow up period. Unintended laparotomy (2.5%) done in one case and bladder repaired (2.5%) done in one case. 95% had good postoperative recovery. Though the operation time was longer but the recovery is quick and patients leave the hospital 48-72 hours after operation with satisfactory condition.

Introduction

Then use of laparoscopic hysterectomy has recently been reported as an alternative to traditional abdominal hysterectomy and the utilization of miniendoscopic technique has also been recorded¹. Nevertheless, it has been founded in the UK that >80% of hysterectomies are still performed using the classical abdominal route^{2,3}. Moreover, even in majority of hysterectomies, especially if adnexectomy is associated are also performed abdominally^{4,5}.

The first laparoscopic hysterectomy was performed and published in 1989⁶ but it was only from 1991 onward that this surgical method of removing the uterus began to be used^{7,8,9}. However, since 1989 the new option of laparoscopic hysterectomy has raised questions about the most suitable type of approach^{10,11,12,13}. The advantage of the laparoscopic hysterectomy approach has been mainly associated with a short hospital stay and a quick convalescence^{14,15}. There are, however some concern related to the costs and morbidity of the approach. Laparoscopic hysterectomy took longer time to perform and required welltrained experienced surgeon¹⁶.

The advent of diagnostic and operative endoscopy has dramatically changed the field of gynecologic surgery over the last several years¹⁷. The revolution of fibre optic technology over recent years has allowed rapid progress in the field of Minimal Access Surgery (MAS). The benefit of MAS includes improved cost effectiveness, decreased morbidity, shorter hospital stay, earlier return to work and possible better cosmetic result¹⁸.

Materials and methods

This is a prospective randomized study carried out from February 2004 to September 2004 at City Hospital (pvt.) Ltd. Lakshmipur. It includes 40 cases of laparoscopically (LAVH). The criteria for choosing laparoscopically assisted vaginal hysterectomy included enlarged uterus with myomata (Fibroid Uterus) up to 14 weeks size in 20 cases, dysfunctional uterine bleeding in 05 cases, pelvic inflammatory diseases in 05 cases and endometriosis in 05 cases. Table1 shows the indication and number of patient underwent LAVH.

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Indication	No. of Pts.	Grand total
Fibroid uterus	20	40
Dysfunctional uterine bleeding	10	
Pelvic inflammatory disease	05	
Endometriosis	05	

Table 1. Indication and number of patient in LAVH

Fibroid uterus more than 14 weeks size, cardiac and respiratory diseases were excluded from the study. All the laparoscopic hysterectomy were done by the same team of two surgeons (GSK, BG.) Patient had given their informed consent to undergo either LAVH or vaginal hysterectomy or unintended laparotomy. Bowel preparation was taken for 3 days prior to surgery. Patients were nothing by mouth for 8 hours before operation. Antibiotic Ceftriaxone (1 gm. Vertex, Orion) was given intravenously before induction of anaesthesia and another dose 12 hours after the 1st dose. The patient was placed in the lithotomy position with her legs open at 60 degree under general anaesthesia with endotracheal intubation. The bladder was emptied during the operation by metallic catheter. After carbon dioxide pneumoperitoneum was created by Veress needle a 10 mm trocher was placed umbilical port to introduce the laparoscope and the camera. Two ancillary 5mm trochers were also placed suprapubically and laterally. After an accurate pelvic and abdominal inspection, lysis of any adhesions were performed. The uterus was then mobilized by uterine manipulator making the various anatomical planes were more accesible. Particular attention was given to the course of the ureter in its pelvic zone. After bipolar coagulation, the round ligament was sectioned at 3 cm from the uterus, in order to prevent bleeding from the ascending uterine vessels. The areolar tissues of the broad ligament were then dissected and its posterior fold fenestrated at an avascular area above the uterine vessels. This manoeuvre permitted a better mobilization and identification of the infundibulo-pelvic ligaments, whose vessels were coagulated and cut using bipolar forceps and scissor under direct visualization of the pelvic ureter. Once the uterine ligaments were sectioned, the operation continued centrally in a downward direction. If, however, the adnexae were not to be removed, the utero-ovarian ligament was coagulated and sectioned proximal to the ovaries. Thereafter the vesico-uterine peritoneal fold was opened by scissor and a bladder dissection from the lower uterine segment down to the upper part of the vagina was performed; during this step, the location of the right cleavage plane was crucial to avoid any bladder injury. The utero-sacral ligaments were then coagulated and sectioned, thus favouring laterlization of the uterus. With the help of monopolar diathermy circular colpotomy was done to open both the anterior and posterior pouches.

Then the cardinal ligments and uterine vessels were clamped, sectioned and ligated from below and the uterus was removed through the vagina as shown in Fig:1. The vault was closed from below with Dexon no.1 suture. Finally, again the camera was introduced into the pelvis, performed pelvic irrigation and suction, thus removing blood clots and ensured haemostasis.

The beginning of the operation was calculated at the moment of the umbilical incision and introduction of laparoscopic camera and cutaneous suture was considered the end of the operation. One patient had bladder injury, which was repaired vaginally, and an indwelling catheter was left for 2 weeks. Unintended laparotomy done in one patient due to slipping of ligature of the uterine vessel.

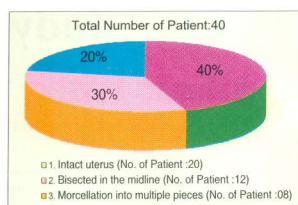


Fig. 1. Number and Method of removal of uterus

Patients were given liquid diet 6-8 hours after and semi-solid diet 12-16 hours after operation. All patients were given normal diet 24 hours after operation. Injection Ceftriaxon (1gm Vertex, Orion) IV was given just before operation and 1gm IV, 12 hours after the initial dose. Then switched over to oral cephalosporin for 5-7 days only. After completion of operation only 1-2 litres of fluid (Dextrosol/Dextropac, Orion) was given IV. Pain killer ketorolac 30 mg IV given 8 hourly for 2 days. Patients were discharged from hospital 48 to 72 hours after operation.

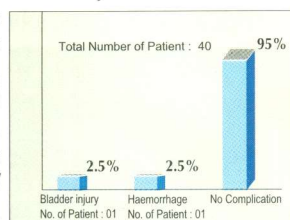


Fig. 2. Complication following LAVH.

No patient required per operative and postoperative blood transfusion. Patients were assessed at an interval of 4 weeks, 3 months and 6 months after operation shown in table II.

Time interval	Number of Patient (n=40)
4 weeks	40
3 weeks	40
6 weeks	40

Table II. Follow up of the patient following LAVH.

Most patients were able to resume normal activities between 10 and 21 days after surgery.

Results

The hospital stay and convalescence period (time from operation to day when the patient returns to daily work) was the shortest in laparoscopic hysterectomy. Patients return home 48 to 72 hours after operation. For the first 15 cases time employed for LAVH was 120 minutes and last 25 cases it was 70 minutes. Average time required for LAVH was 81 minutes. No patient required post-operative blood transfusion and average intra-operative blood loss was significantly lower in LAVH. One patient (2.5%) developed bladder injury which was repaired vaginally keeping an indwelling Foley's catheter for 2 weeks and patient recovered fully. Unintended laparotomy was done in one (2.5%) patient due to ligature slipping of uterine vessels. No patient developed bowel or ureteric injury. Patients underwent LAVH had less intensive postoperative pain, analgesic ketorolac given for 48 hours only. Quality of life including physical, mental and sexual activity at six weeks interval was significantly better. There were little or no scar, rare chance of incisional hernia. There were no wound infection, wound dehiscence and burst abdomen were observed in this series.

Discussion

LAVH is a very recent technique in our country. It may be converted to vaginal or abdominal hysterectomy in presence of complication. It is more safe as that of conventional operation, in a hand of an experienced surgeon.

The duration of LAVH was significantly longer than that of abdominal hysterectomy, for the first 15 operations it required 120 mins to complete each operation which decreased to 70 mins for each of the last 25 cases.

Advantages of the patient underwent LAVH is avoiding laparotomy incision. Hospital stay in LAVH is short only 48 hours to 72 hours. Post-operative pain is less; it required analgesic for 48 hours only. Early ambulation prevents post-operative thrombo-embolism. Most of the patient resume normal activities between 10 and 21 days after surgery. There is early convalescence and negligible post-operative febrile morbidity. Post-operative shock and discomfort is very negligible. Often the patient scarcely knows she has an operation. Blood loss minimal and no patient required post-operative blood transfusion. Ofcourse cost remains a problem, the instrument is costly and need special training and experienced surgeon. It is technically difficult, requires extensive technology and is time consuming. One patient (2.5%) developed bladder injury which was repaired and one patient (2.5%) required unintended laparotomy was a major complication. The good post-operative recovery in 95% of the patients was encouraging.

Conclusion

With laparoscopically assisted vaginal hysterectomy patient had less pain, shorter hospital stay quicker recovery, improved quality of life and the incidence of complications were also low. Two major complications were found but in our opinion it is possible to avoid major complications by paying particular attention to the surgical details.

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Biliary Ascariasis: A case study

Sharfuzzaman A M S M¹, Rahman MM²

The ORION 2005 ; 20 : 234-235

Introduction

The roundworm *Ascaris Lumbricoides* is an extremely common parasites of human gut. It has been estimated that more than 1 billion people are infected and that it causes around 60000 deaths per annum. It thrives under conditions of poor sanitation, especially in the tropics, where warm, humid soil facilitates embryonation of the eggs in the environment¹.

Bangladesh is one of the underdeveloped countries of the world lying in subtropic zone. The standard of living of the majority of the people of Bangladesh is low. The knowledge of sanitation and awareness of disease and consequences are minimum. A lion share of the people living in the villages depends on agriculture as mean of earning. In addition, environmental factor and lack of basic sanitation favors the growth of parasites mainly *Ascaris Lumbricoides* all over the country, which causes significant health problems in our country .

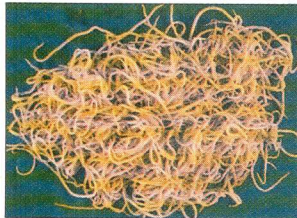


Fig:1 *Ascaris Lumbricoides*

Intestinal ascariasis is very common condition in our country. Adult intestinal worm commonly cause abdominal discomfort or colic and may vomited or passed per rectum. A tangled mass of worms may cause intestinal obstruction and in case heavy infestation, it contributes to malnutrition².

Migration of one or two worms into the biliary tree is a well known complication of intestinal ascariasis giving rise to upper abdominal colic, nausea, vomiting and rarely jaundice but massive infestation may rarely occur. In both cases if not promptly and effectively treated some secondary complications like cholecystitis, cholangitis, liver abscess, primary duct stone, pancreatitis, benign bile duct stricture or even cholangiocarcinoma may developed^{1,3,4,5}.

Pathogenesis

Migration of an adult ascaris through the sphincter of oddi in the common bile duct leads to biliary ascariasis. The invading worm carry some enteric flora into bile duct causing cholangitis. Several worms may block the cystic duct causing biliary colic or acalculus cholecystitis. Liver abscess occurs when intra hepatic ducts are blocked.

Precipitating factors⁶

- Drugs
- Anaesthetic agents
- Anthelmintic
- Fever
- Spicy foods
- Previous Sphincterotomy

Clinical features

- Symptoms variable
- Recurrent right hypo -chondriac pain
- Nausea
- Low grade fever
- Bilious vomiting
- Jaundice
- Palpable GB
- Liver enlarged tender with intracostal tenderness

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Investigations

- Blood count-Marked leucocytosis
- Serum bilirubin - may be raised
- Alkaline Phosphatase
- USG of hepatobiliary system and pancreas:
 - Dilatation of the CBD (Common Bile duct)
 - Bulls eye configuration-in cross section
 - Spaghetti sign-in longitudinal section (an echogenic strip with a anechogenic tube) several worms imaged at a time.



CT Scan

- Worms in the dilated CBD.
- Liver abscess

ERCP (Endoscopic Retrograde Cholangio Pancreatography)

Diagnostic

- Worm can be seen entering or leaving the ampulla of Vater
- Bile sample can be obtained for ascaris egg and C/S for bacteria

Therapeutic

- Extraction of the worm through ampulla of Vater

Fate

- Spontaneous return to duodenum
- Female laying eggs and dies
- Nidus for gall stone
- Secondary bacterial infection-cholangitis
- Liver abscess

Management

Conservative management

- NPO (Nothing per oral)
- N/G suction (Nasogastric suction)
- I/V fluids
- Anti spasmodic
- Antibiotics

After acute attack subsided a course of antihelminthic drugs should be given.

If fail or recurrent attack

- ERCP extraction

Rarely

- ERCP fail, then Exploration of bile duct should be done

In case of bile duct stricture

- Bilio-enteric anastomosis should be done.

Prophylaxis

The measures consists of :

- Proper disposal of human faeces
- Treatment of parasitised individuals and
- Education of children in school on sanitary laws and hygiene

StudyColumbian study⁶

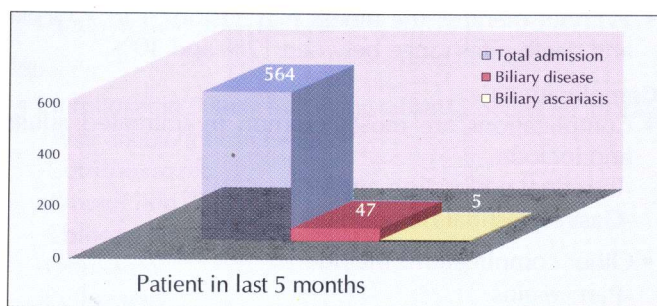
- 19 children under the age of 12 yrs.
- Majority respond to non operative treatment

A recent cohort study⁶

- 500 Indian patient from Kashmir
- Mean age - 35 yrs.
- Mean duration - 6 yrs.
- Biliary colic in - 280 patients
- Cholecystitis - 64
- Cholangitis - 121
- Liver abscess - 4
- Others -

Study in last 5 months in SU-III of SSMC, Mitford Hospital

- Total admission - 564 patients
- Biliary disease - 47 patients
- Biliary ascariasis - 5 patients
- 3 conservative
- 2 operative

**Case report**

A 30 years old lady Mrs. Bibi Saira having three child nonhypertensive, nondiabetic, nonsmoker, housewife of low socio-economic group hailing from Keranigonj, Dhaka was admitted in this hospital in surgery department on 19.06.03 with the complaints of-

- Recurrent upper abdominal pain for the last seven months which was severe and colicky in nature, radiates to back and right shoulder. Pain increases after taking fatty food and relieves by antispasmodics.
- Pain was associated with fever which was high grade, intermittent with chills and rigor.
- Patient also complains vomiting during the attack of pain which sometimes relieves the pain.
- She also noticed jaundice which was intermittent.
- Her menstrual cycle was normal and on OCP (Oral Contraceptive Pill). All of her family members are in good health.

On examination

- Patient found -Moderately icteric and anaemic, her pulse rate was 100 beats/minute, Blood pressure was 120/80 mm of Hg, Temperature was 100°F.
- All other vital parameters were within normal limit

Investigations

- Total Count: 11,600/eu mm of blood
- D/C:

-Neutrophil	64%	-Monocyte	02%
-Lymphocyte	24%	-Eosinophil	10%
		-Basophil	0%

- Serum bilirubin 3.8mg/dl
- Serum amylase 845u/l
- Serum alkaline phosphatase 400u/l

Prothombin time-

- Control 12sec
- Patient 14sec
- Blood sugar [random] 6.2 mmol/lit
- S.creatinine 1.2 mg/dl
- CXR (Chest X-ray) normal study

Conservative management given by

- NPO
- N/G suction
- I/V fluids
- Antispasmodics
- Antibiotics

Operation

On 1.07.03 Cholecystectomy and exploration of bile duct done -multiple live and dead worms with stone found within CBD. After removal of the stones and worms normal saline irrigation was given and abdomen closed after keeping a T-tube in CBD.

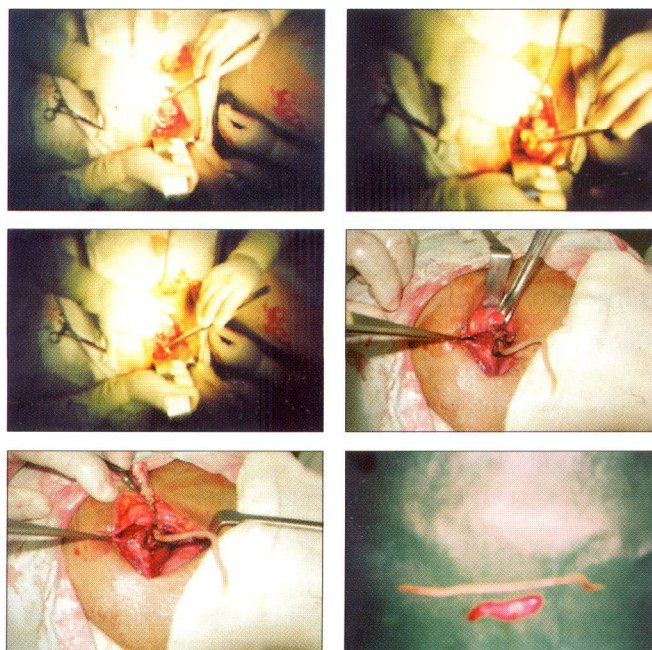


Fig: 2 Cholecystectomy and exploration of bile duct

Post operative

T-tube cholangiogram shows few small radioluscent shadow-? calculus seen in lower part of CBD. Normal saline irrigation given through T-tube T-tube was removed on 30.07.03 and giving antihelmenthic drug patient was discharged. Patient was advised for follow up visit after 1 month.

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Enteric fever: A review

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Introduction

Typhoid fever remains an underestimated important health problem in the developing countries¹. It is a distinctive acute systemic febrile infection of the mononuclear phagocytes. It may be caused by several serovars (*S. typhi*, *S. paratyphi A*, *S. paratyphi B* and occasionally *S. typhimurium*); many clinicians prefer the term enteric fever². Actually in 1869, given the anatomic site of infection, the term enteric fever was proposed as an alternative designation to distinguish typhoid fever from typhus.

Epidemiology

- A global health problem
- 13 to 17 million cases worldwide
- 200,000 deaths occur worldwide per year
- Children <1 year of age are most susceptible
- Endemic in most developing regions, especially the Indian subcontinent, South and Central America, and Asia
- Related to
 - Rapid population growth
 - Increased urbanization
 - Inadequate human waste treatment
 - Limited water supply, and
 - Overburdened health care systems
- Have no known hosts other than humans
- Transmitted only through close contact with acutely infected individuals or chronic carriers.
- Ingestion of contaminated food or water.

Clinical course

- The incubation period ranges from 3 to 21 days.
 - The most prominent symptom is prolonged continued or remittent fever (38.8°C to 40.5°C, or 101.8°F to 104.9°F).
 - Prodrome of nonspecific symptoms
 - Chills -Weakness
 - Headache -Sore throat
 - Anorexia -Dizziness
 - Cough -Muscle pains
 - Gastrointestinal symptoms are quite variable
 - Abdominal pain
 - Diarrhoea or Constipation
 - Epistaxis
- In general, the symptoms associated with *S. typhi* are more severe than those associated with *S. paratyphi*.

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Early physical findings of enteric fever include

- Relative bradycardia.
- Rash ("rose spots"):
 - A faint, salmon-colored, blanching, maculopapular rash
 - Located primarily on the trunk and chest
 - Evident in ~30% of patients at the end of the first week and
 - Resolves after 2 to 5 days without leaving a trace
 - Difficult to detect in dark-skinned patients
- Hepatosplenomegaly
- Toxic patients manifest neuropsychiatric symptoms described as a "muttering delirium" or "coma vigil," with picking at bedclothes or imaginary objects

Sequelae

- Without therapy, the illness may last for 3 to 4 weeks and death rates range between 12% and 30%.

Complications

- Complications are most common in untreated adults and include
 - Intestinal perforation and/or
 - Gastrointestinal hemorrhage
- Other complications include
 - Pancreatitis
 - Hepatic and splenic abscesses
 - Endocarditis
 - Pericarditis
 - Orchitis
 - Hepatitis
 - Meningitis
 - Nephritis
 - Myocarditis
 - Pneumonia
 - Arthritis
 - Osteomyelitis and
 - Parotitis

Despite prompt antibiotic treatment, relapse rates remain at ~10% in immunocompetent hosts. Asymptomatic chronic carriers (1 to 5%) shed *S. typhi* in either urine or stool may continue for >1 year. The incidence of chronic carriage is higher among women and among persons with biliary abnormalities (e.g., gallstones, carcinoma of the gallbladder) and gastrointestinal malignancies.

Laboratory investigations

No specific laboratory test is diagnostic for enteric fever.

- Blood examination
 - Leukopenia and neutropenia (15 to 25%)
 - Normal WBC count despite high fever in the majority of cases
 - Leukocytosis can develop in typhoid fever (especially in children) during the first 10 days of the illness, or later

The diagnostic "gold standard" is culture for *S. typhi* or *S. paratyphi*. The yield of blood cultures is quite variable: It can be as high as 90% during the first week of infection and decrease to 50% by the third week

- Bone marrow cultures remain highly (90%) sensitive despite > 5 days of antibiotic therapy
- Stool cultures
 - Negative (60 to 70%) during the first week,
 - Can become positive during the third week of infection in untreated patients.
- Serologic tests
 - Classic Widal test for "febrile agglutinins"
 - However, given high rates of false-positivity and false-negativity, these tests are not clinically useful.

Treatment

General supportive management

- Bed rest
- Nutrition and hydration
- Antipyretics, if necessary

Specific

- Ciprofloxacin 500mg to 750 mg tablet 12 hourly for 14 days
Other antibiotics can be used:
 - Cotrimoxazole
 - Amoxicillin
 - Chloramphenicol
 - Ofloxacin
 - Pefloxacin
 - Ceftriaxone
 - Cefotaxime
 - Azithromycin
- Pyrexia can persist for 5 days after starting antibiotic
- Even with effective antibiotic there is danger of
 - Complications
 - Recrudescence and
 - Development of carrier state

Discussion

With improvement in environmental sanitation in the United States, the incidence of *S. typhi* infection has dropped to a low level. From 1930 to 1950, the typhoid incidence-initially around 22 per 100,000 diminished by 90%. Known global hotspots for typhoid fever include Peru, Alexandria (Egypt), Jakarta (Indonesia), India, Pakistan and Nepal². In recent years, multidrug resistant strains of *Salmonella typhi* have emerged in tropical countries³. Typhoid fever is also endemic in our country. Although the sanitation has improved a lot in our country, typhoid fever is still a major public health problem. But exact incidence or prevalence of enteric fever in Bangladesh is not known. Multidrug-resistant *S. typhi* is becoming more prevalent in many endemic countries. Patients infected with resistant strains present with more severe illness, look "toxic" and have a higher incidence of disseminated intravascular coagulation and hepatomegaly and a threefold higher mortality rate. Moreover, it is related to the longer duration of disease and to prior ineffective oral antibiotic therapy². Studies on multidrug-resistant enteric fever have been carried out in Dhaka⁴, Khulna⁵ and Rajshahi⁶ that revealed that commonly used drugs were poorly sensitive to *Salmonella* sp.

The prevalence of resistance to multiple first line oral drugs has been rising among strains of *Salmonella* in developing countries especially in Indian subcontinent and Southeast Asia, due to the acquisition of plasmids encoding inactivation β -lactamases and chloramphenicol acetyl transferases^{7,8}. Chloramphenicol-resistant *Salmonella typhi* was first reported in 1972^{10,11,12}. Alam et al⁴, Ahasan et al⁵ and Ekram et al⁶ reported outbreak of multidrug-resistant enteric fever in different parts of Bangladesh few years back in separate studies.

Where multidrug-resistance is a problem a 4- fluoroquinolone or ceftriaxone should be used initially to adults over 17 years of age and ceftriaxone is the best choice for children². However, evaluation of the safety of ciprofloxacin in the dose of 15 to 25 mg/kg for 9 to 16 days in series of children who were between 8 months and 13 years of age did not reveal any cartilage damage on nuclear magnetic resonance scans¹³. This safety profile with cost effectiveness of ciprofloxacin is important as most of our poor people cannot afford 3rd generation cephalosporins. Because of increasing resistance worldwide to conventional anti-typhoid drugs, and in view of the efficacy of the quinolones¹⁴, these drugs have become the first choice of treatment for these important enteric infections.

Conclusion

Enteric fever is a global health problem; risk is highest among persons living in poverty in the developing world like Bangladesh. Increasing resistance to available antimicrobial agents, including fluoroquinolones, may foretell dramatic increases in case-fatality rates. Epidemics and high endemic disease rates have occurred in the Central Asian Republics, the Indian subcontinent, and across Asia and the Pacific Islands. Growing evidence of previously unrecognized disease in children aged <5 years is a newer problem. However, the role of new and effective vaccines as control measures for epidemics and as tools for elimination remains to be explored¹⁵.

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Asthma and Cardiovascular problems: An overview

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Introduction

The management of cardiovascular diseases in a patient with asthma or chronic obstructive pulmonary disease is a common problem. It is made difficult by the direct asthma-inducing effect of some cardiovascular drugs and by potential toxicity resulting from drug-drug interactions. As an example, beta blockers should be used with great caution or not at all in patients with chronic asthma (including chronic obstructive pulmonary disease) or acute allergic or exercise-induced bronchospasm. The angiotensin converting enzyme inhibitors and sympathetic blockers also may have deleterious effects in this setting.

There are a number of modalities that may be beneficial in the management of the patient with acute myocardial infarction (MI). These include aspirin, direct angioplasty or thrombolysis, angiotensin converting enzyme (ACE) inhibitors, beta blockers, and, in most patients, statins. The administration of a beta blocker following an acute MI has been shown to reduce morbidity and mortality in multiple trials. If the patient tolerates the beta blockade, oral beta blocking drugs can then be used in patients of acute myocardial infarction with asthma.

Supraventricular arrhythmias, including AF, are common in patients with asthma and have adverse prognostic implications in patients with acute exacerbations of asthma. Rate control can usually be achieved safely with calcium channel antagonists in this setting. In patients with obstructive pulmonary disease who develop AF, a calcium channel antagonist agent (diltiazem or verapamil) is preferred for ventricular rate control.

ACE inhibitors may be inappropriately stopped in patients with pulmonary causes of cough in patient with heart failure. If the patient tolerates the beta blockade, can then be used in patients of heart failure with asthma.

Indexing words

Asthma, Hypertension, Ischemic Heart Disease, Arrhythmia, Heart failure

Hypertension

The management of hypertension in a patient with asthma or chronic obstructive pulmonary disease (COPD) is a common problem owing to the high prevalence of each condition in the adult population. Beta-blockers should be used with great caution or not at all in patients with chronic asthma (including chronic obstructive pulmonary disease) or acute allergic or exercise-induced bronchospasm¹. Beta-blocker being made asthma worse, sometimes acutely². JNC 7 report mentioned beta-blocker should generally be avoided in individuals who have asthma³. At present, ACE inhibitors are currently not first-line therapy in patients with asthma or COPD¹. It is safest to administer only low thiazide doses (12.5 to 25 mg of hydrochlorothiazide) to nonedematous hypertensive patients with asthma or COPD¹. The calcium channel blockers are excellent agents for the treatment of hypertension in asthma⁴.

Thus, the use of a calcium channel blocker alone or with a low dose of a thiazide diuretic represents the preferred regimen for the initial management of the hypertensive asthmatic¹. Steroid use in asthma commonly promotes fluid retention and hypertension, judgment is therefore necessary in deciding on an optimal dose².

Ischemic Heart Disease

Unless there are specific contraindications aspirin should be administered to all patients with acute coronary syndrome⁵. Approximately 10% of asthmatic patients develop bronchoconstriction when given salicylates (e.g. aspirin)⁶. Aspirin can induce worsening of asthma, which can be severe, accompanied by urticaria. Aspirin sensitive asthmatics are usually adult with a history of nasal symptoms often due to nasal polyps⁷. Clopidogrel should be administered in patients with acute coronary syndrome who are unable to tolerate aspirin due to hypersensitivity primarily manifested as asthma⁵.

Beta-blocker should be avoided in subset of patients who have true bronchospastic lung disease, and use of nitrate and calcium antagonists is preferred⁸. Since many of these patients receive medications for their pulmonary disease that may increase their heart rate or even produce supraventricular tachycardia, it is preferable to use a heart rate slowing calcium antagonist such as diltiazem or verapamil⁸. Many patients with a history of only asthma or mild chronic obstructive pulmonary disease may be able to tolerate small doses of cardio selective beta blockers with careful monitoring⁸. β_2 agonist in high dose may worsen angina⁹.

In unstable angina and non ST elevated myocardial infarction, patients with significant COPD who may have a component of reactive airway disease should be administered beta blocker very cautiously; initially, low doses of beta 1 selective agent should be used. If there are concerns about possible intolerance to beta blockers, initial selection should favor a short acting β_1 specific drug such as metoprolol. Mild wheezing or a history of COPD mandates a short acting cardioselective agent at a reduced dose rather than the complete avoidance of a beta blocker⁵.

Beta blockers are safe and effective in patients with mild pulmonary disease with MI¹⁰. A survival benefit in patients

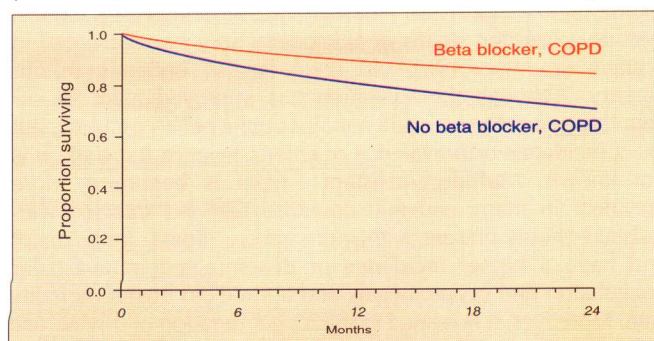


Fig : 1. Beta blocker after MI is effective in patients with chronic lung disease
In an analysis of 201, 752 patients with an acute myocardial infarction (MI), those with chronic obstructive pulmonary disease (COPD) who received a beta blocker had a significant increase in survival at two years compared to patients with COPD who did not receive this therapy (83.2% versus 72.2%) (Data from Gottlieb, SS, McCarter, RJ, Vogel, RA. N Engl J Med 1998; 339 : 489)

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with MI from beta blockade is seen with relative contraindications to such therapy such as chronic obstructive lung disease (COPD) /Asthma¹⁰. Beta blocker therapy should probably be applied universally to all patients without absolute contraindications¹⁰. History of asthma, severe chronic pulmonary disease are relative contraindication to beta blocker therapy, in a setting of MI the clinician has the option of assessing the effects of beta blockade with the short acting intravenous beta blocker esmolol¹¹. If the patient tolerates the beta blockade, long acting oral beta blocking drugs can then be used with increased confidence¹¹.

Arrhythmia

Supraventricular arrhythmias, including AF (Atrial Fibrillation) are common in patients with chronic obstructive lung disease and have adverse prognostic implications in patients with acute exacerbations of chronic obstructive pulmonary disease. Treatment of the underlying lung disease and correction of hypoxia and acid-base imbalance are of primary importance. Theophylline and betaadrenergic agonists, which are commonly used to relieve bronchospasm in these patients, can precipitate AF and make it difficult to control the rate of ventricular response. Beta-blockers, sotalol, propafenone, and adenosine are contraindicated in patients with bronchospasm and wheezing. Rate control can usually be achieved safely with calcium channel antagonists; digoxin offers no advantage over calcium channel antagonists in this situation. Pharmacological antiarrhythmic therapy and electrical cardioversion may be ineffective against AF until respiratory decompensation has been corrected. Intravenous flecainide may be efficacious in restoring sinus rhythm in some patients. Electrical cardioversion may be attempted in haemodynamically unstable patients. In resistant cases, AV nodal ablation and ventricular pacing may be necessary to control the ventricular rate. The role of anticoagulation in patients with AF due to chronic obstructive lung disease has not been studied specifically¹².

Recommendations for management of AF in patients with pulmonary diseases¹².

Class I

1. In patients who develop AF during an acute pulmonary illness or exacerbation of chronic pulmonary disease, correction of hypoxaemia and acidosis are the primary therapeutic measures. (Level of evidence: C)
2. In patients with obstructive pulmonary disease who develop AF, a calcium channel antagonist agent (diltiazem or verapamil) is preferred for ventricular rate control. (Level of evidence : C)
3. Attempt electrical cardioversion in patients with pulmonary disease who become haemodynamically unstable owing to AF. (Level of evidence : C)

Class III

1. Use of theophylline and beta-adrenergic agonist agents in patients with bronchospastic lung disease who develop AF. (Level of evidence: C)
2. Use of beta-blockers, sotalol, propafenone, and adenosine in patients with obstructive lung disease who develop AF. (Level of evidence: C)

Heart failure

Because dyspnoea is the key symptom in both HF and pulmonary disease, it is important to distinguish the two diseases and to quantify the relative contribution of cardiac and

pulmonary components to the disability of the patient when both disorders co-exist. Some drugs used to treat HF can produce or exacerbate pulmonary symptoms. ACE inhibitors can cause a persistent nonproductive cough that can be confused with a respiratory infection, and conversely, ACE inhibitors may be inappropriately stopped in patients with pulmonary causes of cough. Therefore, physicians should seek a pulmonary cause in all patients with HF who complain of cough, whether or not they are taking an ACE inhibitor. The cough should be attributed to the ACE inhibitor only if respiratory disorders have been excluded and the cough disappears after cessation of ACE inhibitor therapy and recurs after reinstitution of treatment. Similarly, beta-blockers can aggravate bronchospastic symptoms in patients with asthma, and therefore, all beta blockers (regardless of their selectivity) should be avoided in patients with reactive airways disease¹³.

Conclusion

Patient of bronchial asthma with cardiovascular problem need special attention for management of both problems simultaneously. If tolerated beta blocker should be used in patient with IHD. Clopidogrel should be administered in patients with acute coronary syndrome who are unable to tolerate aspirin. In supraventricular arrhythmias calcium channel blockers are the drug of choice. Patient with heart failure and asthma beta blocker and ACE inhibitor also can be used if tolerated.

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Renal transplantation in developing world

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Introduction

Renal transplantation is the most acceptable therapeutic option for most patients with irreversible renal failure in developing countries. The high cost of dialysis limits this form of treatment to a privileged groups only, making successful renal transplant a greater necessity in developing country than elsewhere. It is argued that transplantation should be encouraged because it is the most cost-effective form of renal replacement therapy with the best promise of improved quality of life and an excellent chance of rehabilitation.

Incidence of end-stage renal disease is 48 to 240 per million populations in developing countries³³. The incidence of ESRD is steadily increasing in the United States since 1987; it has increased at a rate of 6% per year. There is no clear explanation for this growth, although the increase in the incidence of diabetes mellitus may be a major contributing factor⁵⁹. A marked difference exists in the mean age of patients initiated on renal replacement therapy in developing countries compared with Europe and the United States. In 1997 the mean age of a patient starting renal replacement therapy in the United States was 61 years, whereas in some developing countries, the mean age is 30 years. A possible explanation for the younger presentation in developing countries is that inadequate preventive and curative medical care allows more rapid development of ESRD¹³. In Bangladesh, approximately 100-110 new patients per million of the population develop ESRD yearly, only 2-3% of these patients can able to avail the facility for dialysis and transplantation⁴⁷.

Another important difference that has emerged is the marked male predominance in the incidence of renal replacement therapy compared with industrialized countries. In the United States, men account for 53% of patients started on treatment. In developing countries, men account for 93% of patients receiving treatment. The incidence of chronic renal failure is unlikely to be considerably higher in men, and the marked discrepancies probably reflect social and cultural factors that favor men.

Renal replacement therapy options in developing countries

The management of ESRD poses complex medical, social, moral and economic challenges for patients and communities in developing nations. Life saving therapy entails the institution of dialysis and or transplantation. In developing countries, most patients with ESRD are offered only conservative treatment because of the lack of access to dialysis and transplantation. In Latin America, a report from Sao Paulo, Brazil⁵⁴, showed that 26% of patients did not receive any form of renal replacement therapy, Report syndicate that most of sub-Saharan Africa⁶ has no effective renal replacement therapy program. In Egypt 60%⁸ Southern India 66%⁴⁶, Pakistan 75%⁴¹, Bangladesh 97%⁴⁷ of the incident ESRD population do not receive any form

of renal replacement therapy. On the other hand acceptance rates for renal, replacement therapy in the developed world are 61 to 99%⁵³.

Haemodialysis

In developed countries, 56 to 60% of ESRD patients receive dialysis⁵⁸. In some countries the figure is higher. The situation in developing countries is different. The problems facing the initiation of such programs includes the following:

- Prohibitive capital expenses of setting up dialysis units¹⁴
- Lack of trained staff to care for patients
- Technical problems including erratic power supply, unreliable water supply and mechanical breakdowns
- Shortage of reagents and spares
- Access of patients to long term dialysis. With almost two thirds of the population in developing countries situated in rural areas and treatment centers almost exclusively in urban areas, patients have to travel great distance, which essentially precludes their inclusion in long term dialysis programs¹³.

The long term outcome of maintenance dialysis as the treatment modality of choice shows patients survival to range from 10-15% at 3 yrs in India¹⁹, 25-52% at 5years in Egypt⁸ and South Africa²⁰ and in Bangladesh two and five years survival were 68% and 50% respectively⁴⁷. In the absence of an established renal transplant program, it is not viable economically to maintain large number of patients on a maintenance haemodialysis program in a developing country³⁷. In South Africa, national guide lines set by the department of Health preclude patients from the renal replacement therapy program if they are not suitable transplant candidates for any reason.

Peritoneal dialysis

Peritoneal dialysis is an efficient form of renal replacement therapy⁴² that does not require the capital expenses of hemodialysis. In most instances it is less expensive than haemodialysis⁸. Other advantages of peritoneal dialysis are that it is more physiological than intermittent hemodialysis and requires less stringent dietary and fluid restrictions. It is more appropriate for certain classes of patients, such as diabetics and children. But in most of the developing countries peritoneal dialysis is grossly underused. In India less than 1% of ESRD patients receive peritoneal dialysis. This underuse in developing countries is partly due to physician bias¹³. Other reasons are as follows:

- Patients are less educated and less compliant.
- The risk of peritoneal infection is high in the hot, humid climate and poor sanitary conditions that prevail.
- Lack of skilled personnel results in high rates of infection⁵
- Cost of antibiotics are high⁵

Recurrent peritonitis and other technical problems were major limitations to the use of peritoneal dialysis in the management of uraemic patients in developing countries⁵.

Renal transplantation

The most striking feature of renal transplantation in developing countries is the emphasis and in some cases exclusive reliance on living related donor transplantation. There is worldwide shortage of organs and the gap between supply and demand

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grows inexorably. Lack of resources, cultural factors and ignorance all contribute to the ongoing shortage of organs⁴⁰. The number of transplants performed per million population correlates with the socioeconomic status of the country¹⁴. Of all renal transplants that have been performed around the world, most (>90%) have been in developed countries (12), which perform on average 20-40 transplants per million population per year. This figure compares with 1-5 per million populations in most developing countries, where only 2% of the estimated need for renal transplantation are met. Under these circumstances, the purchase of kidneys from living non-related donors has flourished.

Donors

The incidence of ESRD is estimated at anywhere from 100-200 per million population per year. The maximum yield of cadaver donors (Spain) is about 30 per million populations and is considerably less in most countries. It appears that all countries need to use living donors. Daar and colleagues for the purpose of simplifying the discussion of the ethical issues involved have classified living donation into six categories: genetically related, emotionally related, altruistic strangers, gray basket, rampant commercialism and criminally coerced^{15,16,17}.

Living related donors

In the absence of long term dialysis and cadaver donor programs, living related donor transplantation is the only option available to patients in most developing countries^{14,18}. In a report from Pakistan⁴¹ some of the problems of living related donors experienced in a developing country were highlighted. Although the average number of potential donors per recipient was six, this advantage was dissipated quickly. The structure of most Pakistani society is feudal and tribal in rural areas. Communities live in extended family setups under the patronage of single elder making the number of potential family donors quite large; medical problems excluded 40% of potential donors, however, hypertension was the commonest usually undetected problem. Other problems included urological ones, renal calculi, diabetes mellitus, ischemic heart diseases and hepatitis. This array of problems reflects the limited access to health information and care common in developing countries. Approximately 25% of potential donors refused to donate for social reasons; as a result of ignorance and misconceptions. Families refused to allow a breadwinner from donating for fear of incapacity and loss of family income. There was the perception that the donation would leave the male breadwinner permanently disabled. In the case of women, the perception was that the operation reduced her fertility and compromised her capacity to run a household.

Spousal donor

Spousal organ donation can be an extremely rewarding form of treatment, with most donors expressing satisfaction with their decision and improvement in family relationships. Results of spousal transplants could be improved by if recipient had received donor specific blood transfusions previously^{7,56}. Spousal donations are an important source of kidneys in developing countries as well⁴¹.

Emotionally related donors

In the absence of a suitable relative, an altruistic living donation by a close friend generally would be acceptable today, provided that the donor is motivated by genuine concern for the welfare of the patient. But in fear of commercialization it is not accepted by law in Bangladesh.

Cadaver donors

Ignorance appears to be the major limiting factor inhibiting the institution and growth of cadaver organ donation programs in many developing countries¹⁰. Most religious commentators including Islamic, Christian, Hindu, Judaic and Buddhist support transplantation¹⁶. Saudi Arabia is an excellent example of conservative Muslim country that has implemented a cadaver donor program successfully. The success of such a program requires several factors to be addressed¹⁴.

Education

An integrated education campaign is necessary to increase public awareness of the need for organ donation. In developing countries low adult literacy rates hinder education drives.

Attitude

The attitude of indifferent health care professionals has been identified as a major limiting factor.

Legal aspects

Recognition of the concept of brain death and the enactment of laws that allow the use of organs from cadaveric donors are important. Many developing countries do not have such laws. Bangladesh has passed the Human Organ Transplantation Act (HOTA) which banned trade in organs, recognized brain death and simultaneously promoted cadaver organ donation.

Resources

Access to intensive care facilities is required to allow the ventilation of donors. The severe shortage of intensive care unit beds in developing countries can be a major limitation⁴⁰. A reliable tissue typing laboratory is also essential.

Transplant activity

No country in the world can claim to have enough donors for its transplantation needs. At best 45-50% of the prevalent ESRD population have functioning grafts in developed countries. In developing countries, the situation is much worse, with renal replacement therapy and transplant activity being well below the need¹³. The number of transplant centers throughout the developing world has continued to increase, however, since the 1980.

Asia Pacific region

Combining the registry report of 12 Asian developing countries⁴³ with individual country reports^{41,55} shows that a total of 29,027 kidney transplants were performed in the period 1993-1997. The Peoples Republic of China is exceptional in undertaking the greatest number of cadaver donor transplants in the region⁴³-its main source of organs is reported to be from judicially executed prisoners¹¹. Excluding China's controversial contribution, living related donor transplantation accounts for 90% of transplants in the region. India undertakes the greatest number of living donor transplants. Of the 7,742 living donor transplants undertaken in Asia in the 2-year period 1996-1997, 83% were living related donor transplants and 17% were living unrelated donor transplants⁴³. Cadaver donation is underdeveloped in most of Asia, where brain death has not yet been generally accepted. Many of these countries do not have organ procurement organizations that are supported by the necessary legislation. Singapore was one of the earliest Asian countries to introduce legislation on organ transplantation⁽²⁹⁾. Human organ transplant Act (HOTA) made provision for the procurement of organs from cadavers, defined death to include brain death criteria and banned commercialism. Despite this program, a donor shortage persists, owing to a lack of awareness by the public and particularly by health professional

as well as cultural and religious factors. Taiwan has had a significant cadaver donor program resulting from active organ procurement using brain-death criteria, although the laws were enacted only in 1987⁵⁵.

Commercialism had earned India a poor reputation¹⁴, but in 1995, it passed the HOTA which banned trade in organs and simultaneously legalized brain-death criteria and cadaver organ donation¹⁶. Since then, there has been a slow but steady increase in cadaver donation, including the occasional donation of hearts and livers.

The annual number of renal transplants has increased over the years in Asia, but great potential remains for further growth. This growth can be achieved through legal and social acceptance of the brain death concept, the establishment of organ procurement organizations and most important, education of the public and health care providers through systematic support from the authorities.

Middle East and Afro-Arab region

Progress continues to be made in the Middle East and Afro-Arab region where most countries now have kidney transplant programs. Similar to most developing countries, living related donors account for most transplants. The data from 16 countries¹ showed that 6,408 renal transplants were performed by 1997. Countries with cadaver programs include Saudi Arabia³, Oman¹, Jordan¹, Kuwait¹, Turkey²³, Lebanon²⁷ and Tunisia²². This active cadaver program was achieved through intensive public education. The lack of cadaver donor programs has persisted despite support from religious authorities¹⁶. As a result many patients against the wishes of their local transplant teams, have gone abroad to obtain living non-related donor kidneys through commerce in India, Egypt, Iraq and possibly Iran^{2, 14, 16, 51}.

Africa and Indian Ocean Islands

Africa has a population of nearly 700 million. There is little available information because there are no reliable registries⁶⁰. Except for North Africa, the Indian Ocean Island and South Africa, there is no significant renal replacement therapy in Africa⁶.

Central and Eastern Europe

After the collapse of communism, many countries suffered adverse socioeconomic conditions and this was reflected in the effective renal replacement therapy rates⁵⁰. The former Soviet Union⁵⁰, Poland⁴⁹, Romania⁵⁷ and Albania²⁹ had renal replacement therapy rates comparable to developing countries. Central and Eastern Europe provides renal replacement therapy predominantly dialysis⁴⁹. In Poland, reflecting the regional experience, transplantation accounted for 8% of the renal replacement therapy population⁴⁹.

Latin America

Latin America has experienced a phenomenal increase in transplant activity. This region is the fastest growing in terms of number of transplants; new units established and progress with cadaver organ donation. What makes the achievement more remarkable is that it occurred during a decade of economic recession in the region. The Latin American registry includes 21 countries, a regional population of 470 million, representing approximately 10% of the world transplant activity⁵². Another important development has been an increase in the number of cadaver donors, which by 1990 accounted for 42% of all transplants³⁵. Currently cadaver and living donor transplants are approaching parity in Latin America.

Transplant outcome

Patient survival

Egypt⁸, India¹⁹, United Arab Emirates³⁶, Turkey², Iran, Saudi Arabia⁴, Tunisia⁹, Pakistan⁴¹, Taiwan³² and Korea⁴⁵ reported living donor transplantation patient survival ranging from 72 to 100% at 5yrs. The survival decreased to 62 to 86% at 10yrs in reports from Saudi Arabia⁴ and Korea⁴⁵. Patient survival with cadaver donor transplants was 71-94% at 5 years in reports from South Africa²⁰ Cyprus³¹ Saudi Arabia⁴, Taiwan³² and Korea⁴⁵. This rate decreased to 29-90% at 10 years in reports from South Africa³⁴ and Saudi Arabia⁴.

Graft survival

Living Related Donors

The graft survival of living donor transplants was 47-95% at 5 years in reports from South Africa²⁰ Cyprus³¹ Lebanon²⁷, United Arab Emirates³⁶, Saudi Arabia⁴, Tunisia⁹ Pakistan⁴⁸, Taiwan³² and Korea⁴⁵. The graft survival in HLA-identical donor transplants was 90-95% at 5 years in reports from Lebanon²⁷ and Pakistan⁴⁸. The graft survival in HLA-haploidentical and poorly matched donor transplants was 47-90% at 5 years in reports from Lebanon²⁷, Pakistan⁴⁰ and Korea⁴⁵.

Living non-related donors

In the larger series of living non related donor transplants from developing countries, graft survival ranged from 81 to 88% at 5 years in reports from Lebanon²⁷, Iran, Korea⁴⁵ and Brazil²⁴. This rate decreased to 47% at 10 years in reports from Korea⁴⁵.

Cadaver donors

China has the highest cadaver transplant activity in the Asia-Pacific region, although its unconventional organ source is highly controversial. In 1992 a Chinese report revealed a poor graft survival rate of 26% at 5 years during the precyclosporine era before 1985 but this had improved to 41% at 5 years with cyclosporine immunosuppression. In more recent series in developing countries, cadaver donor graft survival ranged from 55 to 72% at 5 years in report from South Africa²⁰, Cyprus³¹, and Saudi Arabia⁴. This rate decreased to 29-58% at 10 years in reports from South Africa²⁰ and Saudi Arabia⁴.

Economic and social consideration

Cost and economic considerations

Cost has significant implications on the future of renal transplantation in developing countries, where transplantation is constrained heavily by financial resources. There are striking differences in the provision of renal replacement therapy in different regions. The relationship between transplant activity and per capita income of countries in the developing world shows strikingly that cost and economic considerations have a major bearing on delivery. A similar relationship was shown in Latin America³⁵.

The cost of renal replacement therapy depends on the importation of dialysate fluid, disposables and immunosuppressive therapy, specifically cyclosporine, for transplantation. Several reports confirm that transplantation is less expensive than dialysis in the developing world^{8, 13, 40}.

In Taiwan²⁵ the average cost of transplantation in the first year was approximately 70% that of hemodialysis, decreasing to 38% in subsequent years. Another report compared the annual maintenance cost between the different treatment modalities in Nigeria³⁷. Peritoneal dialysis was 70% the cost of haemodialysis, and a living related donor kidney transplant was 50% the cost of haemodialysis in the first year, decreasing to 10% in subsequent years. The distinct advantage of transplantation resulting from prolonged graft survival is

improved quality of life^{32,44,45}. Transplantation affords the patient more freedom with rehabilitation to gainful employment. The transplant becomes economically beneficial if the graft survives longer than the break-even cost saving was achieved after 1.5 years on cyclosporine based regimens, whereas in the United States this was achieved after 4.6 years²¹. Donor selection that offers the best graft survival confers the greatest cost-effectiveness. Genetic and emotionally related living donors offer better graft survival and greater cost-effectiveness than cadaver donors do.

In the case of living donor transplantation, considerable costs can be saved if a patient receives a graft without prior dialysis. For patients with a living donor, early preemptive transplantation is an ideal choice for primary treatment of ESRD in developing countries. Avoiding hemodialysis not only saves costs, but also avoids the inconvenience and discomfort of dialysis and protects the patient from undue exposure to blood products²⁶. The report favored preemptive transplantation as a cost-effective approach for living related transplants. In a study from Vellore, South India, a group of 43 preemptive renal transplant recipients had significantly less morbidity than those transplanted from dialysis²⁶.

Overall, renal transplantation is less expensive than dialysis in developing countries. The absence of government support and the high cost of imported medication make treatment affordable to only a few affluent individuals, however, including those with family support or those with assistance from employers¹³. Schemes to reduce costs include cyclosporine withdrawal at 3 to 12 months maintaining patients on azathioprine and steroids³⁸. Another strategy has been to combine cyclosporine with ketoconazole or diltiazem, both of which increase cyclosporine levels, allowing dose and cost reduction.

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Intrauterine fetal death : An unforeseen mishap

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Introduction

Intrauterine fetal death often constitutes a major challenge for obstetricians in terms of fetal care and also for the need of information and counseling of the affected couple. In the recent years intrapartum and neonatal mortality has declined significantly in developed countries because of the advances in Obstetrics and neonatology but fetal mortality rate has fallen only slightly^{1,2}. This has increased relative importance of Intrauterine fetal death as a clinical and public health problem³. However, little attention has been paid in the developing world⁴.

Definition

Intrauterine fetal death is death of the fetus after age of viability and retained for at least 24 hours resulting in delivery of a macerated fetus. A related term is Stillbirth that indicate delivery of fetus after age of viability which shows no sign of life after birth. However, the definition is adopted in different studies with some modification.

Epidemiology

It is estimated that worldwide there are annually more than 7.6 million perinatal deaths of which 57 percent are fetal deaths⁵. Ninety eight percent of the perinatal deaths take place in the developing world. One study from Latin America showed fetal death was 17.6 per 1000 births and 37% of fetal deaths occur at term and 64% were antepartum⁴. A study from developed world reported prevalence 3 per 1000 birth⁶.

Consanguinity of parents influence fetal outcome and it has been found that the risk of recurrence of stillbirth and infant death is higher for offsprings of first cousin parents compared with offspring of unrelated parents⁷. Once a stillbirth or infant death appear in a family the risk of recurrence in subsequent sibling is higher^{8,9}.

Aetiology

It is difficult to ascertain a definite cause for IUD. Third trimester bleeding e.g placenta previa or abruptio placenta has six fold increased risk of fetal death, small for gestational age fetus has 3.3 fold higher risk⁴. Pregnancy induced hypertension causes

- lack of mid trimester trophoblast invasion of the mouth of spiral arteries, so they remain narrow.
- reduction in maternal blood supply because of spasm & sometimes thrombosis of the maternal vessels and
- separation of placenta or extensive clotting of maternal blood around chorionic villi. Interval between pregnancy shorter than 6 months has twice the risk, Fetal mortality was 49% greater when premature rupture of membrane occur².

Some maternal socio-demographic factors are responsible e.g. advanced maternal age >35 yrs has 53% increased risk, obesity, previous abortion and adverse perinatal outcomes are also associated with fetal death^{4,11}. However, some studies reported that previous stillbirth or spontaneous abortion not significantly associated¹².

Regarding Parity some studies found an increased incidence among multiparous women⁴ while others have found no increase^{2,10}.

Lack of antenatal care had four fold higher risk for fetal death than those with five or more visits². Non cephalic fetal presentation has ten fold higher risk of fetal death during intrapartum period. Fetal malformation are also an important cause. Infective disease either bacterial or viral are important cause of IUD. e.g 7.5% of IUDs in third trimester may have been caused by Parvo virus B-19 infection⁶. Anti cardiolipin antibodies in maternal blood found in some cases of IUD. Some of the cases may result from post maturity.

Cord accidents-True knots or constriction of the cord round a limb may be found in some cases. Umbilical cord stricture is an uncommon but distinctive condition associated with intra uterine fetal death. The stricture Usually seen at the fetal end or in multiple sites. Major pathological features include aberrance, obliteration of cord vessels at the narrow segment and intravascular cord thrombosis¹³. Diabetes Mellitus, Haemolytic disease e.g. Rh incompatibility and Hyperpyrexia, maternal anaemia are associated with significant risk of fetal death⁴.

Unexplained : One fifth of all stillbirths remain unexplained despite autopsy examination

Diagnosis

It is often made from history and clinical examination. Patient will state that there is lack of fetal movements which was previously experienced. On examination there is regression of uterine size, absence of fetal heart sound, uterine tone is diminished and feel flaccid and egg shell crackling feel of fetal head

USG : Reveal absent fetal heart echo, skull collapse, poorly visualised midline falx, retraction of brain tissue, empty urinary bladder and a non-filled aorta

X-ray shows :

- Spalding sign (overlapping of the cranial bones due to shrinkage of the brain)-appear usually after a week or more
- Robert's sign -Gas bubbles appear in the heart, aorta,vena cava, liver, cord and abdominal cavity -may appear as early as 12 hours

Other signs include Crowding of the ribs and Hyperflexion of the spine Intra uterine death can also be diagnosed by noting a macerated baby. Maceration is a destructive aseptic process that appears between 12 to 24 hours after fetal death. The first sign is blistering and peeling of skin that involves whole body. The body appears soft and toneless, ligaments are softened, vertebral body is liable to sag/collapse, cranial bones are loosened & easily movable on one another, fetus becomes swollen and looks dusky red. Amniotic fluid & fluid in all serous cavities may contain blood pigments¹⁴.

Investigation

It is performed to elucidate cause, some done before delivery and others after delivery. Commonly suggested tests are

- Kleihauer-Betke test to detect occurrence of feto-maternal transfusion.
- Serological analysis for Toxoplasma

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- Cervical culture for chlamydia, Group B streptococci and Gonorrhoea Amniocentesis and amniotic fluid examination for detection of metabolic diseases
- Prothrombin time
- Activated partial thromboplastin time (APTT)
- Von willbrand factor antigen (vWFAg)
- Fibrinogen and fibrin degradation product
- Thrombin time
- Platelet count
- Anticardiolipin antibodies (ACLA)
- Blood Group and Rh antibodies
- Glycosylated Hb & Post prandial sugar
- Maternal & paternal karyotypes
- After Delivery
- Mother evaluated for coagulation profile
- Analysis of fetal karyotype, histology, bacteriology and virology of placenta
- Bacterial culture
- Fetal Autopsy

However; it is necessary to select the relevant investigation to make cost effective.

Complication

- Psychological upset
- Infection especially after membrane rupture
- Disseminated Intravascular Coagulation : is due to release of tissue thromboplastin from fetoplacental unit activating the extrinsic pathway of coagulation. There is fall in level of fibrinogen factor VIII & platelets & elevation of FDP.

During labour

- Uterine inertia,
- Retained placenta
- Post Partum Haemorrhage

Management

Prevention

- regular ANC to detect contributing factors and treatment
- early treatment of infection
- prophylaxis of Rh -ve mothers
- prompt treatment of fever

Specific treatment

Usually 80% cases deliver within 2 weeks. Vaginal delivery should be the aim otherwise abdominal delivery

specific indication for abdominal delivery

- known major degree of placenta previa
- severe CPD
- previous classical CS
- more than two previous section
- incipient uterine rupture or rupture suspected

Relative indication : Transverse lie

Induction of labour done by

- **Oxytocin infusion**
- Prostaglandin gel or pessary per vaginally
- Folyes catheter (intracervical)

A Combination of oral mifepradone (200 mg single dose) and intravaginal misoprostol (200 microgram) has found an effective

and safe regime for induction of labour following late fetal death and induction to delivery interval appear shorter than using them singly¹⁵. It is important that proper puerperal care such as suppression of lactation with bromocriptine and careful bereavement support is offered to the mother after delivery

Conclusion

It is difficult to have a precise estimate of IUD as the cases are more likely to go unreported¹⁶. The decline in fetal death rate mainly that occur at term in the developed world is attributed to improvements in obstetric surveillance and proper management in labour¹⁷. Attention to the preventable factors such as regular antenatal care, early treatment of maternal medical problems and a comprehensive approach of management to the unmet need of pregnant women would have a great impact in reducing fetal mortality in the developing countries as well.

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Children with hymenoptera allergy and its management

Khan AH¹, Kabir MZ²,

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About 75% of world's animal species are arthropods. Most of them usually have no interaction with humans, but a small number of medically detrimental species which possess venom can cause morbidity and mortality when humans are bitten or stung.

Most important venomous arthropods are¹²

- (i) The arachnids (spider, scorpions)
- (ii) Insects of the order Hymenoptera (Parasitic or social) includes
 - (a) bees, (b) yellow jackets (c) Hornets (d) Other wasps
 - (e) stinging ants. These species inject venom during bite by fang or sting.

Bite describes venom injected via structures associated with the mouth such as fangs or mandibles and *sting* means the injection of venom via a tapered posterior structure most accurately called a sting.

Insects of the order Hymenoptera are largest in number and are the most important venomous arthropods.

Hymenoptera

The hymenoptera get their name from the Greek words hymen and pteron, meaning membrane and wing, respectively and this gives the first clue to identify them⁹.

Hymenoptera stings allergies have been recognized as a world wide health hazard. Anaphylactic reactions caused by hymenoptera sting predominantly bee, wasp, paper wasp stings are common medical problem.

The first documented anaphylactic reaction of hymenoptera sting was the death of the Egyptians pharaohs who died according to an Egyptian hieroglyph in the year 2640 BC due to a wasp sting¹. Except some social forms exhibit extremely fierce defense of their nest, most wasp and bees are solitary and do not defend their nests, though they will sting in defense if caught. Only a few social species have sufficiently venomous stings to be of medical significance, eg honey bees and bumble bees. It is the social hymenoptera that actively defend their nest and it is mostly these groups that cause medically significant stings. Among the ants all are social but only a few species do have medically significant stings eg fire ants.

Children's involved in outdoor activities and sports are vulnerable to hymenoptera stings. In our country naughty children either disturb the nest of social hymenoptera or accidentally come under attack of disturbed hymenoptera & get medically significant stings.

Components of hymenoptera venoms

During the course of evolution the stinging insects develop venoms an injectable mixture of amines, peptides and enzymes which are capable of disrupting a wide range of cell mechanisms. In addition to Histamine, serotonin, acetylcholine, kinins, protein enzymes like phospholipase A, hyaluronidases are present in the venom. These two enzymes are responsible for majority of allergic reactions².

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Honey Bee venom¹²

Contains Enzymes, smaller proteins, peptides and amines.

- a. **Melittin** (50% of venom dry weight) it hydrolyzes cell membranes causing changes in permeability and is most responsible for the pain associated with the sting.
- b. **Peptide 401**: Mast cell degranulating peptide, cause, release of histamine and setting up an inflammatory reaction.
- c. **Enzymes** include phosphatase A₂: It is the major venom allergen and is responsible for inducing IgE mediated anaphylaxis and it in concert with melittin is a major hemolytic factor.



Fig : 1. Honey Bees

- d. **Hyaluronidase**: major spreading factor.
- e. Physiologically active amines are histamine, dopamine, nor-epinephrine.

Wasp venom contains¹²

Wasp comprises the largest number in the order hymenoptera and their venoms has low mammalian toxicity and it contains enzymes, smaller peptides and amines

- a. **Enzymes**: Phospholipases, hyaluronidases, cholinesterases- these are principally responsible for allergic responses of wasp venoms.
- b. **Peptides**: mastoparans which cause histamine & serotonin release by degranulating mast cells.
- c. **Amines** like histamine, serotonin with acetylcholine affect neurons and contribute to the pain of these sting.

Ant venoms¹²

Most critical Component of fire ant venom are alkaloid (methyl m piperidines) which inhibit Na⁺K⁺ATPase pump of muscle cells membrane resulting in post synaptic blockade. Damage is expressed in hemolytic, cytotoxic and serologic reactions. Anaphylactic reaction may occur due to allergenic proteins.

Reactions to venoms

The most common reaction following hymenoptera sting is a painful wheal or hive caused by the venom. The site rapidly become pruritic and itching can last for several hours (possibly due to IgE mediated response).

Venoms contain a variety of neurotoxins, including, small ring like peptides that insert themselves in cell membranes and causes depolarisation of nerve cells and consequently pain⁹

The most feared IgE mediated response is of course anaphylaxis. Cross linking of venom antigens to previously found IgE antibodies on basophil surfaces, releases multiple. preformed mediators that leads to a cascade of pathophysiologic responses the best known of these mediators is histamine the clinical manifestation of histamine effect include.

- | | |
|----------------------|---------------------|
| a. Diffuse urticaria | d. Laryngeal oedema |
| b. Bronchospasm | e. Nausea vomiting |
| c. Laryngospasm | f. Hypotension |

The onset of action is rapid usually within minutes of a sting though in rare cases it can be delayed for several hours.

Delayed effects such as serum sickness, peripheral neuritis or nephrosis are probably related to antigen antibody reaction (immune complex deposition)

Most fatalities from bee and wasp stings occur in hypersensitive individuals, death most often induced by a single sting and occurs most often within an hour after the sting. Most deaths are caused by :

1. Respiratory dysfunction
2. Anaphylaxis .

Large number of bee stings can also cause death in non hypersensitive individuals. Patients may present with acute renal failure⁷.

Clinical aspects²

Reactions to venom usually occurs in atopic than in non atopic subjects. There is always some local reaction to a sting and in some cases a very marked and persistent local effects heralds a more generalized reaction to subsequent stings within 30 minutes, pruritus and urticaria, faintness and hypotension, respiratory difficulty, nausea, vomiting diarrhea can occur even cardiac arrhythmias have been noted in children below the age of 10 years & can die from sting anaphylaxis.

Apart from classical anaphylaxis, a number of other types of reaction have been described, including a reaction resembling serum sickness with joint pains and fever developing after some days and persisting for some weeks.

- Proteinuria is common but usually short lived.
- Hematuria is also recognized .
- Vesicular skin eruption of delayed onset.
- Peripheral neuropathy.
- Intracranial hemorrhage or oedema.
- Mental changes
- Acute renal failure may also occur⁵

According to Mueller⁸. Sign and symptoms are classified in different grades.

Grade I : Urticaria, Pruritus, Malaise.

Grade II : Angioedema, Chest Tightness, Nausea, Vomiting, Abdominal Pain, Dizziness.

Grade III: Dyspnoea, Wheeze, Stridor, Dysphagia, Hoarseness.

Grade IV: Hypotension, Collapse, loss of consciousness, Incontinence, Cyanosis.

Management of hymenoptera sting

1. Avoidance of behaviour to lower the risk of resting .
2. Injectable or oral antihistamine to reduce the peripheral symptoms such as urticaria.
3. Injectable corticosteroid : The efficient drug for prevention of anaphylaxis.
4. Injection : Epinephrine for acute emergency medication in case of severe anaphylaxis
5. Referral to the allergy specialist for evaluation for venom immunotherapy.

Emergency treatment of choice is still 0.5 ml of 1 in 1000 solution of Epinephrine given by deep s/c Injection and repeated in 10 minutes if necessary. Failing this a pressurized atomizer containing isoprenaline or Epinephrine can be of value².

Antihistamines and corticosteroids provide no immediate benefit but can undoubtedly mitigate the later symptoms and speed recovery. Above mentioned drug can be used alone or in combination like:

1. Antihistamine, Corticosteroid and Epinephrine alone.
 - a. Antihistamine & Corticosteroid.
 - b. Epinephrine & Antihistamine.
 - c. Epinephrine, Antihistamine & Corticosteroid.

Immunotherapy: It is safe and effective therapy and constitute an adequate model for the study of immunological changes occurring in the short and long term and for understanding the mechanism of action of venom¹⁵

(A) Rush SIT⁶

Is a reliable method for the treatment of anaphylactic reaction to hymenoptera venom even in less developed countries. Specific immunotherapy is done in hospitalized patient after getting complete history (age, sex, age when sting reaction happened, time of stinging, place of stings and symptoms after sting episode) Immunotherapy starts with single venom type by subcutaneous route. (first at 4th day then after 7 day, 14 day and monthly for a period of 3 years).

Efficacy of rush SIT is well documented¹³

It enables a hospital controlled administration of venom with a success of more than 95 % cases. Adverse reactions of different grades including anaphylactic reactions have been reported up to 64% cases¹¹.

Venom Immunotherapy (VIT)³

Patient having systemic reaction to hymenoptera sting should be evaluated by allergy specialist for the VIT. This involves a gradual weekly then biweekly increase in venom dose over 6-20 weeks, until a maintenance dose is reached. After that periodic booster dose administered at 4-8 week interval for a period of 3 to 5 years. The individual response depends on the rise of IgG the blocking antibody and an offsetting decrease in IgE. The risk of anaphylaxis from VIT is minimal (0.17%) per year and no reported deaths but local reaction can occur in 50% of patients .

Efficacy : Mixed vespid venom has higher efficacy than Individual one & VIT effective in 97% of cases.

Prognosis : Recurrence risk declines with time a. Initially 50%, b. By year 3-5 : 35%, c. By year 10 : 25 %

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The length of the peritoneal catheter in VP Shunt surgery: A review

Barkatullah AM¹, Mahmood E², Barua KK³, Alam MM⁴

The ORION 2005 ; 20 : 248-249

Abstract

Complications of distal ventriculoperitoneal shunt tubing is quite common either due to a short length of the catheter or a very long length of catheter in the peritoneal cavity. This review article is based on two sample cases of hydrocephalous, in which one had a short and the other had a long peritoneal catheter placement in the peritoneal cavity during VP Shunt surgery.

Keywords : Cerebrospinal fluid shunts, complication.

Case no. one

A thirteen years old right hander young boy, an amateur cricket player came to us in November 1996 with the complaints of headache, vomiting and blurring vision. Fundoscopic examination revealed gross papilloedema. A CT Scan revealed gross hydrocephalous with dilatation of all four ventricles without any other CT findings. A medium pressure ventriculoperitoneal shunt system was inserted by canulating the right lateral ventricle through a right parietal burr hole and the peritoneal catheter inserted through a right lower abdominal incision. After surgery the patient had an excellent recovery. He started back his usual activities as a cricketer. He was very good in bowling. After one year of surgery he noticed a small swelling in the right lower abdomen. He was advised for revision shunt surgery but he did not comply. About six and a half years later, in mid 2004 he developed headache and vomiting with gradually enlarging abdominal swelling, to the size of a cricket ball. An ultrasonogram of the abdomen revealed a cyst containing the peritoneal catheter of the VP Shunt in the anterior abdominal wall and a CT Scan of Brain revealed moderately dilated ventricular system suggesting improperly functioning VP Shunt system. He was hospitalized and revision of the peritoneal end of the ventricular catheter was planned. Upon surgery it was confirmed that the peritoneal end of the catheter had been pulled out of the peritoneal cavity and was lying between the external and internal oblique muscle layer of the anterior abdominal wall with the formation of a cyst. Excision of the cyst, repair of the anterior abdominal wall at this site and reintroduction of the ventricular catheter in the peritoneal cavity with added length was undertaken.



Fig. 1: A swelling beneath the scar mark in the right lower abdomen.



Fig. 2: Per-operative photograph of the cystic cavity.

Case no. two

A two months old female child was brought to the neurosurgery unit of Mitford Hospital Dhaka, Bangladesh on March 16, 2003 with an irregular mass in the lower back. On clinical examination it was found to be a lumbar meningocele with no motor deficit of lower limbs and no urinary incontinence. The head circumference was moderately enlarged with tense and bulging anterior fontanel (OFC 45 cm).

The VP shunt was removed by opening up sub cutaneous tract below the valve of the shunt system in the neck under local anesthesia and then bisecting the peritoneal catheter there. The extruding catheter per anus was gently pulled out. Then the ventricular catheter along with the valve was also pulled out by the neck opening of the catheter tract by gentle pull.



Fig. 3 : Per anal extrusion of the peritoneal catheter of VP Shunt.

The baby was kept on a third generation cephalosporin and metronidazole for five days and nothing by mouth and IV infusion for next twenty four hours. Oral feeds were subsequently started after confirming no bowel complications. A subsequent fresh VP shunt was inserted and the baby was doing quite fine after surgery.

Discussion

Shunt complications are numerous and can be classified under three main headings

- i. Infection
- ii. Functional failure
- iii. Mechanical failure

Late anal extrusion of the peritoneal catheter is a very rare complication with a very few cases reported so far^{1,2}. Factors relating to shunt failure have three potential origins: the surgeon the patient and the shunt. Shunt complications are in fact more often related to a combination of the factors³.

Experience with the primary insertion of an extended length open-ended peritoneal tubing (120 cm) undertaken expressly to avoid the need for a lengthening procedure because of growth of the patient had been reported very successful⁴.

In a review of new insertions of VP shunts using the extended length tubing over a 14-year period at Childrens Hospital of Los Angeles, a total 998 shunts were placed in 952 patients, with a mean follow-up period of 6.7 years. The patients experienced a total of 52 distal shunt revisions for a variety of malfunction etiologies. In patients ranging in age from premature neonate to 20 years, there was no increase in the distal complication rate, and specifically no complications were experienced that were directly related to the use of the extended length tubing⁴.

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An extra-abdominal cyst filled with cerebrospinal fluid was found postpartum in a patient with a ventriculoperitoneal (VP) shunt. No similar complication of VP shunting has been reported before except for our case no-1⁵.

Conclusion

Extra long peritoneal catheter and the rigidity of the tube along with the poor nutritional status of the patient appears to be the cause of the slow penetration of the catheter tip inside the lumen of the large gut. Pulsatile CSF out flow at the catheter tip and the peristaltic bowel movement added to the ultimate extrusion of the shunt per anus. This rare complication can be prevented by keeping the peritoneal end of the catheter to a minimum size, not more than 10 cm in the peritoneal cavity of the neonates and 25 - 30 cm in infants⁶. Our experience reveals that keeping the peritoneal catheter in infants not more than 20 cm. gives better results. As regards the patient factor the nutritional status of the patient must be taken

into good consideration in preventing such complications. So the answer for the question of what should be the length of the peritoneal catheter inside the peritoneal cavity be considered on the merit of each individual case.

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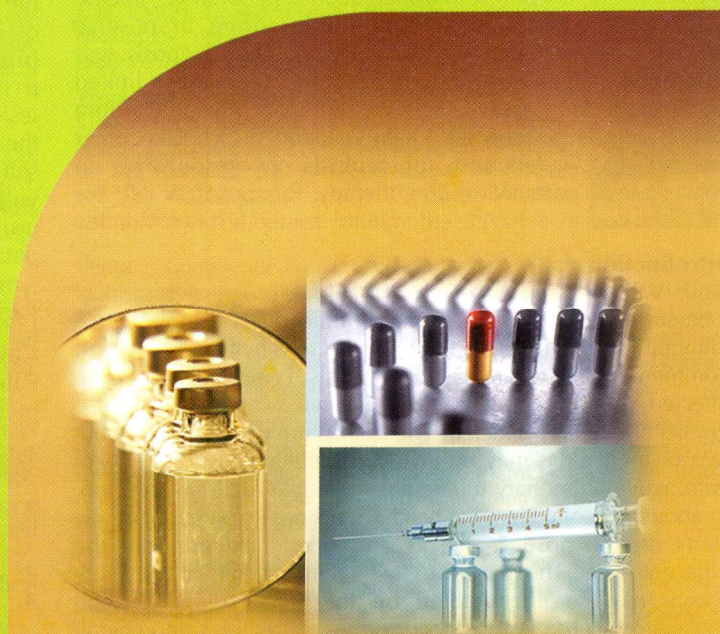
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Lupus vulgaris with perforation of hard palate: A case report

Kafi MAH¹, Chowdhury MAH², Rahman MM³

The ORION 2005 ; 20 : 250-251

Abstract

Tuberculosis continues to be a major health problem in some countries¹. It remains the most common infectious disease in the world & 2.5 million deaths annually². By 2005 WHO predicts there will be 10.2 million new cases and Africa will have more cases than any other region. cutaneous tuberculosis was described by R.Laennec (1781-1836)³.

As we move into 21st century, cutaneous tuberculosis has re-emerged due to development of resistance to antituberculous drugs and increase in diseases (type 1 D.M. Malignancy, chronic renal failure, gastro intestinal disease associated with malnutrition) and condition associated with immunodeficiency such as AIDS⁴. Mycobacterium tuberculosis, Mycobacterium Bovis & B.C.G. vaccine cause tuberculosis involving skin. True cutaneous tuberculosis can be acquired either exogenously (e.g. Tuberculosis chancre, Tuberculosis verrucosa cutis) or endogenously (lupus vulgaris, scrofuloderma). Tuberculids are the cutaneous immunologic reaction to non cutaneous tuberculosis which include erythema nodosum & Erythema induratum. Lupus vulgaris is the most common morphological variant of cutaneous tuberculosis⁵. In about 90% of patient head and neck are involved & female: Male is 2:3. The adults older patients have more extensive lesions than children.

Its course without therapy usually extends over many years or even decades. It is progressive & leads to considerable impairment of function & to disfigurement & perforation. In case of cutaneous tuberculosis history of exposure to positive contact, positive tuberculin test >10mm. The diagnosis was confirmed by histopathology, an enzyme linked immunosorbent assay (ELISA) test for mycobacterium tuberculosis & polymerase chain reaction (PCR). Like other tuberculosis, cutaneous tuberculosis is responsive to conventional combination drug therapy. Rifampicin & INH for the entire course & PZA & ethambutol for the first two months.

Introduction

Lupus Vulgaris is an extremely chronic & progressive form of tuberculosis of the skin occurring in individuals with moderate immunity and high degree of tuberculin sensitivity. It is the most common type of cutaneous tuberculosis. Female appear to be affected about two to three times as often as males & in all age groups are equally affected. The lesions are usually solitary but two or more sides may be involved simultaneously. In patient with active pulmonary tuberculosis multiple foci may develop. In about 90% of patient the head & neck are involved. It usually starts on the nose & cheeks and slowly extends into the adjacent area. The ear lobes are often affected and solitary patch may be encountered on the scalp. Only a small percentage of the lesions occur on the extremities. In general, lupus vulgaris is asymptomatic. The initial lesion is the lupus

macule or papule characterized by brownish red colour and a soft friable consistency. Upon diascopy the filtrate exhibits a typical apple jelly colour. They tend to heal slowly in one area and progress in another area. The early lesions are small, rather ill-defined infiltrate with a smooth surface or covered by a scale. Progression is characterized by an elevation of the lesions producing plaque.

The disease is destructive its course is marked by ulceration, on involution leaves deforming scar. Hypertrophic forms appear as soft tumours growth with a nodular surface or epithelial hypoplasia with pronounced hyperkeratosis. Oedema, lymphatic stasis, recurrent erysipelas, elephantiasis thickening and vascular dilatation may lead to gross deformity. In ulcerative forms, the underlying tissue may be affected by progressive necrosis, when the nasal auricular cartilage is involved extensive destruction and disfigurement ensue.

Lupus vulgaris of mucous membrane

The mucous may be primarily involved or become affected by the extension of skin lesion. They show small soft gray or pinkish papules, ulcers or granulating masses bleed easily. A dry rhinitis is often the symptom of early nasal lupus but progressive lesion destroy



Fig.1: A case of Lupus vulgaris

the cartilage of the nasal septum, cicatricial deformities of the soft palate and stenosis of the larynx may also result. Lupus vulgaris is extremely chronic & without therapy its course usually extends over many years or even decades. 40% of the patient with lupus vulgaris there is associated tuberculosis lymphadenitis 10-20% have pulmonary tuberculosis, bone & joint tuberculosis.

Case history

Patient Mr. Nikhil Chandra, 45 years old gentleman from Tongi presented to our hospital on 25/01/2004 with the complaints of

1. Skin lesion on the upper part of the anterior surface of left chest for 6 years.
2. Similar lesions on the face, lips and extensor surface of the wrist for 1 year.
3. Occasional mild fever with weight loss for 3 months.
4. Difficulty in speech and nasal regurgitation of food during swallowing for 3 months.
5. Year back he attended the skin and VD dept of BSMMU. Dhaka with the similar lesion. He was prescribed some medication names of which the patient could not mention. Following that treatment the patient remained well for 1 year and subsequently the lesion reappeared again.

On examination the patient was found to have moderate pallor, plaque type erythematous lesion covered with crust and scar on the left side of the upper chest, face and extensor

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surface of the wrist. No sensory impairment was noted over those area. There was perforation of hard palate with erythematous margin. No other abnormalities were noted in other systems.

Investigation reports revealed

CBC: Hb% - 11.7gm/dl (73%), ESR- 85mm, WBC-5000/mm³ Polymorph - 42%, Lymphocyte - 48%, Monocyte- 4%, Eosinophil-6%, Basophil-0%, MT-16 mm induration Blood Sugar-3.5 mmol/L, X-ray chest-Normal, VDRL-Non Reactive, Urine R/M/E- Normal, Biopsy of skin- Showed skin tissue with features of lupus vulgaris

Discussion

Lumps vulgaris is the most common variant of cutaneous tuberculosis⁵. It is destructive in its course is marked by ulceration, perforation and on involution leaves deforming

scar. From lupus vulgaris scar developed a squamous cell carcinoma⁶. In this particular case lupus vulgaris associated with perforation of hard palate. Lupus vulgaris developed from a tattoo marks⁷. It also developed in a skin graft⁸. Lupus vulgaris & scrofuloderma are the most frequent from of skin TB associated with organ TB.¹

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MSD NEWS

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Venue: China Kitchen Restaurant, Hatirpool, Dhaka

A farewell program for Prof. Fazlul Haque and reception program for Dr. Faroque Ahmed of Surgery Unit-5 of Dhaka Medical College Hospital held on 26th. August, 2004 at China Kitchen Restaurant, Hatirpool, Dhaka. Dr. Faroque Ahmed, Associate Prof. of Surgery, Unit-5, DMCH chaired the occasion.

Venue: Charping Chinese Restaurant, Rajshahi

A RTM on "Role of Cephalosporin in Surgical Cases" held on 29th. October, 2004 at Charping Chinese Restaurant, Rajshahi arranged by Orion Laboratories Ltd. Dr. Lutfar Rahman Associate Prof. Neurosurgery dept. RMCH chaired the session and Dr. G.M. Raihanul Islam, Medical Associate, Orion Laboratories Ltd. was present as speaker.

Venue: Monda Health Complex, Rajshahi

A RTM on "Role of Cephalosporin in different diseases" held on 14th. October 2004 at Monda Health Complex, Rajshahi. Dr. Dabir Uddin, THA, chaired the session and Dr.G.M. Raihanul Islam, Medical Associate, Orion Laboratories Ltd. discussed on the topic.

Venue: Charping Chinese Restaurant, Rajshahi

Orion Laboratories Limited arranged a RTM on "Vertex" on 23rd. September 2004 at Charping Chinese Restaurant, Rajshahi. Prof. M.H. Haidery, Paediatric dept. (Unit-1 & 2), RMCH chaired the session. Dr.G.M. Raihanul Islam, Medical Associate, Orion Laboratories Ltd. discussed on the topic.

Venue: Singra Health Complex, Rajshahi

RTM on "Vertex" held on 25th. September, 2004 at Singra Health Complex, Rajshahi. Dr. Abdul Ahad, THA, chaired the session and Dr.G.M. Raihanul Islam, Medical Associate, Orion Laboratories Ltd. discussed on the topic.

Venue: Paediatric Medicine Department, Sylhet MAG Osmani Medical College & Hospital, Sylhet

RTM on "Major Gastrointestinal disorder in children" held on 25th. November, 2004 at Paediatric department, SOMCH, Sylhet. Dr. Provat Kumar, Registrar, Paed. dept. SOMCH, Sylhet chaired the occasion and Dr. Sumon, CA (MU-2) discussed on the topic.

Venue: Medicine Teaching Corner, Sylhet MAG Osmani Medical College & Hospital, Sylhet

RTM on "General discussion on use of Cephalosporin injection" held on 4th. November, 2004 at Medicine Teaching Corner, SOMCH, Sylhet. Dr. Rajib, C/A, MU-4, SOMCH, Sylhet, chaired the occasion and also discussed on the topic.

Venue: FIMC Hall Room, Sher-E-Bangla Medical College & Hospital, Barisal.
Orion Laboratories Limited arranged a RTM on "Role of Ceftriaxone in the management of Meningitis" on 25th August 2004 at FIMC Hall Room, SBMC. Dr. Anwar Hossain, Asst. Reg. MU-3, SBMCH discussed on the topic.

Venue: Sadar Hospital Auditorium, Hobigonj.

Orion Laboratories Limited arranged a RTM on "Management of Burn" on 14th October 2004 at Sadar Hospital Auditorium, Hobigonj. Dr. Golam Rajjak Chowdhury, C.S. Hobigonj, chaired the occasion and Dr. Kamrul Hasan, Medical Associate, Orion Laboratories Ltd. discussed on the topic.



Venue: Medicine Teaching Corner, Sylhet MAG Osmani Medical College & Hospital, Sylhet.

Orion Laboratories Limited arranged a RTM on "Management of UTI" on 26th September 2004 at Medicine Teaching Corner, Unit-4. Dr. Rahat, Asst.Reg. Med. Unit-4 chaired the occasion. Dr. Kawsar, Internee Doctor discussed on the topic.

Venue: Seminar Hall, Chittagong Medical College & Hospital.

A RTM on "Peptic Ulcer disease" held on 8th October 2004 at Seminar Hall, CMCH. Dr.M.A. Hasan Chowdhury, Consultant, Medicine Dept. chaired the occasion and Dr.Nurul Abser, Medical Associate, Orion Laboratories Ltd. discussed on the topic.

Venue: Sadar Hospital, Gopalganj.

RTM on "Recent management of IHD & combination therapy of hypertension" held on 22nd September 2004 at Sadar hospital, Gopalganj. Dr. Md. Shahjahan, C.S. Gopalganj chaired the occasion and Dr. Md.Shahjahan and Dr. Proshanto Sharnoker discussed on the topic respectively.



Venue: Conference Room, Chittagong Ma-O-Shishu Hospital.

Orion Laboratories Limited arranged a RTM on "Dengue fever and UTI in children" on 8th September 2004 at Conference Room, Chittagong Ma-O-Shishu Hospital. Prof. N. I. Khan, Academic Director chaired the occasion and Dr. Md. Rasel Farid Chowdhury & Dr. Delwar Hossain discussed on the topic respectively.

Venue: Pediatric department, Chittagong Medical College & Hospital.

Orion Laboratories Limited arranged a RTM on "Typhoid fever in children" on 26th August 2004 at Pedi.dept in CMCH. Dr. Badrul Alam, Assoc. Prof. Pediatrics, CMCH chaired the occasion and Dr. Jafar Ahmed, IMO discussed on the topic.

Venue: Sadar Hospital Conference Room, Madaripur.

Orion Laboratories Limited arranged a RTM on "Recent management of IHD" on 23rd September 2004 at Sadar Hospital, Madaripur. Dr. Shajedha Begum, C.S. Madaripur chaired the occasion. Dr. Harun Ar Rashid & Dr.Iqram Hossain discussed on the topic respectively.



Venue: F.P.A.B. Auditorium, Patuakhali.

RTM on "Role of Cephalosporin injections in the management of severe infections" held on 5th December 2004 at FPAB Auditorium, Patuakhali. Dr. Nurunnahar Begum, C.S. Patuakhali chaired the occasion. Dr. Mazharul Islam, Consultant, Med. General Hospital, Patuakhali discussed on the topic.

Launching of New Products

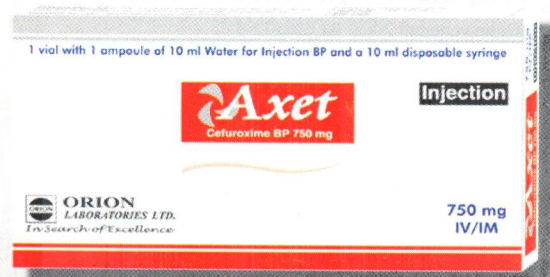
Orion Laboratories Limited has recently introduced the following four products in the market

Axet- 750 IV/IM Injection

Cefuroxime Sodium

Decisive assault against pathogens

Axet (Cefuroxime) is a 2nd generation broad-spectrum parenteral cephalosporin antibiotic. It is active against a wide range of Gram-positive and Gram-negative bacteria including *Staphylococcus aureus*, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Neisseria spp*, *Haemophilus influenzae* and many common Gram-negative hospital pathogens such as *Escherichia coli*, *Klebsiella spp*, *Proteus mirabilis*. Axet has a noteworthy activity against betalactamase producing strains



of *Haemophilus influenzae* and *Neisseria gonorrhoeae*, which are resistant to ampicillin and penicillin. It is indicated for the treatment of upper and lower respiratory tract infections, skin and soft tissue infections, urinary tract infections, gonorrhoea, septicemia, meningitis, prophylaxis against infections in abdominal, pelvic, orthopedic, cardiac, pulmonary, oesophageal & vascular surgery. The usual adult dose is 750 mg 3-4 times daily intravenously or intramuscularly for 5-10 days depending on the type and severity of infections. Axet Inj. is available as 750 mg IV/IM and the price is Tk. 125.00/ vial

Axet 750 mg

Tk 125.00/vial

Sefin-250 mg, 500 mg & 1 gm IV/IM Injection

Cephadrine

Safe & effective for all age group

Sefin (Cephadrine) is a 1st generation cephalosporin antibiotic with broad-spectrum bactericidal activity against both Gram-positive and Gram-negative bacteria. It is also highly active against most strains of penicillinase producing staphylococci. Sefin is rapidly absorbed from the gastrointestinal tract. It is indicated for the treatment of upper and lower respiratory tract infections, urinary tract infections, skin and soft



tissue infections, gastrointestinal tract infections and also surgical prophylaxis. Inj. Sefin are available as 250mg, 500 mg and 1gm IV/IM. The usual adult dosage of Sefin Inj. is 2-4 gm daily in 3-4 divided doses.

Sefin 250 mg

Tk 35.00/vial

Sefin 500 mg

Tk 50.00/vial

Sefin 1gm

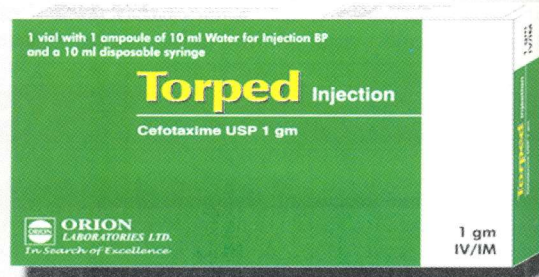
Tk 80.00/vial

Torped

Cefotaxime Sodium

The power against pathogens

Torped (cefotaxime) is a 3rd generation broad-spectrum parenteral cephalosporin antibiotic. It is exceptionally active in-vitro against Gram-negative organism, sensitive to first or second-generation cephalosporins. Torped is similar to other cephalosporins in activity against Gram-positive organisms. It is indicated for the treatment of respiratory tract infections, urinary tract infections, septicemia, soft tissue infections, bone and joint



infections, obstetric and gynaecological infections, gonorrhoea and also surgical prophylaxis. It is the drug of choice for the treatment of meningitis caused by susceptible *H. influenzae* (including penicillinase producing strains). Torped are available as 250 mg, 500 mg & 1 gm IV/IM injection. The usual adult dosage of Inj. Torped is 1 gm every 12 hourly.

Torped 250 mg

Tk 75.00/vial

Torped 500 mg

Tk 50.00/vial

Torped 1 gm

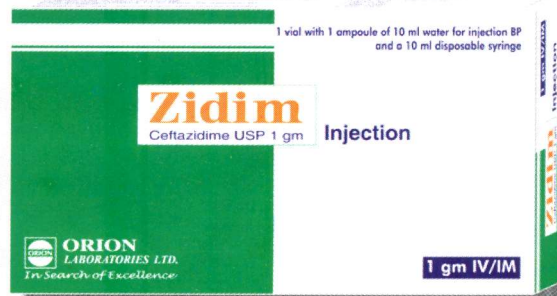
Tk 130.00/vial

Zidim

Ceftazidime

A real threat to pathogens

Zidim (ceftazidime) is a 3rd generation broad-spectrum parenteral cephalosporin antibiotic, which is resistant to most beta-lactamase and active against wide range of Gram-positive and Gram-negative bacteria. It is indicated for the treatment of single infection and mixed infections caused by two or more susceptible organisms, respiratory tract infections, skin and soft tissue infections, gastrointestinal, biliary and abdominal infections,



bone and joint infections and also infections associated with dialysis. It is more active against *Pseudomonas spp*. Zidim are available as 500 mg & 1 gm IV/IM injection. The usual dosage of Inj. Zidim is 1-2 gm 8-12 hourly.

Zidim 500 mg

Tk 115.00/vial

Zidim 1gm

Tk 215.00/vial

MSD NEWS

Coordination meeting of "The ORION" medical journal

Venue : Meghna, Pan Pacific Sonargaon Hotel

Orion Laboratories Ltd. arranged a co-ordination meeting of it's medical journal 'The ORION' on Friday, 8 October at Meghna, Pan Pacific Sonargaon Hotel chaired by Prof. M.A. Mazed, Consultant, ENT department, Holy Family Red Crescent Hospital. Md. Ebadul Karim, Executive Director of Orion Laboratories Limited welcomed the participants. Further development of 'The ORION' and acceptance with substantial contribution in CME and services to the doctors' community the following eminent doctors of the country delivered their speech with suggestions and directions. Renowned gynecologist and obstetricians Prof. T.A Chowdhury, eye specialist Prof. Mustafizur Rahman,



child specialist Prof. M Q K Talukdar, cardiologist Prof. K H M S Sirazul Haque, cardiologist Prof. Nazrul Islam, child specialist Prof. M A K Azad Chowdhury, Dr.G.H Rabbani and Dr. Mahbubur Rahman, scientist of ICDDR, cardiologist Prof.Hasina Banoo,medicine specialist Prof.Sheikh Nesar uddin Ahmed, gynecologist and obstetricians Prof.Kohinoor Begum, medicine specialist Prof.F.A.J. Janan, anaesthesiologist Prof.K.M Iqbal. Prof. T A Chowdhury in his speech expressed his appreciation for it's regular publication and contribution in CME. Prof. M Q K Talukdar in his speech encouraged its regular publication. Prof. Mustafizur Rahman also expressed his satisfaction over marked development of "The ORION". In closing speech Prof. M A Mazed thanked the Chief Editor of "The ORION" and Executive Director of Orion Laboratories Ltd. for regular publication of 'The ORION'. He also advised to take the appropriate measures for further development of this journal. Chief Editor Dr. Md. Zakirul Karim conducted the meeting and Mr. Quamrul Hassan, Vice President (Marketing) of Orion Laboratories Limited thanked the participants.

Internee Doctors Reception Program

Venue: Lecture Gallery, Dinajpur Medical College, Dinajpur

Orion Laboratories Limited congratulate the Intern Doctors of Dinajpur Medical College and arranged a grand gala reception program and Scientific Seminar on "Recent Management of Hypertension" at 7:30 pm on 10th September, 2004 at Lecture Gallery of Dinajpur Medical College. Dr. Md. Ziaul Haque, G.S, BMA, Dinajpur, welcomed the participants. Dr. A.H.M. Shafiqur Rahman, President, BMA, Dinajpur, chaired the session. Dr. M. Saiful Bari, Principal, DJMC was present as Keynote speaker and also Chief Guest of the session. Dr. S.M. Abul Kalam, Civil Surgeon, Dinajpur and Dr. Md. Azizul Islam, President, BPMP, Dinajpur were present as special guest respectively.

Venue: Hotel Amir International, Mymensingh

Orion Laboratories Limited congratulate the Intern Doctors of Mymensingh Medical College and arranged a grand gala reception program and Scientific Seminar on "Ischemic Heart Disease-A Modern Epidemic" at 12:00 noon on 12th October, 2004 at Hotel Amir International, Mymensingh. Dr. Harun-Or-Rashid Harun, G.S, IDA, MMCH, welcomed the participants. Dr. Abdullah Al Mamun Alamgir, President, IDA, MMCH chaired the session. Dr. Md. Shamsul Haque, Assoc. Prof. & Head of the Dept. of



Cardiology, MMCH was present as Keynote speaker of the session. Prof. Abdullah Akhtar Ahmed, Principal, MMC was present as Chief Guest of the occasion. Dr. Saiyeedur Rahman, G.S, Teachers Association, MMC, Dr. Muhammad Ali Siddiqui, G.S, BMA, Mymensingh, Dr. AKM Musa Shaheen, President, BMA, Mymensingh, Brig. Gen. Dr. Md. Abdus Shahid Khan, Director, MMCH were also present as Special Guest of the session.

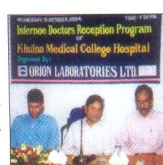
Venue: North Way Hotel, Bogra

Orion Laboratories Ltd. congratulates the Intern Doctors of Bogra Medical College and arranged a grand gala reception program at 8:00 pm on 6th October, 2004 at North Way Hotel, Bogra. Dr. Gazi Saiful Alam Chowdhury, Asst. Registrar, CCU, Dr. Samir Hossain, Asst. Registrar, Surgery and Dr. Shafiqul Islam, Asst. Registrar, Surgery were present on the occasion.



Venue: Hotel Royal International, Khulna

Orion Laboratories Limited congratulates the Intern Doctors of Khulna Medical College and arranged a grand gala reception program at 8:00 pm on 13th October, 2004 at Hotel Royal International, Khulna. Dr. Matiar Rahman Khan, Assoc. Prof. Of Ophthalmology and Superintendent/ Director of KMCH was present as Chief Guest of the occasion. Dr. Abdul Kader, Asst. Registrar, Dept. of Orthopaedics was also present as Special Guest of the program.



Venue: Redfort Chinese Restaurant, Uttara, Dhaka

Orion Laboratories Limited congratulate the Intern Doctors of Moulana Bhasani Medical College and arranged a grand gala reception program at 12:30 pm on 13th December, 2004 at Redfort Chinese Restaurant, Uttara, Dhaka. Dr. Abu Altaf Hossain, Director MBMCH Chaired the occasion. Dr. Md. Momtazul Momen, Asst. Director, MBMCH was also present as Chief Guest of the program.

Venue: Hotel Raffle Inn, Faridpur

Orion Laboratories Limited congratulate the Intern Doctors of Faridpur Medical College and arranged a grand gala reception program at 12:00 noon on 8th December, 2004 at Hotel Raffle Inn, Faridpur. Dr. Niranjan Dhali, Senior Consultant, Dept. of Paediatrics FMCH Chaired the occasion. Dr. M. A. Malek, Assoc.Prof. of Surgery, FMCH and Dr. Sardar Md. Showkot Ali, Assoc. Prof. of Pediatrics, FMCH were present as Chief Guest and Special Guest respectively of the occasion.

Venue: Priyangan Community Centre, Dhaka

Orion Laboratories Limited congratulate the Intern Doctors of Dhaka National Medical College and arranged a grand gala reception program at 12:00 noon on 9th October, 2004 at Priyangan Community Centre, Dhaka. Prof. M. R. Azad, Director, DNMCH Chaired the occasion. Dr. Rezaul Huq Ronny, Internee Doctor, DNMCH was also present as Chief Guest of the program.



Round Table Meeting

Venue: Surgery Department, Bangladesh Medical College, Dhaka

Orion Laboratories Limited arranged a RTM on "Role of Ceftriaxone in the management of post operative infections" at Surgery department, BMC on 7th October, 2004. Prof. Abu Ahmed Chowdhury, Head of Surgery & Medical Director, BMC, chaired the occasion. Prof. Anisur Rahman department of Surgery, BMC discussed on the topic.

Venue: Medicine Department, Bangladesh Medical College, Dhaka

A RTM on "Management of Enteric fever" at Medicine department of BMC on 5th October, 2004. Prof. Taimor Nawaz, Head of Dept. of Medicine, BMC, chaired the occasion. Dr. Mujibul Hoque Mollah, Associate Prof. Dept of Medicine, BMC discussed on the topic.

Venue: Gynae Department, Bangladesh Medical College, Dhaka

RTM on "Role of Cephalosporin in the management of perioperative infections" at Gynae department of BMC on 9th October, 2004. Prof. Shahla Khatun, Head, dept of Gyane, BMCH, chaired the occasion & discussed on the topic.

The rest of the MSD news at page -251

Medi News

Zinc improves recovery from Pneumonia

Pneumonia often affects children with low birth weight or those whose immune systems are weakened by malnutrition or other diseases. It kills two million children each year. A new study from Bangladesh shows yet again that young children with severe pneumonia benefit from taking zinc supplements. In this study, 270 infants between the ages of two and 23 months were given either 20mg of zinc per day or a dummy pill in addition to conventional antibiotics. Children given zinc recovered an average of one day earlier than those who had been given dummy pills. They also left hospital one day earlier, on average. The researchers believe zinc may speed recovery by reducing inflammation and lower obstruction in the airway. The findings showed that giving children zinc is cost effective. A course of zinc treatment costs just US\$0.15. A one-day stay in hospital in Bangladesh costs US\$25. "In view of the high number of children in this age-group hospitalized with severe pneumonia, the cost savings could be substantial," say the researchers, from the Centre for Health and Population Research and Bloomberg School of Public Health at the Johns Hopkins University, writing in *The Lancet*. Zinc appears to significantly reduce the duration of fever and severity of illness in boys with pneumonia and other serious lower respiratory infections, according to a new study published in the March issue of the *American Journal of Clinical Nutrition*. Researchers studied 153 children aged between two months and two years old, who were hospitalized with severe acute lower respiratory infections. They found that recovery from very ill status and from fever in boys who received zinc treatments was 2.6 times and three times those in non-zinc-treated children.

American Journal of Clinical Nutrition (vol 79, no 3, 430-436)

Laptops may damage male fertility

Men who use laptop computers could be unwittingly damaging their fertility, experts believe. Balancing it on the lap increases the temperature of the scrotum which is known to have a negative effect on sperm production, researchers found. Coupled with the rising popularity of these computers—about 150m people use them worldwide—much more research is needed say the US authors. Lead researcher Dr Yefim Sheynkin, from the State University of New York at Stony Brook, said: "Laptops can reach internal operating temperatures of over 70°C. They are frequently positioned close to the scrotum, and as well as being capable of producing direct local heat, they require the user to sit with his thighs close together to balance the machine, which traps the scrotum between the thighs." The researchers asked 29 healthy male volunteers aged between 21 and 35 to take part in an experiment. They then recorded the temperature changes to the scrotum caused by laptop use and different seating positions over one hour time periods. Just sitting with the thighs together, a posture needed to balance a laptop, caused scrotal temperatures to rise by 2.1°C.



Using it on your lap could be risky

cnn.com/HEALTH

Protein stops heart attack damage

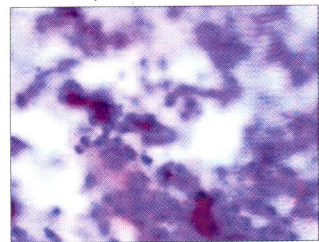
A protein produced by the heart during its development could be used to repair heart attack damage, research suggests. University of Texas scientists worked on mice, but hope their findings will eventually lead to new treatment for heart disease. The protein, Thymosin beta-4, is already used in clinical trials to promote wound healing on the skin. The Nature research found it prevented cell death and limited scar tissue formation after a heart attack. Thymosin beta-4, is produced by embryos during the heart's development. It plays a key role in keeping heart cells alive, and ensuring they migrate to the right place. The Texas team simulated a heart attack in 58 adult mice by tying off the coronary artery. Half of the animals were given injections of Thymosin beta-4, and the rest a control injection of saline. The researchers found that Thymosin beta-4 caused fewer cells in the affected part of the heart to die, resulting in improved function even several weeks after the heart attack. They believe the protein triggers changes in cell metabolism to create stronger heart muscle cells that can resist the low oxygen conditions after a heart attack. Lead researcher Professor Deepak Srivastava said it was hoped to launch clinical trials using the protein to treat the heart in the near future. The next step will be to determine the most effective dose, the best time to administer it, and how long it after a heart attack it can be given and still remain effective. bbc.com/health



Protein stops cell death

Gel may destroy cervical cancer

A gel to destroy cervical cancer cells and minimise the threat of disease is under development. The gel, applied directly to the cervix, is designed to block the growth of proteins which play a key role in the development of cancer. Tests by York University showed that the treatment could induce cancerous cells to commit suicide. The scientists hope their work will eventually see an end to the need for surgery for early-stage disease. They hope clinical trials will be carried out in the UK soon. However, they stress that their work is still at a relatively early stage. Cervical cancer kills almost 250,000 women worldwide each year. It is caused by a common sexually transmitted virus, the human papilloma virus (HPV). The virus inserts its own DNA into cells on the cervix's surface, triggering production of proteins that prevent the cells from dying, and turn them cancerous instead. The new gel is designed to boost the body's immune system so it is able to fight back against HPV, and prevent the build up of the rogue proteins. bbc.com/health



Proteins trigger cells to become cancerous

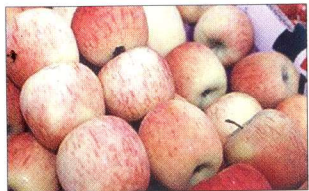
Apple juice protects the heart

An apple juice a day could keep a trip to the heart doctor away, says new research. A team of researchers at UC Davis School of Medicine in the US have found that drinking apple juice appears to slow down a process that can lead to heart disease. Compounds in apples and apple juice called phytonutrients act in much the same way that red wine and tea do to delay the break down of LDL or "bad" cholesterol. When LDL oxidises, or deteriorates in the blood, plaque accumulates along the walls

www.orion-group.net/journals

Medi News

of the coronary artery and causes atherosclerosis (a dangerous thickening of the artery). Lead researcher Dianne Hyson, a dietician, said: "Previous studies have shown that eating fruits and vegetables is associated with a reduced risk of coronary artery disease. "But this is the first clinical study to show the potential benefits of active compounds in apple juice and apples." Although the researchers expected to see positive results from drinking apple juice, they were surprised to find beneficial effects after only six weeks. Ms Hyson said: "A very moderate intake of apple juice has the potential to reduce risk factors for heart disease in a fairly short period of time. "This small diet change might play an important role in a heart healthy diet."



Apples include a beneficial compound

bbc.com/health

Smoking is bad for your brain

More research has been published linking smoking to health risks with a study suggesting the habit affects IQ. Researchers from the Universities of Aberdeen and Edinburgh looked at how the cognitive abilities of smokers and non-smokers changed over time. They found smokers performed significantly worse in five separate tests. The research, part of the Scottish Mental Health Survey, is published in New Scientist magazine. Around 465 people were tested on their mental abilities in 1947 when they were aged 11. They were then tested a second time between 2002 and 2002, when they reached the age of 64. On this occasion they underwent tests to evaluate their non-verbal reasoning, memory and learning, how quickly they processed information, decisions about how to act in particular circumstances and construction tasks. Current or former smokers were found to perform less well in the tests even after factors such as childhood IQ, education, occupation and alcohol consumption were taken into account. The effect appeared to be stronger in current smokers according to the study, which was also published in the journal Addictive Behaviors.



Smoking is now linked with cognitive damage

bbc.com/health

Lead exposure link to cataracts

Accumulated lead exposure may increase the risk of developing a cataract, research suggests. Scientists at Boston's Brigham and Women's Hospital found people with the highest level of lead in their bones were most likely to develop a cataract. Cataracts, the leading cause of blindness world-wide, are a clouding of the lens, the clear tissue which focuses light on to the retina. The study is published in the Journal of the American Medical Association. Despite measures to cut lead pollution most adults have substantial levels in their bodies.



Cataracts are a leading cause of sight problems

Previous research has indicated that low-level lead exposure may increase the risk of a number of chronic age-related diseases. The Boston team investigated whether there was an association between the development of cataracts and lead levels in two bones-the tibia (shin bone) and the patella.

Data was analysed on 642 male patients, or which 122 developed a cataract. The researchers found that men with the highest tibia lead level were 2.7 times more likely to develop a cataract than those who recorded the lowest level of lead in this bone. When other factors, such as smoking and diabetes were taken into consideration, the risk rose to 3.2 times that of those exposed to the lowest lead levels.

reuters.com/health

Ultrasounds safe for baby

Pregnant women can be reassured that having several ultrasounds will not harm their unborn baby. The researchers were concerned 10 years ago when they found pregnant women who had a series of ultrasounds were more likely to give birth to a smaller child than women who had a single scan. Specifically, pregnant women who had been randomly assigned to have ultrasounds at five different times had children who weighed slightly less at birth than women who had one scan at 18 weeks. But when the researchers followed the 2714 children for eight years they found the children who had been exposed to the multiple ultrasounds in the womb had caught up with the others by the time of their first birthday. The researchers also found no differences in the children's speech, language, behaviour or neurological development. In general women could be very greatly reassured that prenatal ultrasound imaging is safe when used responsibly.

Health & medical news

Chocolate may cure coughs

An ingredient in chocolate could be used to stop persistent coughs and lead to more effective medicines, say U.K. researchers. Their small study found that theobromine, found in cocoa, was nearly a third more effective in stopping persistent coughs than codeine, currently considered the best cough medicine. The Imperial College London researchers, who published their results online in the FASEB Journal, said the discovery could lead to more effective cough treatments. "While persistent coughing is not necessarily harmful it can have a major impact on quality of life, and this discovery could be a huge step forward in treating this problem," said Professor Peter Barnes of Imperial College and Royal Brompton Hospital. Ten healthy volunteers were given theobromine, codeine or a dummy pill during the trial. Neither the volunteers nor the researchers knew who received which pill. The researchers then measured levels of capsaicin, which is used in research to cause coughing and as an indicator for how well the medicines are suppressing coughs. The team found when the volunteers were given theobromine, the concentration of capsaicin needed to produce a cough was around a third higher than in the placebo group. When they were given codeine they needed only marginally higher levels of capsaicin



to cause a cough compared with the placebo. The researchers said that theobromine worked by suppressing vagus nerve activity, which is responsible for causing coughing. They also found that unlike some standard cough treatments, theobromine caused no adverse effects on the cardiovascular or central nervous systems, such as drowsiness.

ABC Science Online

Information for Authors

The followings are the minimum requirements for manuscripts submitted for publication

The **MANUSCRIPT** should be prepared according the modified Vancouver style as proposed by the International Committee of Medical Journal Editors (ICMJE). The entire uniform requirements document was revised in 1997 which is available in the Journal of American Medical Association (JAMA, 1997; 277:927-934) and is also available at the JAMA website. Sections were updated in May 1999 and May 2000. A major revision is scheduled for 2001. The following section is based mostly on May 2000 update.

THREE COPIES of the manuscript should be sent in a heavy paper envelope. Manuscripts must accompany a covering letter signed by all authors. This must include (i) information on prior or duplicate publication or submission elsewhere of any part of the work as defined earlier in this document; (ii) a statement of financial or other relationships that might lead to a conflict of interest; (iii) a statement that the manuscript has been read and approved by all the authors, that the requirements for authorship have been met; and (iv) the name, address, and telephone number of the corresponding author, who is responsible for communicating with the other authors about revisions and final approval of the proofs. The letter should give any additional information that may be helpful to the editor.

A 1.44 MB 3.5 inch good quality **FLOPPY DISK** or **CD** must accompany the printed copies of the manuscript containing an electronic copy of the manuscript prepared in Microsoft Word 6.0 or later version.

PREPARE MANUSCRIPT AS PER THE FOLLOWING GUIDELINES

DOUBLE-SPACE all parts of manuscripts. **TYPE** or **PRINT** on only side of the paper. Number pages consecutively, beginning with the title page. Put the page number in the upper or lower right-hand corner of each page.

BEGIN, ON A NEW PAGE, each section or component with following sequence: title page, abstract and key words, text, acknowledgments, references. Tables, figures and illustrations may be positioned within the text where they should appear.

The **TEXT** of observational and experimental articles is usually divided into sections with the headings of Introduction, Methods, Results, and Discussion. Long articles may need subheadings within some sections (especially within the Results and Discussion sections) to clarify their content. Other types of articles, such as case report, review, and editorial, are likely to need other formats.

The **TITLE PAGE** should carry (i) the title of the article, which should be concise but informative; (ii) the name by which each author is known, with his or her highest academic degree and institutional affiliation; (iii) the name of the department and the institution to which the work should be attributed; (iv) disclaimers, if any; (v) the name and address of the author responsible for correspondence concerning the manuscript; and (vi) sources of support in the form of grants, equipment, or drugs.

The **ABSTRACT** should be in second page and should usually be not more than 150 words for unstructured abstracts or 250 words for structured abstracts. The structured abstract should have following sections: (i) objective(s), (ii) methods, (iii) year and place of work, (iv) results, and (v) conclusion. The abstract should state the purposes of the study or investigation, basic procedures (selection of study subjects or laboratory animals, observational and analytical methods), main findings (giving specific data and their statistical significance, if possible), and the principal conclusions. It should emphasize new and important aspects of the study or observations.

Below the abstract, authors should provide 3 to 10 **KEY WORDS** or short phrases that will assist indexers in cross-indexing the article and that may be published with the abstract. Terms from the medical subject headings (MeSH) list of Index Medicus should preferably be used.

Introduction should state the purpose of the article and summarize the rationale for the study or observation. Give only strictly pertinent references and do not include data or conclusions from the work being reported.

In **METHODS**, describe your selection of the observational or experimental subjects (patients or laboratory animals, including controls) clearly. Identify the age, sex, and other important characteristics of the subjects. Identify the methods, apparatus (give the manufacturer's name and address in parentheses), and procedures in sufficient detail to allow other workers to reproduce the results. Give references to established methods, including statistical methods; provide references and brief descriptions for methods that have been published but are not well known; describe new or substantially modified methods, give reasons for using them, and evaluate their limitations. Precisely identify all drugs and chemicals used, including generic name, dose, and route of administration. Reports of randomized clinical trials should present information on all major study elements including the protocol (study population, interventions or exposures, outcomes, and the rationale for statistical analysis), assignment of interventions (methods of randomization, concealment of

allocation to treatment method of masking (blinding). Authors submitting review manuscripts are advised to include a section describing the methods used for locating, selecting, extracting, and synthesizing data.

In **Results** section, when data are summarized, specify the statistical methods used to analyze them. Present your results in a logical sequence in the text, tables, and illustrations. Do not repeat in the text all the data in the tables or illustrations; emphasize or summarize only important observations. Restrict tables and figures to those needed to explain the argument of the paper and to assess its support. Use graphs as an alternative to tables with many entries; do not duplicate data in graphs and tables. Number tables consecutively in the order of their first citation in the text, and supply a brief title for each. Give each column a short or abbreviated heading. Place explanatory matter in footnotes, not in the heading. Identify statistical measures of variations such as standard deviation and standard error of the mean. Do not use internal horizontal and vertical rules. Be sure that each table is cited in the text. Figures should be professionally drawn and photographed. Supply raw data in separate page so that the figures may be redrawn. For x-ray films, and other material, send sharp, glossy, black-and-white photographic prints, usually 127 x 173 mm (5 x 7 in) but no larger than 203 x 254 mm (8 x 10 in).

In **DISCUSSION** emphasize the new and important aspects of the study and the conclusions that follow from them. Do not repeat in detail data or other material given in the Introduction or the Results section. Include in the Discussion section the implications of the findings and their limitations, including implications for future research. Relate the observations to other relevant studies.

Link the **Conclusions** with the goals of the study, but avoid unqualified statements and conclusions not completely supported by the data. State new hypotheses when warranted, but clearly label them as such. Recommendations, when appropriate, may be included.

Acknowledgments may go as an appendix to the text, one or more statements may specify (i) contributions that need acknowledging but do not justify authorship, such as general support by a departmental chair; (ii) acknowledgments of technical help; (iii) acknowledgments of financial and material support, which should specify the nature of the support.

References should be numbered consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by Arabic numerals in parentheses. References cited only in tables or figure legends should be numbered in accordance with the sequence established by the first identification in the text of the particular table or figure.

Use the style of the examples below, which are based on the formats used by the NLM in Index Medicus. The titles of journals should be abbreviated according to the style used in Index Medicus. Consult the List of Journals Indexed in Index Medicus, published annually as a separate publication by the library and as a list in the January issue of Index Medicus. The list can also be obtained through the library's web site (<http://www.nlm.nih.gov/>).

Avoid using abstracts as references. References to papers accepted but not yet published should be designated as "in press" or "forthcoming"; authors should obtain written permission to cite such papers as well as verification that they have been accepted for publication. Information from manuscripts submitted but not accepted should be cited in the text as "unpublished observations" with written permission from the sources.

Avoid citing a "personal communication" unless it provides essential information not available from a public source, in which case the name of the person and date of communication should be cited in parentheses in the text. For scientific articles, authors should obtain written permission and confirmation of accuracy from the source of a personal communication.

The references must be verified by the author(s) against the original documents.

The Uniform Requirements style (the Vancouver style) is based largely on an ANSI standard style adapted by the NLM for its databases. Notes have been added where Vancouver style differs from the style now used by NLM.

Measurements of length, height, weight, and volume should be reported in metric units (meter, kilogram, or liter) or their decimal multiples. Temperatures should be given in degrees Celsius. Blood pressures should be given in millimeters of mercury. All hematological and clinical chemistry measurements should be reported in the metric system in terms of the International System of Units (SI).

Use only standard **ABBREVIATIONS**. Avoid abbreviations in the title and abstract. The full term for which an abbreviation stands should precede its first use in the text unless it is a standard unit of measurement.

The **Chief Editor** reserves the right to style and format and to determine the priority and time of publication of the accepted article. An edited copy of the manuscript is to be sent to the corresponding author for approval. The author is responsible for all changes in the manuscript. Articles are to submit to **Executive Editor : The ORION**.

ORION

Cephalosporin injectables

Axet
Cefuroxime Sodium

750 mg IV/IM

Decisive assault against pathogens

Sefin
Cephadrine

250 mg, 500 mg & 1 gm IV/IM

Safe & effective for all age group

Cefotaxime Sodium
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250 mg, 500 mg & 1 gm IV/IM

The power against pathogens

Ceftriaxone Sodium
Vertex

250 mg IV/IM, 500 mg IV/IM & 1 gm IV/IM

The most economic Ceftriaxone in Bangladesh

Ceftazidime
Zidim

500 mg & 1 gm IV/IM

A real threat to pathogens



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