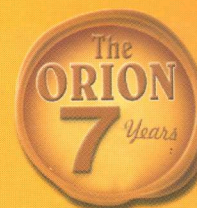


The ORION

Medical Journal



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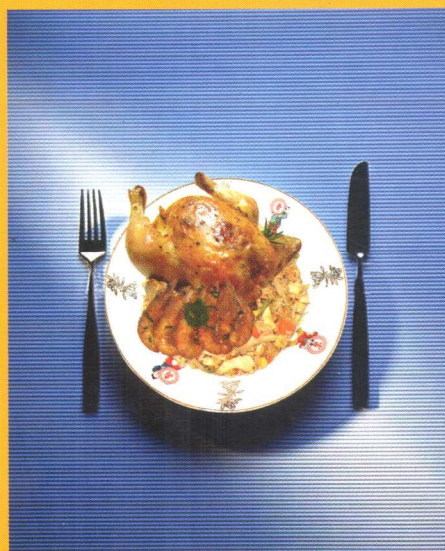
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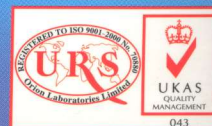
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Editor's Choice

The ORION, Bestowing CME, Since 1998

The ORION has been contributing persistently the Continuous Medical Education program since 1998 among the doctors community of Bangladesh. This enormous endowment is possible because of arduous efforts of the valued authors, continuous support of the esteemed readers and fabulous contribution of the respective members of 'The Advisory & The Review Board'. The ORION also accredits the members of 'The Editorial Board' and all its well-wishers for enduring such immense asseveration. The ORION is exclusively accentuating the local research work and endorsing national diseases epidemic with its native treatment protocol. Therefore this New Year issue incorporates six (6) original articles & three (3) review articles to be aligned into broad medical spectrum.

Editorial of this issue focuses on a terrifying rural life threatening health condition "Snake bite in Bangladesh" with a modern view of managing this acute medical emergency (P-322). Thereafter, a new invention of tibial nail ("E") narrates a safe procedure for managing tibial fracture at "Management of tibial shaft fracture by Eshaque's ("E") tibial interlocking nail" which is cheaper and mostly available in Bangladesh (P-323). A cross sectional study highlights prevalence and incidence of UTI among the female workers in selected garment industry of Dhaka city with a view to improve the working environment and certain facilities to prevent the condition (P-325).

Another original article "Operative treatment of Tennis elbow: Garden procedure" documents a simple surgical procedure which provide low morbidity and fastest recovery for patients with Chronic tennis elbow (P-328). 'Coblation tonsillectomy versus blunt dissection tonsillectomy' (P-330) compares a new modern method with traditional way of dissecting tonsil which is drawn first time in Bangladesh by the scientific study.

The original article from ophthalmology arena reveals that the constipation is an aggravating factor for an established glaucoma (P-332). Another original article "Glomus tumour: A cause of intractable pain" points out the tumorous malformation of glomus body which frequently involves nail bed with classic triad of pain, tenderness and cold sensitivity (P-334).

This issue is also enriched with a review article "Long term allograft loss: a major challenge for kidney transplantation" which nicely furnishes factors responsible for failure of kidney transplantation and way of optimization of these factors (P-336). Another review article on 'haematuria: common manifestation of common & uncommon diseases' nicely sketches the clinical condition, screening of the disease profile and the underlying diagnosis (P-341). Other review article "Rheumatic disorder & bone problems in diabetes mellitus" gives emphasis on the various diseases of locomotor system due to diabetic mellitus and its management (P-344).

The case report of this issue stands with a story of relatively uncommon disease of a young female with 'Ovarian fibrothecoma' (P-347) and its cystic degenerative changes.

The opinion and suggestion of the valued readers are always welcomed to make The ORION medical journal ameliorated steadily.

May the Almighty bless all in the spirit of good health. The ORION wishes all a very colorful Happy New Year - 2006 with blooming life in every moment.

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Snake Bite in Bangladesh

Faiz MA¹

The ORION 2005 ; 23: 322

Snake bite is a terrifying acute medical emergency situation in rural Bangladesh in particular. Estimate was 4.3 bites per 100,000 population with ~2000 deaths per year following snake bite¹. This is known to be a health hazard for centuries, which was under the pervue of traditional healers, 'Ohzas' who used to demonstrate a number of rituals for providing treatments which have been found to be useless, at times harmful. Despite an important health hazard in Bangladesh it received virtually no appropriate attention from the planners and professionals.

Snake bite is a result of an unfortunate accidental interaction between a snake and a human victim. Most often the victim is an active poor young people who get the bite during day to day occupational activity like cultivation, fishing, plantation, wood collection, watching the 'crop' or 'garden' lying in floor or even during rural foot walk. Sometimes it happens in home surrounding like while on chicken or pet bird care.

Pain in the bite site and panic following bite compel the victim or near by attendant to provide whatever known first aid remedy available in place may be cutting by non sterile sharps, applying unnecessary tight tourniquette by whatever material available in the vicinity, various local harmful remedies, recitation of verses or 'mantras', and seeking treatment from 'snake doctors' who usually provide their showman oriented treatment and hardly ever advice for quick scientific treatment. As most of the snake bites are non-venomous bites some of them recover with the treatment so far provided.

The effect of venomous bite result in development of local swelling, prolonged bleeding, hypotension, paralysis, skeletal muscle damage, renal failure, cardiac abnormalities. In the initial period following bite clinical distinction between venomous bite and non-venomous bite may not be possible with certainty when close observation will provide clues if there is any features of envenomation on specific system. The major venomous snakes of Bangladesh are cobras, kraits, green pit vipers and sea snakes in coastal areas. Green pit vipers of the genera *Trimeresurus* (popularly known as Gaaltawa) are available in forested areas of the country like greater Chittagong, and Sylhet areas². Bite following green pit viper result in mild type of effects like gradually expanding local swelling, bleeding, echymosis; cobra bite result in paralysis of 'myasthenic' type with local swelling and subsequent soft tissue necrosis; krait bite result in paralysis with out significant local effects; sea snake bite causes mild type of paralysis with skeletal muscle damage and varying degree of renal failure. Cobra and krait bite may cause rapid paralysis requiring artificial respiratory support due to involvement of diaphragm.

Appropriate first aid includes immobilization of the bitten limb, non-tempering the bite site and quick referral for evaluation for envenomation. Attention of respiratory function and if needed providing support by Ambo bag while on transfer is essential as large number of snake bite have been found to die due to presumed respiratory paralysis before arrival to hospital. Hospital management includes differentiation of venomous from non venomous bite by looking for clinical criteria, bed site 20 min whole blood clot test, species identification by careful examination of brought specimen if any and if facilities

available venom antigen detection in bite site, serum and urine. In Bangladesh, method for detection of venom-antigen is not available for routine clinical practice. Based on clinical criteria of envenomation polyvalent anti snake venom, the specific drug for treatment of venomous snake bite is provided depending on availability. The anti-snake venom (ASV) is not manufactured in Bangladesh, and supply is being given in government hospital, which is manufactured in India either lyophilized or serum form. The supply of ASV in public hospital is irregular and is not available in private hospitals and is not easily available in the private market as well. Even if it is available, often not affordable by the patient's party who are poor. For cobra bite usual dose is 10 vials, for krait bite more doses are required. ASV is associated with potential immediate side effects like anaphylaxis which should be treated with adrenaline, hydrocortisone, chlorpheniramine and H₂ blocker. In neurotoxic snake bite ancillary treatment with neostigmine-atropine is provided which may be the only supportive treatment in absence of ASV. Despite use of ASV a proportion of patients following neurotoxic snake bite may develop respiratory paralysis which requires assisted ventilation for variable period of time with successful complete recovery^{3,4}.

Through a number and method of awareness campaign in the community increasing number of snake bite victims are being seeking treatment in different public hospitals of the country. Training materials for doctors on snake bite is developed in Bangladesh based on regional guidelines⁵. A large number of such patients were treated in Chittagong Medical College Hospital, 897 such patients with 39% venomous bite were treated in CMCH over 40-month period from 1999-2001. Over a period of one year, 61 patients with 9 venomous bite were treated in Dhaka Medical College Hospital in 2004. Twelve of them required ASV, 04 of them required assisted ventilation, three victims of venomous bite died two of whom were brought dead. During the flood of 2004 DGHS recorded 99 death following snakebite through the existing surveillance system.

Being a rural poor man's life threatening health condition snake bite deserves special attention for saving young active earning members of the community conforming our pro poor strategy and commitment of Millennium Development Goal. Probably we neither public nor private sector are doing enough to appropriately manage such a simple acute emergency. By ensuring free supply of logistics including ASV in all public hospitals of the country and by having trained health professionals in all such places we can demonstrate our eagerness not to keep snake bite a 'neglected disease' any more. Inability to provide such bare requisite will continue to encourage treatment seeking from 'Ohzas'.

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Management of tibial shaft fracture by Eshaque's ("E") tibial interlocking nail

Eshaque AKM¹, Sarker MM², Ali M³

The ORION 2006 ; 23 : 323-324

Fracture is always associated with soft tissue injury. Hard tissue as well as soft tissue should be treated simultaneously. Nature of injury not always follow the common principles of fracture. Types and patterns of fracture depends on nature of violence, so treatment varies according to demand of injury.

Tibia is a long weight bearing bone. It is a superficial bone anteromedial aspect and it is subcutaneous. So it is prone to fracture by direct / indirect violence. Fracture can occur :-

Sites of fracture

- Epiphysis i.e. involving articular surface.
- Metaphysis with or without involving articular surface
- Diaphysis-
 - Upper 1/3
 - Middle 1/3
 - Lower 1/3.

Types

- Simple
- Compound

Architecture

- Transverse.
- Short/long oblique.
- Spiral
- Comminuted
- Segmental

Modalities of treatment

A. Conservative treatment

- Immobilisation by plaster (if not displaced)
- Close-reduction and immobilisation by plaster (if displaced)

B. Operative treatment

- Close reduction and immobilisation by interlocking tibial nail (static/dynamic).
- Open-reduction and internal fixation by plate & screw (simple or dynamic compression plate).
- Reduction and immobilisation by external fixator when it is open case then.

Intramedullary nail

- Rush-nail.
- Lottes-nail.
- Enders nail.

Interlocking nail

- Delta nail.
- Recon nail.
- Ao/Asif universal nail
- Sign nail.
- "E" (Eshaque)-nail.

Cost effective.

All Interlocking Nails are costly and not always available "E-NAIL" is cheaper and can be made locally. Its functional effectiveness is like other interlocking nails. Other IM Nails are also cheaper but not much functionally effective.

- Prof. A. K. M. Eshaque**, D. Ortho., M.S. (Ortho.), FPOA, Professor and Head of the Department of Orthopedics Sir Salimullah Medical College & Mitford Hospital, Dhaka.
- Dr. Mohammad Moshin Sarker**, MBBS Asst. Surgeon, Dhaka National Medical College Hospital.
- Dr. Mohammad Ali**, MBBS Asst. Surgeon, BSMMU, Dhaka.

Biomechanics of interlocking "E" nail

Eshaque's tibial nail is clover-leaf nail. It is a modified from kuntscher nail and designed for tibial use. Its mode of action like other tibial inter-locking nail. Dynamic as well as static fixation can be done by it. Dynamic fixation controls bending and rotational deformity but bone always transfer full axial load. Dynamization can be done by putting one screw above or below the fracture line. Static fixation controls rotation, bending and axial load.

It is done by putting one screw above and one screw below the fracture. Clover-leaf design also prevent rotation. Normally tibia withstand one half of force i.e. 60 to 75 newton meters. This force is also required for fracture. This nail ideally resist this amount of force. (kyle 1985.) So it provides a stable nail-bone construct during healing process, which allow full loading of bone and early functional recovery.

Indications for use.

- Closed with displaced fracture not controlled by plaster in fresh /neglected cases.
- Closed comminuted fracture in the shaft. (fresh neglected cases).
- Failure of conservative management.
- Open fracture-Gustillo type i, ii & iii (Clean-non infected case).
- Delayed-union, non-union and mal-union.
- Associated with other long bone injury like fracture in femur, radius/ulna.

Plate versus intramedullary nail

	Plate-screw	IM nail	Interlocking nail
Exposure to fracture area	Long exposure	Short exposure	Not required
Single/multiple exposure	Single exposure	Multiple exposure	Multiple exposure
Rigid fixation	yes	no	yes
Rotation	Not possible	Possible	Not possible
Infection	More	Minimum	Minimum
Dynamisation	Possible	Not possible	Possible
Early mobilisation	Possible	Not possible	Possible
Bone healing	Early	Not early	Early
Non-union	More	Less	Less
Popularity	Less popular	Least popular	More popular
Fracture in 3cm. above distal articular surface	Possible but technically difficult.	Possible	Possible

Why "E" tibial interlocking nail is preferred?

- Provide all criteria for interlocking nail.
- Prevent rotation by its clover-leaf shape.
- It is cheaper and within range of low income group of people.
- Locally made and can be made anywhere.

Patients & method

Fifteen adult male patients have been studied in Sir Salimullah Medical College and Mitford Hospital and also in Private clinics,

Dhaka from July '03 to June '04. Their age varies from 20yrs to 40 yrs. And mean age is 27.5yrs. Among them 12 cases are non-union of Tibia and 3 cases are fresh (within 10 days of fracture).

"E" Nail is used in all cases. Bone graft is used in non-union cases. Fibulectomy is also done in non-union cases to eliminate buttress action. All wounds are healed nicely. One case developed discharging sinus after two months. It is controlled by antibiotics and dressing. Another case developed delayed union for which bone marrow protein (BMP) is injected. Partial weight bearing is advocated after one month. Patient can walk freely at the end of three months. Callus seen earlier in fresh case than non-union cases. There is no stiffness in knee or ankle joint except one. There is one case of one year old non-union of tibia with stiffness in knee and ankle joint. One and half months is required to make it free from stiffness.



Fig-1: "E" Tibial Interlocking Nail

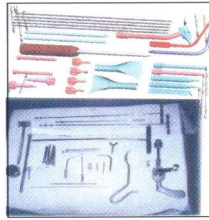


Fig-2: "E" Tibial Interlocking Nail Set

Callus is seen in-between 15 days to 30 days. Each case has been followed up in one month interval. Bony union occurs in all cases. Consolidation time varies from 2months to 4 months.

Complications

- Post operative Infection.
- Non-union.
- Breaking of Nail.

Conclusion

Interlocking tibial nail is a popular and safe implant for the management of fracture of bone and the soft tissue. The available interlocking nail in our country is costly and it is not always available in the market. "E" tibial interlocking nail is made locally. It is cheaper than the other nails and can be made anywhere in Bangladesh. It is technically easier to apply & minimum instruments are needed for this application. It can be easily introduced in the medullary cavity due to presence of tapering end like rush nail. It prevents rotation due to the presence of clover leaf shape. It also provides dynamic and static action like other interlocking nail. It can be easily removed from the bone by kuntscher nail extractor after proper healing. "E" nail will be more popular in near-future due to its characteristic features. Study of this nail is very short. More study is needed for long term result.

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UTI among female workers in a selected garment industry of Dhaka city: A cross sectional study

Begum N¹, Mamoon ABA², Hossain M³, Begum N⁴, Chowdhury SA⁵, Rahman MF⁶

The ORION 2006 ; 23 : 325-327

Abstract

A cross sectional study was conducted among 110 female workers of Topaz garment industry, located in Tejgoan industrial area of Dhaka city to find out the occurrence of Urinary Tract Infection (UTI) in relation to their age, education level, marital status, monthly income, nature of job, drinking of water, toilet (micturition) habit, pattern of drug sensitivity and symptoms of UTI. Majority of the respondents were within the age of 20-24 years (36.4%) followed by that of 25-29 years (30.9%). Mean age of the workers was $23.91 \pm SD 5.6$ years. Most (58.2%) of them were illiterate and their mean monthly income was Taka $1523 \pm SD 465.6$. Among the total respondents about 54.5% complained about urinary problem, but 18 (16.4%) suffered from laboratory diagnosed UTI. Marital status, drinking habit, toilet habit and nature of job apparently found to have effect on UTI. The respondents who have good drinking habit and good toilet habit were less prone to develop UTI.

Key words

Urinary Tract Infection (UTI), female garment workers, nature of job, frequency of water intake, toilet (micturition) habit etc.

Introduction

In Bangladesh, being a new field of manufacturing activity, garments industries have developed as temporary established and premise based unit. Ready-made garment have been emerged as a formal export oriented industry in the country in a tiny scale in 1976-77 and at present the garment industry is the largest export earner sector in Bangladesh. According to Bangladesh Bureau of Statistics about 800,000 workers are employed in garment industry out of which 80% are female¹.

The Urinary Tract Infection (UTI) can be defined as the presence of actively multiplying organisms within the urinary tract and growth of at least $> 10^5$ colony forming units per ml². It is a very common bacterial illness seen by the physicians. It affects 10-20% of women among whom a substantial proportion go on to experience recurrent infection³. In fact UTI affects every 5th women during her life⁴. Clinically UTI may be asymptomatic or symptomatic. When urine is examined, infection is diagnosed by routine microscopic examination and culture.

Asymptomatic infection of the urinary tract occurs without the presence of symptoms like dysuria, increased frequency of micturition, foul smelling urine, supra-pubic or lower abdominal pain, pain in loin or backache etc. but symptomatic infection means infection of the urinary tract with the presence of above clinical features along with laboratory diagnosis⁵.

There are many studies regarding the health problem of garment workers. Some studies show that out of many common complaints especially of female workers, one of these is UTI problem. Eighty percent (80%) of female workers complain about UTI⁷. According to their complaint, UTI means burning micturition, dysuria, and frequency of micturition. Urine is an excellent cultural medium for multiplication of organisms introduced into bladder. Stasis of urine in any part of the tract is thus an important cause of spread of urinary tract infection. Multiplication of organism in the urinary tract can be minimized by high rate of urine flow by taking high volume of water and regular complete bladder emptying⁵.

Without laboratory examination it is very difficult to confirm the diagnosis of the urinary tract infection especially asymptomatic, complicated urinary tract infections or symptomatic bacterial cases. For this purpose mid stream urine is collected and is examined for naked eye examination, microscopic examination and cultural sensitivity. Normal urine may contain less than 5-pus cells/HPF. Significant bacteriuria is considered when Colony-Forming Unit (CFU) is more than 105/ml, which is usually accompanied by pyuria but there may be no correlation with bacteriuria and pyuria⁸. The detection of asymptomatic bacteriuria cases are more important in preventive medicine, because the symptoms of chronic pyelonephritis manifests at a late stage when treatment is less useful. Therefore the present study was aimed to detect UTI among female garment workers who spend most of their time with poor leisure and hygiene facilities in their working place.

Materials and Method

It was a cross sectional study done on 110 female workers of Topaz garment industry, located in Tejgoan industrial area of Dhaka city. Cases were selected by systemic sampling technique in which every 4 th worker from the registrar book was taken as respondent. Pregnant women were excluded from the study. Data were collected from respondents in a semi-structured questionnaire by face-to-face interview technique. Urine samples were collected in a sterile container for Routine Microscopic Examination (R/M/E) and to see the Culture & Sensitivity (C/S) pattern of the isolated bacteria.

Laboratory procedure

A clean catch mid stream urine was collected in a sterile container. The samples were put into culture in blood agar and Mac Conkey's media. The culture plate was incubated aerobically for 48 hours. Any plate showing more than 105/ml colony was considered as significant bacteriuria cases. Routine examination of all urine samples for albumin, sugar and microscopic examination was done. Anti microbial drug sensitivity of the isolates were done accordingly by standard bacteriological method.

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Results

It was a cross sectional studies which was conducted among 110 female garment workers. Table-1 shows the socio-economic characteristics of the respondents. Here it is found that the maximum (36.4%) number of the respondents were within the age group of 20-24 years, followed by that of 25-29 years (30.9%). Regarding the education status of respondents, majorities i.e., 58.2% were illiterate followed by that of 23.6% who had secondary level education. The marital status of the workers shows that maximum (66.4%) were married and 23.6% were unmarried. The occupation pattern shows that majorities (64.5%) of the respondents were machine operator. The monthly income of the most (67.3%) of them was 1000-2000 taka.

Table-1: Socio-economic characteristics of the respondents (n =110)

Socio-economic characteristics	Number	Percent
Age (in year)		
15 - 19	24	21.8
20 - 24	40	36.4
25 - 29	34	30.9
30 - 34	6	5.5
35 - 39	4	3.6
40 - 44	2	1.8
Total	110	100

Education		
Illiterate	64	58.2
Primary	18	16.4
Secondary	6	23.6
Above secondary	2	1.8

Marital status		
Married	73	66.4
Unmarried	26	23.6
Separated	8	7.3
Divorced	2	1.8
Widow	1	0.9

Religion		
Muslim	108	98.2
Hinduism	2	1.8
Buddhism	0	0

Nature of job		
Machine operator	71	64.5
Helper	19	17.3
Quality inspector	9	8.2
Trainee operator	7	6.4
Cleaner	4	3.6
Iron man	0	0

Religion		
Muslim	108	98.2
Hinduism	2	1.8
Buddhism	0	0

Monthly income (Taka)		
<1000	23	20.9
1000 - 2000	74	67.3
2000 & above	13	11.8

Figure -1 depicts the age distribution of the patients with Urinary Tract Infection (UTI). Here it is shown that out of 110 respondents, 18 (16.4%) of them were suffering from UTI. Among the 18 UTI cases, (44.4%) of them were in the age group

of 20-24 years, (33.3%) were in the age group of 25-29 years and remaining (11.1%) were in the age group of 30-34 years and 35-39 years each. It has been found that no patient was in the age group 15-19 years and 40-44 years.

Figure-1: Distribution of respondents by age with urinary tract infection (n=18)

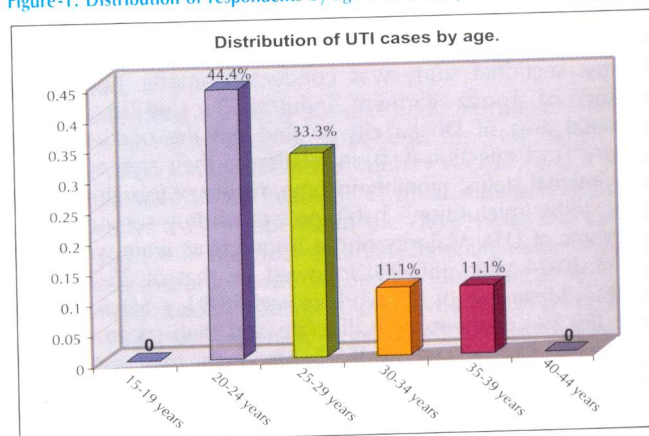


Table-2 shows the distribution of UTI with the level of education of the respondents. Out of total 18 UTI cases, (55.6%) were illiterate, (33.3%) were educated up to secondary level and (11.1%) had primary education. No one with education level of HSC was suffering from UTI. Relation of UTI with marital status of the respondent is illustrated in Table -3. It shows that majority of the respondents i.e. (66.7%) of UTI cases were married, while (22.2%) were separated from their husbands. Only (11.1%) UTI cases were unmarried. Table - 4 represents the relationship of UTI by their nature of job. Out of the total respondents who were suffering from UTI (55.6%) were machine operator, (33.3%) helper and (11.1%) were quality inspector. The table shows that those garment workers who are engaged in heavy physical work are more prone to develop UTI.

Table-2 : Respondents by level of education with UTI (n=18)

Education	Respondents with UT	Percentage (%)
Illiterate	10	55.6
Primary	2	11.1
Secondary	6	33.3
HSC	0	0
Total	18	100

Table-3: Respondents by marital status with UTI (n=18)

Marital status	Number of respondents	Percentage (%)
Married	12	66.7
Separated	4	22.2
Unmarried	2	11.1
Divorced	0	0
Widow	0	0
Total	18	100

Table - 4 Respondents according to nature of job with UTI (n=18)

Nature of job	Number of respondents	Percentage (%)
Machine operator	10	5.6
Helper	6	33.3
Quality inspector	2	11.1
Trainee operator	0	0
Iron man	0	0
Cleaner	0	0
Total	18	100

Regarding the drinking habit of the respondents it was found that out of 110 respondents, (63.6%) used to drink less than 2 glass of water during work time and other (36.4%) drink more than 2 glass of water. Among the total 18 UTI cases, most (72.2%) of them had the history of taking less than two glass of water. On the other hand, UTI occurred comparatively less (27.8%) who used to drink more than two glass of water during the working hours. In addition, it also shows that who developed UTI, (22.2%) had good toilet habit i.e. they used toilet for micturition for more than 2 times and (77.8%) had average toilet habit i.e. they use toilet less than 2 times. (Table - 5, 6, 7).

Table-5 : Respondents according to frequency of water intake (n=110)

Frequency of drinking water during work time	Number of respondents	Percentage (%)
Never	0	0
Less than two glass	70	63.6
More than two glass	40	36.4
Total	110	100

Table-6 : Respondents according to frequency of water intake with UTI (n=18)

Frequency of drinking water during work time	Number of respondents	Percentage (%)
Never	0	0
Less than two glass	13	72.2
More than two glass	5	27.8
Total	18	100

Table - 7 : Distribution of respondents by toilet habit with UTI (n=18)

Toilet habit	Number of respondents	Percentage (%)
Good	4	22.2
Average	14	77.8
Poor	0	0
Total	18	100

The sensitivity pattern of organisms shows that only 33.3% of isolates were sensitive to Ampicillin followed by that of Cotrimoxazole and Cephalexin (55.6%). The Nalidixic acid was 88.9% and that of Nitrofurantoin (66.7%) sensitive to isolated organisms. However all 18 positive cases were sensitive to Ciprofloxacin and Ceftriaxone (Table-8).

Table-8 : Respondents according to culture sensitivity pattern of urine (n=18)

Antimicrobials	Sensitive	Resistant
Ampicillin	6 (33.3%)	12 (66.7%)
Cotrimoxazole	10 (55.6%)	8 (44.4%)
Cephalexin	10 (55.6%)	8 (44.4%)
Ciprofloxacin	18 (100%)	0
Nitrofurantoin	12 (66.7%)	6 (33.3%)
Nalidixic acid	16 (88.9%)	2 (11.1%)
Gentamycin	14 (77.8%)	4 (22.2%)
Cepharadin	12 (66.7%)	6 (33.3%)
Doxycycline	14 (77.8%)	4 (22.2%)
Ceftriaxone	18 (100%)	0

Discussion

In Bangladesh a large number of female workers are engaged in garment industry. Most of them come from families with poor socio- economic status. As per rule there should be one

toilet for every 25 workers. But it is very sad that no factory is maintaining the rule. In some factory the number is one toilet for 50 or even for 100 workers, which are sometimes very troublesome for the female workers at the time of their need. Due to lack of adequate toilet facilities, lack of knowledge, lack of health education facilities along with prolonged working hour, there is stagnation of urine in the urinary bladder, which make them more vulnerable to develop UTI. In this study out of 110 respondents, 18 (16.4%) of them were suffering from UTI. Among the UTI cases, majorities (44.4%) of them were in the age group of 20-24 years, 55.6% were illiterate and 66.7% were married. This is consistent with many studies, which shows that UTI is more prevalent among young married women. The respondents who were doing more physical work were more suffering from UTI than those who were doing less physical work. Thus 55.6% of machine operators developed UTI in contrast to respondents who were engaged in less physical work. Out of 110 respondents 60 complaint of urinary symptoms among which 14 (23.3%) suffered from UTI. Again 50 respondents who did not complain about urinary symptoms 4 (8%) developed UTI. So the ratio of symptomatic to asymptomatic bacteriuria was 3.5:1. In a prevalence study of UTI in adult women it was found that 11.20% women developed UTI⁶. But in this study occurrence of UTI is 16.4% in a selected garment industry, which is a bit higher. So female garment workers might be more prone to develop UTI due to their working condition. In this study it has been found that those who have good drinking habit and good toilet habit in term of micturition, they are less likely to develop UTI. Most the respondents told that due to inadequacy of toilet, insufficient water in toilet and workload, they used to avoid using toilet. Esch. Coli is responsible for urinary tract infection in most of the cases. In this study, all the 18 (100%) culture positive cases yielded Esch. coli as the causative organism. Regarding the sensitivity pattern of these organisms only 33.3% of isolates were sensitive to Ampicillin followed by the Cotrimoxazol and Cephalexin (44.4%). The sensitivity to Nalidixic acid was 55.5% and that of Nitrofurantoin (66.6%). All 18 positive cases were sensitive to Ciprofloxacin and Ceftriaxone.

Conclusion

The garment industries need more female workers than that of male because the nature of work is more suitable for female and they do well. The authority is more interested to appoint the female workers because female labour can be paid less than male and they do not actively participate in the union and normally they do not escape from the job. For this reason, it is advisable that the improvement of working environment and certain facilities could help to improve the performance of their workers.

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Operative treatment of Tennis elbow : Garden procedure

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Abstract

The study group consist of 12 patients (12 elbows) which are clinically diagnosed tennis elbow operation done by Garden procedure. Out of 12 patients 7 were men and 5 were women. Follow up duration 12 months to 36 months (with a mean of 24 months). Patients pain, activity level and hand grip strength were evaluated post operatively.

8 elbow (66.67) had excellent or good result, 3 elbows (25%) had a fair result and 1 (8.33%) had a poor result require revision surgery. Most of patients had immediate relief of pain and did not notice any problem and weakness of hand grip and radial wrist extension. There was a good result for tennis elbow with morbidity by the Garden procedure.

Key note

Tennis elbow-operative treatment -Garden procedure.

Introduction

Patho physiology of the lateral epicondylitis is common orthopaedic condition. Lateral epicondylitis or tennis elbow is diagnosed by the clinical symptoms of epicondylar tenderness, pain on resisted wrist extension and absence of other pathology^{1,2}.

Runge³ described tennis elbow in the literature in 1873. Tennis elbow-is a misnomer because the condition is commonly seen in non tennis player. It is an affection of middle aged and occurs in productive working years. Symptoms are usually mild but occasionally there is a significant disability^{4,5}. Conservative treatment is usually successful and frequency of operative intervention is relatively low^{4,5}.

Many differing operative techniques has been described. Mainly the lesion is the origin of extensor carpi radialis brevis (ECRB)^{2,4}. Garden² asserted that the pain of the tennis elbow result from periosteal tear at the origin of the extensor carpi radialis brevis (ECRB). So, he designed simple operation to lengthen the tendon of the ECRB. He reported his experience of 50 patients all had immediate pain relief after this operation with no extensor weakness and a rapid return of full function.

Materials and methods

All patients treated for tennis elbow with the Garden procedure at our hospital and private clinic from July 2001 to August 2004. Total of 12 patients (12 elbows) were selected by the following criteria : Pain on the lateral side of the elbow, tenderness over the ECRB origin and pain in the lateral epicondyle during resisted dorsiflexion of the wrist with the elbow in full extension.

Total of 7 men and 5 women aged from 30 to 55 years (mean 45 years). Out of 12 elbows right elbows (8 dominant sides) and 4 left elbows. All Patients had elbows severe, enough to interfere with the daily activities and worked for more than 10 months. Despite non operative treatment which included

analgesia, physiotherapy, elbow support, local steroid injection. Duration of symptoms varied from 10 months to 30 months (mean 17.5 months)

Occupation of patients-(12 Patients) 5 are strenuous manual labour, 4 are moderate labour, 3 are light labour.

Procedure

A small incision was made over the dorsolateral aspect of the forearm just proximal to the muscle bellies of extensor pollicis brevis and abductor pollicis longus. Incision was made to show the flatended tendon of extensor carpi radialis longus, which was retracted to show the ECRB tendon lined adjacent to it. The tendon of the ECRB was divided by a step-cut, and lengthened by approximately 1 cm. The ends were sutured with absorbable sutures. Postoperatively, patients were allowed to use the hand within pain limits, and to return to work and sporting activities as and when they felt able. Patients were reviewed at 2 and 6 weeks postoperatively and discharged when satisfied with the surgical outcome. No physiotherapy, exercise regimen or splint was given postoperatively.

Review consisted of pain assessment grip, strength and activity evaluation. The over all outcome of treatment was rated using the grading system developed by Verhaar et al⁷. The result was considered excellent if the pain at the lateral epicondyle had been relieved completely. The patient was satisfied with the result, there was no subjective loss of grip strength and resisted dorsiflexion of the wrist caused no pain. A good result meant that there was occasional slight pain at the lateral epicondyle after strenuous activities the patient was satisfied with the result. There was no loss or a slight subjective loss of grip strength and resisted dorsiflexion of the wrist caused on pain. The result was considered fair if there was discomfort at the lateral epicondyle after strenuous activities but it was more tolerable than it had been before the operation, the patient was satisfied or moderately satisfied with the result, there was slight or moderate subjective loss of grip strength and resisted dorsiflexion of the wrist caused slight or moderate pain. A poor rating was given if the pain at the lateral epicondyle had not decreased. The patient was dissatisfied with the result, there was severe subjective loss of grip strength and resisted dorsiflexion of the wrist caused severe pain.

Table -1: Occurrence of pain in elbows undergoing the Garden procedure for lateral epicondylitis (n=12).

	No. of elbows	
	Before surgery	After surgery
Pain on use	12	3 (on heavy manual work) 1 (on light work)
Pain at rest	8	0
Pain at night	7	0

Results

The follow up period 12 months to 36 months (mean 24 months). In terms of treatment outcome 6 (50%) patients had an excellent, 2 (16.67%) patients had good results, 3 (25%) patients had a fair result who had pain on grip and felt the hand weak, 1 (8.33%) patient had a poor result and needed revision surgery.

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Complications

One patient had a superficial wound infection, which was treated successfully with a short course of antibiotics.

Discussion

Operative treatment is seldom necessary for tennis elbow and accordingly we have operated on only 12 patients using the Garden procedure over a period of 3 years. The advantages of this procedure itself the short postoperative period and minimal subsequent disability. These advantages are particularly important for the working person who has to continue to work despite a painful elbow. This study found encouraging results and allow rate of complications after the Garden procedure. Verhaar et al⁷, also reported that 23% of their patient group had pain on resisted dorsiflexion of the wrist and 40% had tenderness over the lateral epicondyle at 5-year follow-up. Most of the patients required 6 to 12 weeks for adequate not necessarily complete recovery. Only 18% of patients had returned to their original work at 6 weeks postoperatively.

Nirschl and Pettrone⁴ in their series of 82 patients found that the mean period for complete pain relief was 2.6 months (range 8 days-12 months) after surgical treatment of tennis elbow. In our study the patients who had good or excellent results had immediate pain relief (within 2 weeks postoperatively) and could return to work early without any need for immobilisation or physiotherapy.

Treatment outcome in our study appears superior to results reported after complete release of the common extensor tendon^{5,8}, after resection of the orbicular ligament⁹ and by

Nirschl and Pettrone⁴ following excision and repair of the pathologic lesion in the origin of ECRB. So far the literature has not indicated which operative technique for tennis elbow is superior to others, with most studies demonstrating a success rate of more than 80 percent^{3,5}. Given that all operations appear equally effective, a technique that is associated with low morbidity and a short recovery period should be selected.

Conclusion

The garden procedure is a simple procedure, giving good results for patients with chronic tennis elbow with low morbidity and early recovery. Further, this study add support to the view that the underlying lesion in tennis elbow is in the origin of ECRB.

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"Coblation tonsillectomy versus blunt dissection tonsillectomy"

Matin MA¹

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Abstract

Tonsillectomy is one of the most common surgical procedures performed by the ENT Surgeons world wide. Multiple surgical techniques have been described like-blunt dissection, guillotine, cryo, laser, monopolar & bipolar diathermy, ultrasonic scalpel and more recently Coblation tonsillectomy. In Coblation, radiofrequency bipolar current excites sodium ions in the saline medium at operation site creating a plasma filed which splits tissue into molecules at low temperature, lysis the peritonsillar connective tissue while a coexisting low power coagulation current coagulates vessels. Aim of this study is to compare new method Coblation with classical dissection method regarding duration of operation, amount of blood loss, operation pain, rate of healing of tonsillar fossa, return to normal work & post operative complication. 100 tonsillectomy patients have been selected for this study of which 50 patients had Coblation tonsillectomy and other 50 patients had traditional blunt dissection tonsillectomy. This study has been done first time in Bangladesh. It was observed that Coblation tonsillectomy offers less time, minimum blood loss, less post operative pain, rapid healing of tonsillar fossa with no reactionary or secondary haemorrhage but it is very expensive and significantly reduces all of these benefits over cost effectiveness.

Keywords

Tonsillectomy; Coblation; Blunt dissection; Radiofrequency.

Introduction

Tonsillectomy is one of the most common surgical procedures performed worldwide¹. Since the first tonsil removal performed by celsus in 30 B.C.² multiple surgical techniques have been described and diverse instruments have been evolved for this purpose³.

At the beginning of the 21st century, dissection tonsillectomy is more often used than tonsillotomy^{4,5}. Described techniques include blunt dissection, guillotine excision, cryosurgery, monopolar and bipolar diathermy dissection, bipolar scissors dissection, ultrasonic scalpel tonsillectomy, laser dissection and, recently introduced coblation-assisted tonsillectomy^{5,7}.

The surgical technique of coblation tonsillectomy is based on dissection of the tonsil in the relatively bloodless tonsillar-muscular plane, using an Arthro Care Evac 70 Arthro Wand (Arthro Care Corp. Sunnyvale, CA). All operations in the present study were performed with the patient under general anesthesia. The operating principle of coblation or electrodissection is similar to bipolar diathermy or electrosurgery. In both methods, an alternative current passing between the active electrodes in the tip of the device produces destruction of the target tissue adjacent to the electrodes. In bipolar diathermy, direct contact between electrodes and tissue produces local temperatures of 400 degree c to 600 degree c resulting in heating of intracellular



Fig.-1 : Evac 70 Plasma Wand

contents and subsequent vaporization of the cell¹¹. In contrast, coblation must fill the physical space between the electrodes with a medium rich in sodium (eg, isotonic saline or saline gel). By coblation the medium is dissociated into free sodium ions, which are responsible for the destruction of intercellular bonds, resulting in tissue dissociation. The reaction is achieved at temperatures between 60 degree c to 70 degree c with minimal collateral thermal tissue damage. Also, the presence of cool, irrigating isotonic saline helps to limit the amount of heat delivered to the surrounding structures^{5,6,8-10}.

Materials and methods

100 Patients were selected for this study of which 50 patients underwent blunt dissection with monopolar diathermy haemostasis and 50 patients underwent Coblation tonsillectomy. Patients with history of recurrent tonsillitis or obstructive tonsils are included in this study while patients with history of peritonsillar abscess are excluded from the study. All operations were done at Maleka Nursing Home, Bogra where the Author is doing his private practice. Study period was from Feb. 16 to Sept. 15 2005. All operations were done under G/A. All Patients were kept for one day at Clinic. Patients age ranges from 4 years to 45 years. First Coblation was done on 22 april 2005 In Coblation, Evac 70 plasma Wand is used. All patients were given perioperative antibiotic (Cephadrine) and post operative analgesic (Paracetamol and diclofenac if needed). Patients were asked to keep records of post operative pain in visual analogue scale (1-10) mild (1-3) moderate (4-6) severe (7-10). They were also asked to keep records of any other complications. All patients were seen on day 8 by the Author at his private chamber.



Fig.-2 : Coblation control unit

Results

A total of 100 patients (50 Coblation and 50 blunt dissection) were entered into the trial: they all had a history of recurrent tonsillitis or tonsillar hypertrophy. Their age ranged from 4 to 45 years. (Table 1).

Table -I : Age incidence

Coblation Group (N-50)		
Age	No of Pt	%
4-10	12	24
11-20	21	42
21-30	10	20
>30	7	14
Dissection Group (N 50)		
11-20	9	18
11-20	28	16
21-30	8	16
>30	5	10

There were 32 male and 18 female patients in coblation group (Table 2) with male female ratio^{3:2:2}. Average operative time for coblation is 12 minutes where as for dissection group is 20 minutes (Table-3). Amount of blood loss in Coblation group is negligible (Table-4) although initial 2-3 cases there was 150-200 ml of blood was lost. On the other hand 50-200 ml blood was lost in dissection method.

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Table -2 : Sex incidence

Coblation Group		
Male	32	
Female	18	Male : Female 3.2:2
Dissection Group (N 50)		
Male	9	
Female	28	Male : Female 3.2:2

Table -3 : Operative time

Dissection Group	
Minimum :	18 min :
Maximum :	35 min :
Average :	20 min :
Coblation Group	
Minimum :	12 min :
Maximum :	25min :
Average :	10 min :

Table -4 : Amount of Blood loss

Coblation Group	Negligible, but initial 2-3 cases there was 150-200 ml.
Dissection Group	50-200 ml.

As shown in Fig. 3, the difference in mean pain scores for the two groups was very different.

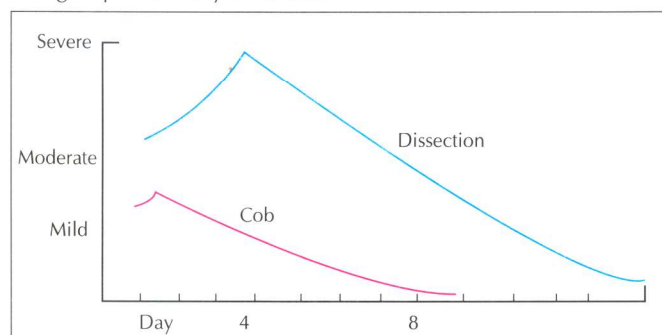


Fig.-3 : Post operative pain

Both groups showed an initial rise in mean pain scores with day 4 being the most painful in the dissection group, day 2 was recorded as the most painful day in the coblation group. With the coblation group there was a more rapid return to low pain scores than the dissection group. A noticeable difference was found in the day of return to a normal diet: day 3 for coblation group, compared with day 8 for dissection group (Table-5).

Table -5 : Day of Return normal diet

Dissection Group	Day 8
Coblation Group	Day 3

When examining the throat at 8 days post op, there was a large difference in the healing of the tonsillar fossa, with nearly all the coblation fossae fully healed and considerable slough/granulation tissue present in the dissection group (Table-6). Although I did not attempt to accurately record analgesic use among the 2 groups, the coblation group usually took paracetamol and dissection group took diclofenec in addition to paracetamol. There were no episodes of primary or secondary haemorrhage in coblation group where as one secondary haemorrhage experienced in dissection group (Table-7) Initial learning of coblation there was loss of post pillar in 1 patient and deep burn of post. pharyngeal wall in another patient.

Table -6 : Degree of healing of tonsillar fossa on day 8

Coblation:	Smooth healing. no granulation tissue/slough
Dissection:	Still there is some slough/granulation tissue

Table -7 : Rate of complications

Coblation Group:	No reactionary/sec. hge 1 post. pharyngeal wall burn
Dissection Group:	1 post pillar loss 1 secondary hge.

Discussion

Coblation tonsillectomy is a recently introduced dissecting technique with few reports in the literature^{4,6,10}. Blackburn and Ribble Valley Health Authority possesses the largest series of coblation tonsillectomies in the United Kingdom and probably one of the largest in the world, with nearly 850 operations¹. These records afforded us the opportunity to evaluate complications following this new surgical procedure and compare them with our standard tonsillectomy methods. Coblation is a new technique in soft tissue surgery¹¹. Recently the use of this new technique in the treatment of snoring, nasal congestion and sleep apnoea has received considerable research interest^{12,13}.

This study was designed purely to assess new method Coblation with classical dissection method regarding duration of operation, amount of blood loss, post operative pain, rate of healing of tonsillar fossa, return to normal work & post operative complications. Very significant benefits have been demonstrated in all of these respects when using this new technology. I believe that this justifies further evaluation of this interesting technique. But as this is very expensive procedure so I recommend to reuse the Evac 70 plasma wand 4-5 times by autoclaving in our developing countries to reduce the cost of operation.

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Constipation-an aggravating factor of an established glaucoma: An urban study

Murad MAU¹, Moktad SA², Basory R³, Chowdhury FI⁴

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Abstract

Objective : We study the effect of constipation in glaucoma. **Method :** This was a descriptive type of cross sectional study conducted on 32 patient attended at the OPD on Islamia Eye Hospital, Al-Ashraf General Hospital Dhaka, International Medical College and Hospital Tongi, Gazipur, Central Hospital, Hobiganj during the period from January 2000 to August 2005. Data were collected through periodic observation and was analyzed manually. **Results:** Relation between Constipation with Glaucoma is 93.8% and relation between Non-constipation with Glaucoma is 6.3%. On male 43.8% and female [56.3%]. Age between 18 years to 75 year on typing of Glaucoma, Chronic Simple Glaucoma is 62.5% and Acute Congestive Glaucoma is 37.5%. **Conclusion :** In this study it was found that constipation is a one of the aggravating factor in case of glaucoma.

Key Word

Glaucoma, Constipation.

Introduction

Glaucoma term comes from the Greek word glaucous. It is a progressive disease cause reversible or irreversible change of the eyeball due to increased intra ocular pressure. Clinical feature of glaucoma is congestion of the conjunctiva, dimness of vision, repeated changes of glasses¹. Headache sometimes watering. Cardinal sign's are deep anterior chamber, mid dilated pupil, changes in visual field. Changes in intraocular pressure, changes of cup disc ratio. Incidence of glaucoma about 66.8 million people worldwide more then one half of individuals with glaucoma are unaware³. About 2% of the total eye patient s are suffering from glaucoma^{1,2}.

Table-1: Factors that may lead to increased intraocular pressure³.

Age : > 40
Gender-female
Race- African, American.
Generics - family history of elevated intraocular pressure
Refractive Error- Myopia.
Seasonal - higher intraocular pressure in winter months.
Postural variation- changing from sitting to supine.
Exertional influences- Valsalva's maneuver, Electroshock therapy.
Lid and eye movement- blinking, lid squeezing.
Intraocular conditions-secondary glaucoma, Increased corneal thickness.

Systemic influences- hypertension [Especially systolic pressure]
Hyperthermia
Obesity
Pulse rate
Hemoglobin concentration.
Diabetes
Hormonal influences- Adrenocorticotrophic hormone
Glucocorticoids
Growth hormone
Hypothyroidism food and drugs- Caffeine
Tobacco
Corticosteroid.

On classification

- Primary-primary open angle glaucoma and primary closed angle glaucoma.
- Secondary-about 6 million people of the world are suffering from secondary glaucoma³.
- Congenital.

Source

Adapted from MB Shields(ed). Textbook of glaucoma (3rd ed). Baltimore; Williams & Wilkins, 1992; 70. In our study we saw that constipation aggravate the glaucoma's signs and symptoms especially intraocular pressure but it is not the cause of glaucoma .to establish the above statement we followed the following methods to identify it.

Methodology

This was a descriptive of cross sectional study, during the study period 32 patients were selected in OPD for first time. Who reported to OPD with glaucoma. Thorough history of the patient's particularly cardiovascular, respiratory and urinary diseases were taken. Local examination and investigations were done as follows-

- Vision
- Slit lamp examination
- Intraocular pressure [IOP]- Schiotz Tonometer.
- Fundoscopy by direct ophthalmoscope
- Laboratory examination-Blood sugar was done, ECG was done.
- Details of bowel habit and diet habit [vegetarian. Non-vegetarian, medication]

Following glaucoma patient were excluded from our study-

- Who were already treated 2nd and 3rd time.
- Filtration operation done.
- Patient above 75-year age.
- Any corneal opacities or suspected any other intraocular pathology.

Treatment of glaucoma in our country usually is conservative by pilocarpine HCl 2%, Timolol Maleate 0.5%, Acetazolamide 250 mg. with K-supplement. If it failed we go for Filtration Surgery. Follow up on 24 hours, 72 hours, 1 week, 3 weeks and 6 months was maintain. In our practice we use above medication along with laxatives [Bisacodyl 5mg, 2 tab at H/S], those patients have habit of constipation [Duration of 5 to 7 days]

Results

Out of 32 patients 30 patients were constipated. Usually their bowel opened every 5 to 7 days. 2 patients were not constipated. Usually their bowel opened at least once in a day. So all the patients were prescribed laxatives. 15 patients with antiglaucoma, drugs and laxative, 15 patients with antiglaucoma drugs without laxatives to open the bowel.

We follow up upto 6 months to 1 year. They are happy enough with their treatment along with relieve of constipation. We also advised to take the fleshy and cellulose like food, to relieve their chronic constipation.

Discussion

Production of aqueous humour from non-pigment epithelium [NPE] of ciliary process → to the posterior chamber → through

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pupil to come out to the anterior chamber and then through schlemm's canal → scleral venous plexus → episcleral veins →

Table-2 : Demographic Data of IOP

SL. No.	SL. Age & Gender	IOP 1st time in eye	Medicine plus laxatives Group-A			Relieve of discomfort of patient
			3rd	7 Days	21 Days	
1	48F	38	28	22	16	+++
2	46F	42	32	24	14	+++
3	58F	35	28	22	15	+++
4	50M	36	25	20	18	+++
5	46F	33	28	24	18	+++
6	48 F	42	28	22	16	+++
7	55M	49	27	20	18	+++
8	58M	45	35	24	16	+++
9	36F	38	27	24	17	+++
10	39M	33	28	22	16	+++
11	40F	37	25	20	16	+++
12	33M	54	32	20	15	+++
13	45F	42	38	24	18	+++
14	37M	31	27	22	16	+++
15	38F	32	28	20	16	+++

Highest IOP (in mmhg). With laxative 13 patients was relieved out of 15 and about 86.7%

Table-3 : Demographic Data of IOP

SL. No.	SL. Age & Gender	IOP 1st time in eye	Medicine without laxatives Group-B			Relieve of discomfort of pt.
			3rd	7 Days	21 Days	
1	35F	40	30	25	17	+++
2	45F	53	32	23	18	++
3	18M	44	37	24	16	++
4	28M	43	32	22	16	++
5	56M	34	27	20	17	+++
6	46F	44	28	22	18	++
7	38F	35	26	24	16	+++
8	32F	35	30	22	17	++
9	36M	38	32	20	18	++
10	38F	36	34	22	16	+++
11	42F	33	33	24	18	+++
12	45M	47	32	20	16	+++
13	48F	43	34	22	16	+++
14	60M	35	28	20	15	+++
15	55M	35	24	21	16	+++

vortex veins and conjunctival veins. To maintain the normal function of the eye, it needs pressure. Which we call intraocular pressure. Outside the eye the pressure in the ocular veins is lower than the IOP⁴. Normally mean pressure in human eye is 7 to 8 mmHg. The pressure in the vortex veins just outside the eye may be expected to be similar to that in the episcleral veins on ocular veins 5 to 10 mmHg⁴. But during voluntary defecation can be initiated by voluntarily relaxing the external sphincter and contracting the abdominal muscles [straining], thus aiding the reflex emptying of the distended rectum⁵.

During such process- central pressure is increased. It is increased by positive pressure breathing, straining expansion of blood volume⁵. So these effect on ocular veins and obstruction of the out flow of the aqueous. Which may aggravate the intraocular pressure, in case of glaucoma, which is more dangerous and causes irreversible changes in eyeball.

Conclusion

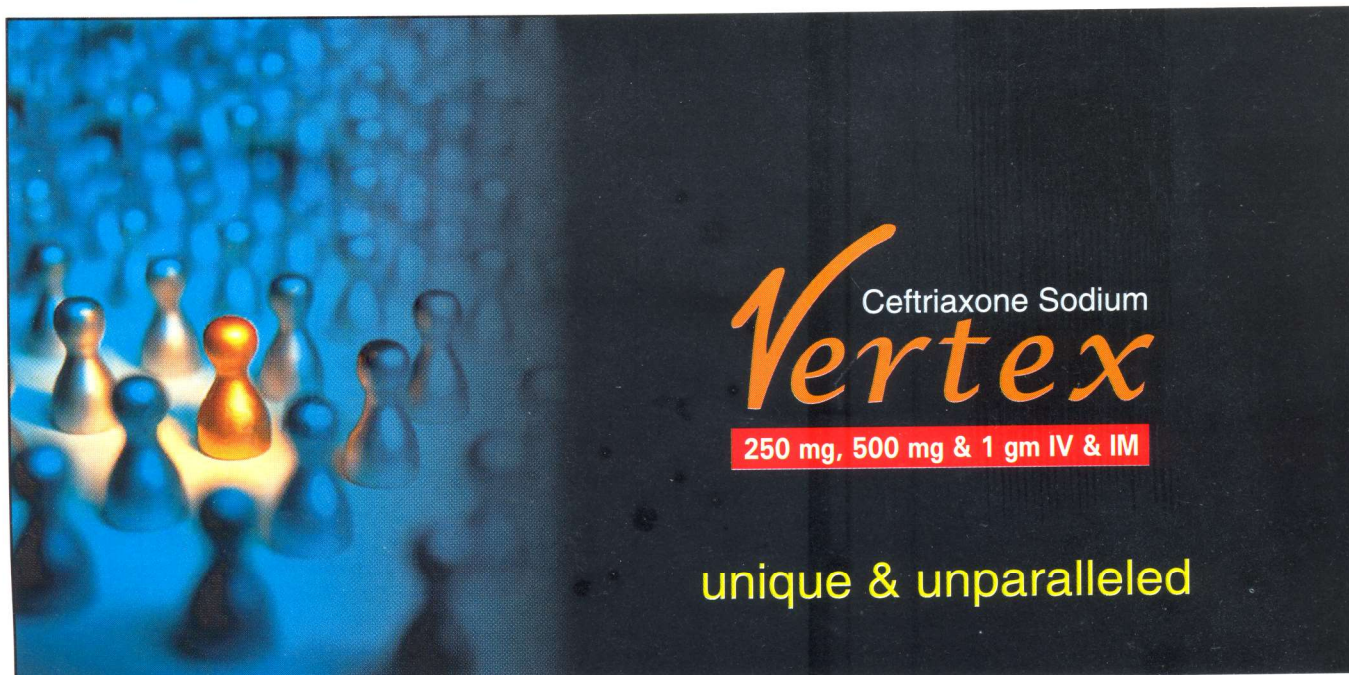
In Conclusion our study of 30 constipated patient group A [with laxative] had the IOP fall quick and effective. In group B [with out laxative] the pressure fall was there but not as sufficient and quickly as a group A. so our recommendation is that any patient coming for the treatment of glaucoma his history for bowel habit to assessed properly and a laxative to prescribed with other medication and operation [if any].

Acknowledgement

For his kind cooperation, his inspiration and guidance Professor Shamsul Alam. MBBS, DA (London) Ex- Head of the Department of anesthesiology. International Medical College & Hospital, Tongi, Dhaka.

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Glomus tumour : A cause of intractable pain

Ali M¹, Rahman MA², Sabet S³, Ahmed N⁴, Miah AKMA⁵, Shalahuddin KAKM⁶, Sumon SM⁷

The ORION 2006 ; 23 : 334-335

Abstract

Glomus tumour is not an unusual finding in common surgical practice. The condition is very painful as well as alarming. Due to the very location of the tumour it elicits excruciating pain during our day to day activities involving use of the fingers. That is why radical excision of the lesion is needed to get relief of such a painful ailments. We studied 8 cases both male and female over a period of 5 years. Proper diagnosis and operative treatment provided 100% cure rate.

Keywords

Glomus Tumour

Introduction

Glomus tumour is tumorous malformation of vasoformative tissue with involvement of the nerve. In a Glomus body there is neuromyoarterial apparatus which regulate peripheral blood flow in the digit, the continuous pain is not symptom but minor trauma to the affected site gives rise to sharp lancinating pain along the distribution of nerve.

Methods & materials

Eight cases of different age group were studied over a period of 5 years in private practices, Z H Sikder Woman's Medical Collage & Moulana Bhasani Medical College Hospital (MBMCH) from July 1998 to October 2003. Patients of different age groups were found starting from 20 years to 50 years. Four female patients were encountered & remaining were male. Thorough clinical examination was carried out including Love's pin test, which had a sensitivity of 100%. In all cases symptoms of pain typically originates in nail bed. One was found in toe nail bed (3rd toe) & remaining in finger nail beds. Tumor size were variable, less than a millimeter to a centimeter. All tumors became more prominent after nail avulsion. Following localization, total excision of the tumors circumferentially was done. Postoperative recovery was uneventful in all cases, with symptomatic relief. Histopathology was diagnostic except one, in which on histopathology was done.

Observation & results are submitted in tabulated form

Table -1 : Age distribution :-

Age	Patients
20-35	5
36-50	3

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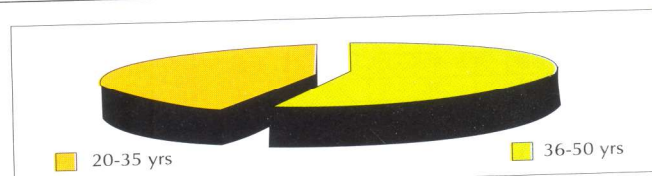


Table -2 : Sex distribution :-

Name of sex	Number
Male	4
Female	4

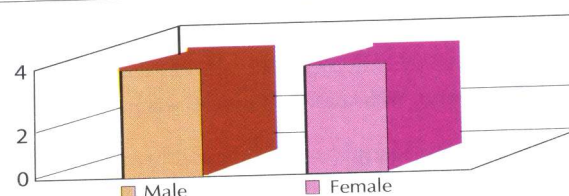


Table -3 : Site of lesion :-

Finger Nail Bed	7
Toe Nail Bed	1

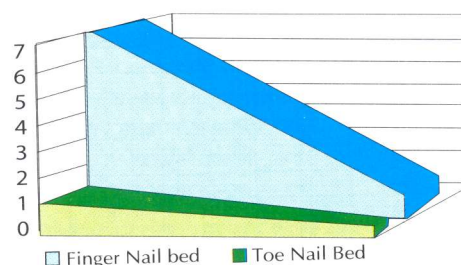
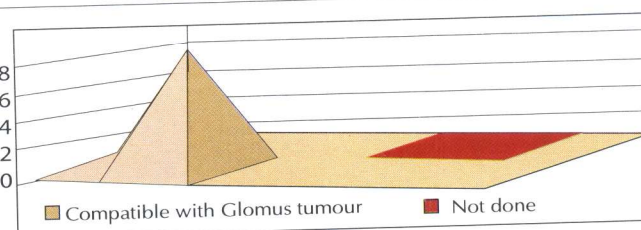


Table -4 : Histopathological correlation :-

Compatible with glomus tumor	7
Not done	1



Discussion

Glomus body is a neuromyoarterial apparatus, a controlled arteriovenous anastomosis or shunt between terminal vessels whose function is to regulate peripheral blood flow in the digits. Glomus tumour is tumorous malformation of Glomus body. These are paragangliomas, frequently involves nail bed with classic triad of pain, tenderness and cold sensitivity always happens while touching the nail. Patients complain of severe pain every time (he/ she) touches the nail. Glomus tumour is a small form of smooth nodule rarely more than a mm in diameter present as an exquisitely tender red, violet or blue colored localized area beneath the nail. In our study most patients presented with severe excruciating pain along the wave of the involved nerve. Usually pain is disproportionate to the size of lesion. Pain usually starts following a minor trauma

to the involved nail bed of fingers but in our study we found one of our cases involved the toenail. There are glomus tumours in other locations of body like glomus jugulare, Glomus tympani cum & Glomus vagale are vascular neoplasms arising from the jugular bulb and tympanic plexus respectively. Both tumors spread cephalically and posteriorly in to the middle ear and mastoid. Both are non chromaffin producing para ganglions and histologically same as carotid body tumours. The glomus vagale is a neoplasm arising in the skull base & neck & may extend upwards into cranial vault. All these three varieties of tumors may slowly invade jugular foramen and its nerves like IX, X, XI, as well as VII, XII, & VIII cranial nerves in about 20% cases. The manifestations of middle ear cavity tumour are avascular retro tympanic mass and conductive type of deafness. Brown's sign (Pulsation of the tympanic membrane that is inhibited by pneumatic otoscopy), thin section high resolution CT scan combined with gadolinium enhanced MRI may delineate extent of tumour.

Mainstay of treatment is surgery. Excision of lesion gives the actual relief of the symptoms. In our study none of the patient experienced recurrence during post operative follow up.



We adopted through nail bed approach. Digital block was sufficient for anesthesia. With all aseptic precautions nail avulsion was done first, as a result the outline of lesion was clearer. The lesion was excised circumferentially. When the tumour is large and disrupts the nail matrix, a split thickness nail graft from another digit is needed to reconstruct the defect.

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Good Bone

Long term allograft loss: A major challenge for kidney transplantation

Roy DK¹

The ORION 2006 ; 336-340

Summary

Despite the significant improvement that have occurred since the introduction of Cyclosporin, long term renal allograft survival continues to be an area of concern. Any cause of renal injury either immunological or non-immunological that results in nephron loss, leads to reduced renal mass and initiates further renal damage due to hyper filtration. Acute and chronic rejection is initiated by HLA disparity between donor and recipients and increased recipient immune responsiveness. Better HLA matching between donor and recipient in both live and deceased kidney transplantation and the use of more potent immunosuppressants has reduced the incidence of acute and chronic rejections, although improvement of long term graft survival is still not satisfactory. Most immunosuppressive regimens that have been adopted to optimize first year rejection rates appear to be overly immunosuppressive late after transplantation. Accordingly, judicious choice of drugs and reduction in immunosuppression over time, guided by indicators of immunosuppressive toxicity and the needs of individual patient, is becoming the accepted standard. Management strategies that involve the use of sirolimus offer some promise. Donor and recipients age, sex, waiting time on dialysis all may affect long term graft survival. Nephron dose mismatch, prolonged cold ischemia time, Infection, hypertension, post transplant diabetes mellitus, dyslipidemia, malignancy, noncompliance all contribute to long term allograft failure. Optimizing these factors and minimizing CNl nephrotoxicity are critical in reducing long-term allograft failure.

Introduction

Renal transplantation is the only viable therapeutic option for most patients with irreversible renal failure. A successful transplant restores not merely life but also an acceptable quality of life to these patients. The high cost of lifelong dialysis limits this form of therapy to a privileged few, making successful renal transplant a greater necessity. Since the first successful kidney transplantation in 1950¹ and particularly since the introduction of potent and selective immunosuppression in 1980s, a great deal of progress has been made in graft preservation and patient survival. Acute rejection has been shown to be the strongest negative prognostic factors for long-term graft survival after kidney transplantation. Progress in the control of early and late rejection and in managing infections such as cytomegalovirus has improved both survival of the patients and function of the grafts². But concerns temper this optimism. Current immunosuppressive protocols contributed to a reduction in acute rejection rates by nearly half over the first two years post transplantation, but the expected increase in long term graft survival has not been observed³. This potential discordance between trends in acute rejection rates and trends in long term graft survival has been observed in several clinical trials. In United States 4500 transplant patients develop end stage renal disease (ESRD) in each year, making transplant failure a major cause of ESRD⁴. The two most common causes of late loss of kidney allograft (More than 6-12 months after transplant)

are chronic allograft nephropathy (CAN) and death with a functioning graft^{3,5}. CAN is a heterogeneous disease with both immune and nonimmune causes and the diagnosis is nonspecific. CAN is the main cause of graft loss after one year, with 60-70% prevalence in protocol biopsies^{6,7}. Increasingly we are able to recognize specific contributors to the disease. Determining whether CAN is predominantly the result of immunological or nonimmunological events, and how CAN should be treated or prevented, remain challenging questions in the clinical practice of kidney transplantation today. This review examine the role of factors related to the development of chronic allograft nephropathy and long term graft loss. As there is no therapy available at this time for established chronic allograft nephropathy, possible areas of intervention for the prevention of CAN are discussed. Many factors have been found to play role in the development of chronic allograft nephropathy including donor factors, recipient factors, immunological risk factors (acute rejection episodes), Non immunological factors such as atherosclerotic risk factors (hypertension, posttransplant diabetes mellitus, dyslipidemia etc), chronic calcineurine inhibitor toxicity, and noncompliance.

Donor factors

The graft half-life is longer for living donor than with deceased donor kidney transplant. The difference may be accounted by a number of factors. First the quality of the kidney of a living donor can be carefully assessed, while that of a cadaver donor must be evaluated in a hurry and under difficult conditions. Secondly ischemia reperfusion injury is less severe with living donation. Finally brain death is associated with an up regulation of cytokines and chemokines that favour over expression of HLA antigens by endothelial and tubular epithelial cells, thus increasing the risk of acute⁸ and chronic rejection⁹.

Donor age has been shown to have powerful association with long term graft survival by Thorogood et al¹⁰ using data from Euro transplant registry. The united network for organ sharing (UNOS) registry documented that the higher the age of the donor the worse the long term outcome of the graft¹¹, which is probably due to problem of old kidneys replicative senescence rather than decreased renal function. The effect of donor age seems to increase with the increase of cold ischemia time. The rate of acute tubular necrosis is higher among donor above 50 years of age. Women tends to have smaller, lighter (weight 10-20% less than man) kidneys, which have 17% fewer nephrons than those of man. According to Brenner's hypothesis¹², kidneys with reduced renal mass progress towards failure due to hypertrophy of the nephrons to meet the excess load, eventually leading to nephron exhaustion. Brenner¹² suggested that renal allograft survival might be improved by matching nephron supply to recipients need. Gross imbalance between nephron supply and recipient demand are not likely to be corrected over long term by engraftment of a single kidney. Extreme mismatches in size e.g., placing a small female or pediatric kidney in a very large patient may lead to hyper filtration injury or to nephrotoxicity (because drug doses are tailored to the patient size). In such cases considerations may be given to dual kidney transplantation, currently only feasible from cadaveric donor. The dosing of

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large number of nephrons might lessen the risk of co-existent hypertension and thereby reduce the magnitude of immune injury to the graft. Use of kidneys from the very old and the very young should be discouraged. Dual kidney transplant of borderline donor into a single recipient is proposed by some investigators to solve such problem. The best way of utilizing old kidneys could be to transplant them to old recipients. A donor gender effect on graft survival is also observed for cardiac allograft¹³, which supports that in addition to "nephron under dosing" further pathomechanism must play a role, possibly difference in immunogenicity according to donor gender. To improve long-term graft survival rate age and gender matching between recipient and donor should be considered as criteria for organ allocation.

The role of HLA typing with modern immunosuppression has been a matter of controversy. There is evidence that long-term survival is better for transplant with no antigen mismatch than for mismatched transplants¹⁴, lesser degrees of mismatch are of little clinical relevance¹⁵. In fact the graft half life of transplants between spouses who are obviously HLA mismatched is more than one third better than that of deceased donor kidney transplant¹⁴. Recently donor specific alloantibodies (DSA) to HLA class I or II have been shown to be associated with CAN, possibly manifesting alloresponsiveness via the indirect pathway^{16,20}. It is not unusual to find that posttransplantation production of alloantibodies predate the clinical manifestations of CAN, further implicating humoral immune mechanisms as a cause of CAN rather than a consequence²¹. In kidney biopsy presence of the complement split product C4d appears to be a good in situ marker of antibody mediated rejection^{18,22}. Histocompatibility is one of few factors that can be used prospectively to improve long-term graft survival rates.

Recipient factors

Not only the age of donor, but also the age of recipients is increasing in recent years. The UNOS data showed that the results are worse for recipients above the age of 50 years. Pretransplant careful evaluation of co-morbid diseases as well as relative benefit offered by transplantation compared to dialysis is essential. It is also important to assess the patient's nutritional status and rehabilitation, since frail elderly patients are at particular risk of infectious complications. The main cause of graft failure in elderly recipients is death due to other causes than to allograft related problems. Cardiovascular disease and malignancy is more frequent at advanced age. Therefore, intensified cardiovascular investigations and search for malignancies with appropriate therapeutic measures should be taken before considering elderly patients for transplantation. On the other hand, the risk of graft failure due to acute or chronic rejection tends to decrease with age¹¹. Thus less aggressive immunosuppressive therapy to reduce the risk of cardiovascular complications, infection and diabetes may be used. It would be of great utility to know immune reactivity of the recipient in order to adjust immunosuppression accordingly. Unfortunately we have still no definite valid pretransplant markers of immune reactivity. In the past patient who lost their first transplant due to rejection were considered at high immunological risk. Recent UNOS data¹¹ showed that the graft half-life was similar for the first transplant (10.6 years) and second transplant (9.4 years). However, patients who lost their first graft due to accelerated rejection may still be considered strong responders. Patients who develop high titers of panel reactive antibodies (PRA) following pregnancy, blood transfusion, or previous transplant is difficult to transplant as the cross match with potential donor is more likely to be positive.

Good results have been reported by pre treating hypersensitized patients with intravenous high titer immunoglobulin²² or with CD20 monoclonal antibody rituximab²⁴, which may reduce PRA titer dose dependently. Waiting time on dialysis consistently represent the strongest independent potentially modifiable risk factor for long term graft loss²⁵. The 5 year and 10 years graft survival rates were 58% and 29% respectively for patients who were on dialysis for longer than 2 years, compared to 78% and 68% respectively for those who were on dialysis for less than 6 months (for both comparisons $p < 0.001$)²⁶ Strong evidences suggest that the result of preemptive transplantation, before dialysis started are far better^{26,27}.

Cold ischemia time and initial kidney function after transplantation

Prolonged cold ischemia is a significant predictor of long term graft loss²⁸. Cadaveric kidney experiencing longer cold ischemia time (CIT) are associated with higher levels of delayed graft function, acute rejection, and early graft loss²⁹. One mechanism to explain this results is that Ischemia/reperfusion (I/R) injury makes the allograft more immunogenic by upregulating molecules involved in immune response (e.g, HLA class I/II). While other studies³⁰ showed that prolonged cold ischemia time is mainly responsible for tubulointerstitial damage, where as allogenicity leads to a vascular lesion. The association of both the factors together accelerates and aggravates the progression of chronic allograft nephropathy. Reducing prolonged cold ischemia time by regional organ distribution and less stringent tissue matching may reduce persistent high rates of long term loss of cadaveric renal allograft.

It has been apparent for many years that measures of post transplant renal function correlate strongly with graft half-life. Cecka JM et al²⁵ observed many years ago that early renal dysfunction whether it was the result of acute rejection (immunologic) or non immunologic events, represents a negative predictor of 1 year graft survival. Meier-Kriesche et al³ found that the serum creatinine value at 6 month after transplantation represents a better correlate of long term graft survival (3 and 6 years) Vs acute rejection alone. Flechner and his colleagues³¹ found that serum creatinine of 2mg/dl or greater by 6 months more than doubled the risk of chronic allograft nephropathy. An important observation in this regard has been that, when the serum creatinine returns to its base line value after treatment of acute rejection the risk of later CAN is dramatically diminished³². But the graft survival of those acute rejection cases whose serum creatinine remain elevated are 19% and 23% lower at 3 and 6 years compared to those who never experienced acute rejection³. Distinguishing between different histological types of acute rejection is potentially important because they have been associated with different clinical response to anti rejection treatments and ultimately with graft survival^{33,34,35}. A study³⁶ on 428 kidney transplant recipients reported that individuals who experienced acute vascular rejection in the first three months post transplantation had one year graft survival rate of 50% and 5 year rate of 34% compared to 87% and 71% respectively for patients experiencing pure interstitial rejection. Other clinical results have provided support for the suggestion that allograft vascular injury may be causally related to chronic rejection and graft loss.

Recurrence of primary disease

Recurrence of primary diseases may lead to graft failure, particularly in the long term. On review of the recent large studies³⁷⁻⁴² it appears that some diseases, such as IgA nephropathy, membranous nephropathy, and lupus nephritis,

do not affect the 10 year graft survival even when they have recurred in the graft, but they may eventually contribute to graft failure over more longer periods. But Focal segmental glomerulosclerosis, membranoproliferative glomerulonephritis, Henoch-Schönlein purpura and particularly haemolytic uremic syndrome recurrence are more dangerous and may lead to graft loss. In sporadic cases favourable response to plasmapheresis and immunoadsorption have been reported. De novo microangiopathy may occur in patients on cyclosporin, tacrolimus, anti-mTOR agents or OKT3. In these cases, renal biopsy is indispensable for early diagnosis of thrombotic microangiopathy. Prompt withdrawal of offending agent leads to recovery in some patients. Plasmapheresis may also be helpful.

Infection

Infections that are induced by transplantation remain frequent, with infections now exceeding rejection in pediatric transplant population⁴³. Death due to infection may be one way of functioning graft loss. Aggressive immunosuppression may reactivate Polyoma BK virus, which remain dormant in the urinary tract. The human strains of BK and JC were discovered in 1970s^{44,45}. Polyoma virus nephropathy (PVN) is an emerging dilemma in kidney transplantation. Several centers are now reporting very high rates of PVN with upto 50% graft loss, and significant irreversible graft dysfunction in others^{46,47}. Even with early detection the therapeutic options have been far less than curative. Reduction in immunosuppression is the first step, however patients are at increased risk of subsequent rejection^{47,48}. The growing burden of PVN has led some researcher to propose routine viral screening and immunosuppression reduction in recipients with high titers⁴⁹⁻⁵¹. Besides BK virus, Cytomegalovirus, Herpes virus 1,2 an adenovirus infection may cause interstitial nephritis, enhance immunogenicity of graft and predispose to opportunistic infection with eventual graft loss. Tuberculosis itself may not affect the graft half-life, but pharmacokinetic interferences by anti tubercular drugs, which if not properly handled may cause graft damage.

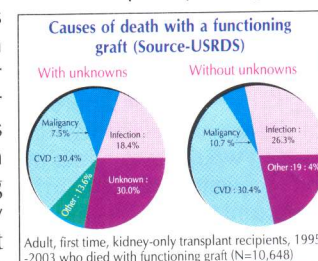
Immunosuppressive drugs mediated injury

The central issue in organ transplantation remains suppression of allograft rejection. The introduction of calcineurin inhibitors cyclosporin into clinical practice in early 1980s has a special place as survival rates at one year for kidney transplants improved from approximately 60% to 80%, although long term allograft survival has only marginally improved³. Although the role of CNI toxicity (CsA or TAC) in the pathogenesis of CAN has been a matter of debate amongst transplant physicians and nephrologists, recent clinicopathological studies have suggested that CNI nephrotoxicity contributes to CAN either directly via drug toxicity or indirectly via hypertension and dyslipidemia⁵²⁻⁵⁵. These drugs can cause persistent vasoconstriction and endothelial lesions that eventually lead to interstitial fibrosis and tubular atrophy. Important contributors to their nephrotoxicity are activation of the rennin angiotensin system, increased synthesis of osteopontin and chemokines as well as diminished production of nitric oxide. All these factors may trigger excessive production of profibrogenic transforming growth factor beta 1 and or directly cause tubulointerstitial damage⁵⁶. Factors increasing the risk of severe nephrotoxicity are the dose of CNIs, age of the recipient, and his or her renal function. Both acute and chronic nephrotoxicity are well described even with judicious use of CNIs, and is the major dose limiting effects of these drugs^{56,57}. Lesion caused by CNIs can be halted or even improved by reducing or stopping the drug in due time⁵⁸. To prevent the development of severe renal toxicity, the blood levels of cyclosporin and tacrolimus should

be adjusted accordingly, taking the possibilities of pharmacokinetic interferences into account. Recent results using newer immunosuppressants suggest that it is possible to develop safe and effective immunosuppression with less reliance on CNIs. Approaches using CNIs dose reduction⁵⁹, as well as those using calcineurin inhibitor elimination or even complete avoidance have been reported with high rates of success⁶⁰. Nankivell et al⁵⁵ suggested a two staged treatment strategy, with less reliance on CNIs in the second phase, which may provide better outcome than current strategies. The choice of immunotherapy now extended with the use of sirolimus, the first of a new class of immunosuppressive agents (mTOR inhibitors) that act downstream from CNIs and have anti-proliferative action on hypoxia induced proliferation of vascular smooth muscle cells⁶¹. Both sirolimus and everolimus were shown to reduce allograft vasculopathy⁶². Improvement of renal function after late conversion of CNI to sirolimus has been shown for renal transplants as well as for function of native kidneys in recipients of cardiac transplants^{63,64}. Sirolimus also prevent chronic allograft nephropathy and reduces recipient mortality with functioning graft by its tendency to lower blood pressure, and not increasing the incidence of post transplant diabetes mellitus like CNIs^{65,66}. The use of sirolimus has been associated with less tumour progression or even tumour regression. At currently used dosing regimen of sirolimus a lower incidence of malignancies has been noted. None of the 60 patients on sirolimus developed a tumour after 36 months compared with nine of 98 patients on sirolimus and cyclosporin combination⁶⁷. Antimetabolite mycophenolate mofetil or mycophenolate sodium (MMF) is capable of reducing the incidence of acute rejection, a known risk factor for CAN without inducing nephrotoxicity. Although there are many experimental and some clinical findings arguing for specific action of MMF on the immunological aspects of CAN, there is currently no firm evidence of this in humans. The data in the literature do not really address the issue of long-term allograft survival.

Non specific causes of graft dysfunction

Hypertension, posttransplant diabetes mellitus and dyslipidemia are also major risk factors for cardiovascular diseases and graft loss. Upto 20-25% of renal transplants develop overt de novo diabetes mellitus after transplantation (PTDM)^{68,69}. Unless adequately controlled PTDM increases the risk of cardiac, cerebrovascular and other peripheral vascular diseases⁷⁰. Moreover, patient with PTDM may develop diabetic nephropathy and graft dysfunction in long run^{68,71}. Fasting and postprandial glucose should be checked frequently and glucose intolerance should be treated as early as possible. Hypertension and dyslipidemia are also major risk factors for cardiovascular diseases, which has emerged as the main cause of death in recipients with functioning allograft. These risk factors may negatively influence allograft function both by promoting vascular lesions in the allograft (transplant arteriopathy) as well as in the recipient's arteries contributing to a high cardiovascular morbidity and mortality⁵. Opelz et al⁷² showed a strong association between blood pressure level and the risk of chronic graft dysfunction. Systemic hypertension to be diagnosed early and controlled by proper use of anti hypertensive agents to avoid long-term graft loss or dysfunction. Similarly, correction of dyslipidemia is also essential. Prolonged



or heavy immunosuppressive therapy used in transplantation is complicated by the development of an unusual assortment of malignancies. Although the overall risk for the development of cancer in renal transplant recipients is small, it is virtually important to follow them indefinitely to prevent death due to malignancy with functioning graft. It may be possible to prevent the development of some malignancies. Administration of hepatitis B vaccine to dialysis and transplant patient may prevent the development of hepatocellular carcinoma. Avoidance excessive sun exposure, wearing of protective clothing and the use of sunscreen applications or tretinoin or other retinoids may prevent skin tumors. The level of immunosuppressive therapy should be kept as low as is compatible with good allograft function. Inappropriate use of nephrotoxic drugs (NSAIDs, Cidofovir, foscarnet, amonoglycosides etc) in transplant patients may also be responsible for allograft dysfunction. Allograft recipients showing an increase in serum creatinine should always be asked about the use of potentially nephrotoxic agents. Center effect may be also responsible for long-term graft dysfunction. Different factors may explain the center effect like different criteria for patient selection, surgical techniques, post operative care and follow up, immunosuppressive regimens, management of rejection episodes and complications etc.

Causes of long-term allograft loss

A. Chronic allograft nephropathy

Immunological factors

- Number and type of acute rejection episodes.
- Response of acute rejection to treatment.
- Chronic subclinical rejection.

Non Immunological factors

- Age, race and gender of both donor and recipient.
- Waiting time on dialysis.
- Nephron dose.
- Cold ischemia time.
- Initial graft function after transplantation.
- Recurrence or de novo development of renal diseases.
- Post transplant infection.
- Calcineurin inhibitor nephrotoxicity.
- Noncompliance.

B. Death with a functioning graft

Cardiovascular death predisposed by

- Hypertension
- Post transplant diabetes mellitus
- Dyslipidemia
- Smoking
- Type of transplant (Live or deceased)

Malignancy induced by immunosuppression

Infection predisposed by immunosuppression

Others.

Non compliance

Non compliance in transplantation, defined, as covert or overt nonadherence to medications (s) prescribed for the prophylaxis of allograft rejection. It would seem intuitive that patients given the gift of organ donation and or the chance for life without dialysis would comply with the transplant team's prescription for successful longterm outcome. As has often been said transplantation is trading of one set of problems for another and some of these problems (financial burdens, complexity of the treatment programme, necessity of a disciplined medication and follow up schedule, side effects of drugs including disfigurement, adaptive life stresses) cause patients to deviate in a number of ways from the plan of care outlined by the transplant team.

Inadequate knowledge about the risk of non-compliance is also another cause of noncompliance. Poor compliance is an important cause of late graft loss. Butler et al⁷³ reviewed the studies devoted to the problem of compliance. Cohort studies showed that 30% of the cases of graft failure was preceded by episodes of non-adherence. Patients who are noncompliant with transplant medications have lower drug levels, more acute rejections and more graft loss^{74,75}. The link between subclinical noncompliance and decreased graft function was recently documented in a prospective study⁷⁶. Diagnosis, prophylaxis and treatment of non compliance are increasingly important strategies for reducing the attrition of graft function and survival over time. To improve compliance uninterrupted social and financial support should be assured, the treatment scheme should be simplified as much as possible, the patient should be well informed about the effects of the drugs and the consequences of poor adherence. To achieve the results we all desire, to achieve the promise of our new, varied and potent therapeutic armamentarium, transplant clinicians should work collaboratively with behavioral scientists to design real-world interventions that support improved long-term allograft survival.

Conclusion

Kidney transplantation is the best treatment for patients with end stage renal failure, both in terms of survival benefit and quality of life. The major limitation is the continuing shortage of kidneys suitable for transplantation, reinforcing the need to maximize graft survival. In recent years transplant recipients have benefited from improved short-term graft survival. Despite this, the expected increase in the long term graft survival has not been observed. This failure in improvement of the long term graft survival is predominantly due to chronic allograft nephropathy (CAN) and death with a functioning graft. CAN is a heterogeneous disease with both immune and nonimmune causes. Rejection both cellular and humoral is a major contributor to CAN. Most immunosuppressive regimens that have been adopted to optimize first year rejection rates appear to be overly immunosuppressive late after transplantation. Accordingly, judicious choice of drugs and reduction in immunosuppression over time, guided by indicators of immunosuppressive toxicity and the needs of individual patient, is becoming the accepted standard. Management strategies that involve the use of sirolimus offer some promise. Donor and recipients age, sex, waiting time on dialysis, nephron dose mismatch, prolonged cold ischemia time, infection, hypertension, post transplant diabetes mellitus, dyslipidemia, noncompliance all contribute to long term allograft dysfunction or failure. In order to make progress in prolonging graft life we must be able to clearly understand all these factors, optimize these factors and minimize CNI nephrotoxicity.

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Haematuria : Common manifestation of common and uncommon diseases

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Introduction

Haematuria is the presence of blood, specifically red blood cells, in the urine. Abnormal excretion of erythrocyte in urine is called haematuria. Haematuria is a sign that something is causing bleeding in the genitourinary tract: the kidneys, the tubes that carry urine from the kidneys to the bladder (ureters), the prostate gland (in men), the bladder, or the tube that carries urine from the bladder out of the body (urethra). Bleeding may happen once or it may be recurrent. It can indicate different problems in men and women. Causes of this condition range from non-life threatening (e.g., urinary tract infection) to serious (e.g., cancer, kidney disease). Therefore, a physician should be consulted as soon as possible.

Prevalence

Haematuria is one of the common nephrological and urological problems. Prevalence varies 2.5 to 4% among the general population, of them 25% having cystoscopic abnormalities including malignancies. Incidence of haematuria may occurs in up to 10% of the general population. But differences in the age and sex of the populations screened, the amount of follow-up and the number of screening studies per patient account for this range. In older men, who are at a higher risk for significant urologic disease.

Source of erythrocyte

Blood in the urine (haematuria) can originate from any site along the urinary tract whether gross or microscopic.

Screening

The literature agrees that gross haematuria warrants a thorough diagnostic evaluation. By contrast, microscopic haematuria is an incidental finding, and whether physicians should test for haematuria in asymptomatic patients remains at issue. No major organization currently recommends screening for microscopic haematuria in asymptomatic adults, even though bladder cancer may be detected in such patients. Though there is controversy regarding screening for haematuria, because the incidence of serious underlying conditions is relatively low. However, if haematuria is detected, it is very important that patients are thoroughly evaluated, as this is the presenting symptom of many of the urological cancer malignancies, which do not necessarily cause any other symptoms until they are relatively advanced and possibly metastatic (have spread).

Causes of Haematuria

Systemic

- Purpura
- Sickle cell trait
- Bleeding disorders, including anticoagulant drugs

Renal

- Acute glomerulonephritis (Primary/Secondary)
- Infarct / papillary necrosis
- Trauma
- Tuberculosis
- Stones

- Renal pelvis ca. and other renal tumours
- Wilms' tumour (in children)

Post-Renal

- Ureteric Stones
- Ureteric neoplasms
- Bladder tumours (transitional cell carcinoma)
- Bladder tuberculosis and bilharziasis
- Radiation cystitis
- Drug-induced cystitis, e.g. cyclophosphamide
- Prostatic enlargement
- Urethral neoplasms
- Bacterial cystitis

Localization

Red cell casts are virtually pathognomonic for glomerular bleeding. Unfortunately, they are a relatively insensitive marker. Therefore, it is useful to examine the character of the red blood cells. Dysmorphic urinary red blood cells show variation in size and shape and usually have an irregular or distorted outline. Such red blood cells are generally glomerular in origin. In contrast, normal doughnut-shaped red blood cells are generally due to lower urinary tract bleeding. Accurate determination of red blood cell morphology may require inverted phase contrast microscopy. The percentage of dysmorphic red blood cells required to classify haematuria as glomerular in origin has not been adequately defined. In general, glomerular bleeding is associated with more than 80 percent dysmorphic red blood cells, and lower urinary tract bleeding is associated with more than 80 percent normal red blood cells. Percentages falling between these ranges are indeterminate and could represent bleeding from either source.

Microscopic haematuria with Proteinuria of 1+ or greater on dipstick urinalysis should prompt a 24-hour urine collection to quantitate the degree of proteinuria. A total protein excretion of >1,000 mg per 24 hours (1 g per day) should prompt a thorough evaluation or nephrology referral and it is likely to be glomerular haematuria. Such an evaluation should also be considered for lower levels of proteinuria (>500 mg per 24 hours [0.5 g per day]), particularly if the protein excretion is increasing or persistent, or if there are other factors suggestive of renal parenchymal disease.

If a careful history suggests a potential "benign" cause for microscopic haematuria, the patient should undergo repeat urinalysis 48 hours after cessation of the activity (i.e., menstruation, vigorous exercise, sexual activity or trauma). No additional evaluation is warranted if the haematuria has resolved. Patients with persistent haematuria require evaluation.

Pattern of haematuria

Gross haematuria

If the blood is visible to the naked eye, it is called gross haematuria. In gross haematuria the urine is pink, red, or dark brown and may contain small blood clots. The amount of blood in the urine does not necessarily indicate the seriousness of the underlying problem. As little as 1 milliliter (0.03 ounces) of blood will turn the urine red.

Microscopic haematuria

If the blood is detected only on a urine test, it is called microscopic haematuria. The recommended definition of

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Associate Professor of Nephrology
Sylhet MAG Osmani Medical College, Sylhet.

microscopic haematuria is three or more red blood cells per high-power field on microscopic evaluation of urinary sediment from two of three properly collected urinalysis specimens. Thus, should be evaluated appropriately. At this time, there is no consensus on when to test for microscopic haematuria in the primary care setting.

Intermittent Haematuria

To account for intermittent positive tests for haematuria the patients with more than three red blood cells per high-power field from two of three properly collected urine specimens. It could be microscopic haematuria or macroscopic haematuria and, thus, should be evaluated appropriately. However, before a decision is made to defer evaluation in-patients with one or two red blood cells per high-power field, risk factors for significant disease should be taken into consideration. High-risk patients should be considered for full urologic and nephrologic evaluation after one properly performed urinalysis documenting the presence of at least three red blood cells per high-power field.

Risk Factors for Significant Disease in Patients with Microscopic Haematuria

- Smoking history
- Occupational exposure to chemicals or dyes (benzenes or aromatic amines)
- History of gross haematuria
- Age >40 years
- History of urologic disorder or disease
- History of irritative voiding symptoms
- History of urinary tract infection
- Analgesic abuse
- History of pelvic irradiation

Isolated haematuria

Patients with microscopic haematuria, a negative initial urologic evaluation and no evidence of glomerular bleeding are considered to have isolated haematuria. Although many such patients may have structural glomerular abnormalities, they appear to have low risk for progressive renal disease. Thus, the role of renal biopsy in this setting has not been defined. Nevertheless, because follow-up data are limited, these patients should be followed for the development of hypertension, renal insufficiency or proteinuria.

Idiopathic haematuria

A small number of people experience microscopic haematuria that has no discernible cause. These people normally excrete a higher number of red blood cells. "Joggers haematuria" results from repeated jarring of the bladder during jogging or long-distance running.

Pseudohaematuria

Reddish urine that is not caused by blood in the urine is called pseudohaematuria. Excessive consumption of beets, berries, or rhubarb; food coloring; and certain laxatives and pain medications can produce pink or reddish urine.

What are the symptoms?

The major symptom is blood in the urine, but it is often invisible to the naked eye. Sometimes there is swelling, high blood pressure, or another symptom of an underlying cause for the haematuria. In many cases, blood in the urine (gross or microscopic) is the only sign of a disorder. In others, a variety of symptoms, such as abdominal pain, decreased urinary force, hesitance, incomplete voiding, fever, frequent urination (polyuria), pain during urination (dysuria), pain in the flank or side, urinary urgency may be present.

What is significant haematuria?

Previously we have been taught that haematuria above 10 RBC's per high powered field on MSU was significant and less than 10 were safe. Unfortunately this is not true. The risk of a significant pathology relates to age and various risk factors including smoking, occupational and family history. Several studies have tried to define a safe for haematuria and have concluded that there is no level of haematuria, which is safe to dismiss in any age group.

How is it diagnosed?

Haematuria may be diagnosed when blood is observed in the urine or discovered on a urine test. Red urine does not necessarily mean blood in the urine. Beetroot and blackberries can discolour the urine red due to their anthocyanin pigment, as can various medications, including phenothiazines, prafantacin, and haemoglobinuria and myoglobinuria (filtered breakdown products of blood and muscle). The initial determination of microscopic haematuria should be based on microscopic examination of urinary sediment from a freshly voided, clean-catch, midstream urine specimen. Clues to the underlying cause may be found with a careful history and physical exam and some screening lab tests. If the cause is not apparent, the diagnostic work-up continues step by step until the cause is found. Early tests might include a complete blood count, a urine culture, a 24-hour urine collection, a blood test renal function, a C3 level (a screening test to look for kidney causes such as inflammation caused by streptococcus or lupus), and an imaging study such as an ultrasound. Both urine dipstick and urine microscopy are sensitive tests to detect haematuria, but only an MSU will differentiate the site of bleeding. Haematuria can be measured quantitatively by any of the following:

1. Determination of the number of red blood cells per milliliter of urine excreted (chamber count),
2. Direct examination of the centrifuged urinary sediment (sediment count) or
3. Indirect examination of the urine by dipstick (the simplest way to detect microscopic haematuria). Given the limited specificity of the dipstick method (65 percent to 99 percent for two to five red blood cells per high-power microscopic field). However, the initial finding of microscopic haematuria by the dipstick method should be confirmed by microscopic evaluation of urinary sediment or chamber count.
4. Upto 3 erythrocyte hpf is considered to be a normal when urinary sediment is examined after centrifugation. Fewer than 4 % people usually excrete more than 3 erythrocyte hpf.
5. Normally adult populations excrete about 10^7 erythrocyte in 2 litter of urine per day. Normal level of excretion is about 8000 RBCs per ml (when urine is centrifuged) and 13000 (when uncentrifuged urine) are examined.
6. Macroscopic haematuria often causes considerable concern, and just a few mls of blood can turn a whole bladder full of urine quite dark red. Sometimes the site of bleeding can be localised within the urinary tract by determining whether the bleeding is "initial"-i.e. at the beginning of the stream only, "terminal"-i.e. at the end of the stream only, or "complete"-i.e. throughout the entire stream. Initial haematuria generally indicates bleeding from the urethra that is flushed out by the first passage of urine through the urethra. Terminal haematuria can arise from the posterior urethra, bladder neck or trigone (base of the bladder), and is noticed at the end of urination, when the bladder compresses these areas. Total haematuria indicates that the

bleeding occurs at the level of the bladder or higher in the urinary tract, so that all of the urine is mixed with the blood, and the entire stream is therefore bloody.

7. Pain that occurs in association with a urinary tract infection or passage of a stone may indicate that the bleeding is from a benign cause.
8. Painless haematuria is generally regarded as secondary to a urinary tract cancer, until proven otherwise. However, all bleeding warrants investigation, to be certain that there is not an associated cancer, besides the more obvious causes for painful bleeding.

How is it treated?

Treatment is aimed at the underlying cause.

How can it be prevented?

Prevention also depends on the underlying cause.

Conclusion

Not all patients need every test, whilst some may need a very thorough evaluation to be confident of detecting cancer. As a rule if patient has had macroscopic haematuria, or is at high risk, tests should continue until a cause is found.

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MSD NEWS

Septic Abortion-DMCH, Dhaka

A scientific seminar was arranged by OLL on 'Septic Abortion' with the doctors of Mat-1, Gynae & Obs. Department, DMCH on 24th October 2005. Dr. Nahid Yasmin, Asst. Prof. Dept. of Gynae & Obs. Chaired the session. Dr. Bipul Kumar Biswash, MO, MAT-1, DMCH discussed on the topic.



Endoscopic Neurosurgery & Bangladesh Perspective-DMCH, Dhaka

Neurosurgery department, DMCH organized a seminar on 'Endoscopic Neurosurgery & Bangladesh Perspective' at conference room, DMCH on 25th October 2005. Dr. Md. Wahiduzzaman, Asso. Prof. Dept. of Neuro-Surgery, DMCH chaired the session. Dr. Mainul Huque Sarker, Prof. and head of the dept. of neurosurgery was the key point speaker on the occasion.



Recent Advancement in The Technique of Cesarean Section'- DMCH, Dhaka

The seminar was arranged by Orion Laboratories Ltd. on 26th October '05. Prof. Kohinur Begum Dept. of Obs. & Gyn. MAT-2, was the honorable chairperson on that occasion. Dr. Khon. Roksana Momtaz, IMO, MAT-2, DMCH discussed on the topic.



A case presentation on 'Invasive mole' -DMCH, Dhaka

Orion Laboratories Ltd. conducted a seminar on 27th October '05 at conference room, DMCH. Dr. Rushdana Rahman, IMO, MAT-4, DMCH was the speaker of the session. Dr. Farhana Dewan, Asso.Prof. of Gynae & Obs. Chaired the session.



Injectable Antibiotics- Barisal

A scientific seminar was arranged by OLL on 'Injectable Antibiotics' at surgery seminar room, SBMCH on 13th September 2005. Dr. A.K.M. Nazrul Islam, Asst. Prof. Of Surgery (Unit-IV) chaired the session. Dr. Arif Hossain, Registrar, SU-IV, SBMCH was the key note speaker.

Role of Ceftriaxone In Surgical Procedure - FMCH, Faridpur

A scientific seminar was held on 26th September '05 on 'Role of Ceftriaxone In Surgical Procedure' at surgery unit, FMCH on Dr. M.A. Malek, Asso. Prof. Dept. of surgery, FMCH chaired the session. Dr. J.C. Shaha, Asst. Prof. of Gynae & Obs. FMCH was the speaker on the occasion.

Azithromycin-A Golden Approach To Treat Infections'-BMCH Uttara, Dhaka

A seminar was sponsored by OLL on 'Azithromycin-Golden Approach To Treat Infections' at Red fort restaurant,

Uttara,Dhaka on 17th September 2005. The program was organized by Bangladesh Medical College Hospital Uttara Campus. Dr. Lt. Col. Sanaullah (Retd), Deputy Director, BMCH Uttara, chaired the occasion.

Round Table Meetings

Debhata Health Complex, Shatkhira

Orion Laboratories Limited arranged a round table meeting with the doctors of Debhata Health Complex,Shatkhira on 'Onium' on 11th August 2005.

Manda Thana Health Complex, Naogaon

A round table meeting was conducted by OLL with the doctors of Manda Thana Health Complex,Naogaon, Rajshahi on 'Onium' on 11th August 2005. The doctors were focused the Onium as a novel antispasmodic drug.

Conference Room, Desh Medical Services, Panchlaish, Chittagong

Orion Laboratories Ltd. conducted a round table meeting on 'Vertex is highly indicated for the prevention of post operative infection' on 10th August 2005 with the doctors of Desh Medical Services, Chittagong. Dr. Moynal Hossain, MA, OLL was one of the speaker of the session.

Ekushey Hospital (pvt.)Ltd. Chittagong

A round table meeting was held on 'Vertex-Is highly indicated to prevent post operative Infection' on 14th August '05 at Ekushey hospital (PVT.) Ltd. Chittagong. Dr. Ridwan, MO, Ekushey hospital was the speaker of the session.

Gynae Seminar Room, SSMCH, Dhaka

A round table meeting focusing the product 'Vertex' was organized by GU-III, SSMCH on 11th October '05. Dr. Fatema Begum, Asso. prof. of Gynae & obs. (GU-III) was chaired the occasion.

Niramoy Poly Clinic, Sylhet

A round table meeting was conducted by Orion Laboratories Limited on 'Vertex in post operative management' at Niramoy Poly Clinic, Sylhet on 28th August 2005.



Gynae Seminar Room, SSMCH, Dhaka

A round table meeting on 'Ceftriaxone Sodium' on 16th October '05 was organized by Gynae Unit-I, SSMCH. Prof.Mahmuda Khatun, Dept.of Gynae & Obs. SSMCH chaired the session.

Medicine Unit-V, DMCH, Dhaka

A successful Iftar Mahfil was sponsored by OLL at conference room of DMCH on 12th October 2005. The rest of the MSD news at page -346

Rheumatic disorders & bone problems in diabetes mellitus

Musa AKM¹, Nazimuddin K², Huq SA³, Sarker RSC⁴, Ahmed AKMS⁵

The ORION 2006 ; 23 : 344 -346

Introduction

A variety of conditions may affect the locomotor system in diabetic subjects causing several Rheumatic problems and bony lesions. The limited joint mobility (cheiroarthropathy) is characterized by stiffness of the small joints of the hands and other sites. A variety of soft tissue Rheumatic conditions are seen in diabetes such as Adhesive Capsulitis of the shoulder, flexor tenosynovitis and Carpal tunnel syndrome. Hyperostotic bone change, Diffuse Idiopathic Skeletal Hyperostosis (DISH) develops early in diabetes particularly in type 2 Diabetes. Diabetic osteoarthropathy (Charcot's joint) is characterized by destruction and lytic bone changes affecting the bones of the foot. Gout and Pseudogout are also seen more frequently in Diabetes^{1,2}.

Diabetes mellitus affects almost every system of the body including musculoskeletal system. Joint disease in diabetes is mainly due to either excessive collagen deposition or dysfunction of autonomic nervous system.

Table-1 : Rheumatic Disorders & bone problem in Diabetes Mellitus^{1,2,3}.

Non articular conditions (Skin, soft tissue & fibrosing conditions)	Articular Conditions	Bone Conditions
Cheiroarthropathy & Pseudoscleroderma.	Neuropathic Joint (Charcot's Joint)	Ankylosing Hyperostosis (Forestier's Disease)
Dupuytren's contracture	Osteoarthrosis	Osteopenia (Type 1 Diabetes)
Flexor Tenosynovitis (Trigger finger)	Gout & Pseudogout	Osteoporosis
Carpal tunnel syndrome	Septic arthritis & Osteomyelitis.	
Adhesive Capsulitis of the shoulder		
Shoulder Hand Syndrome		

Limited joint mobility (diabetic cheiroarthropathy)

In Diabetes of long duration there is thickening and tightening of the skin particularly of the dorsum of hands giving the resemblance to the waxy tight skin seen in patients with Systemic Sclerosis (Scleroderma).

Pathogenesis

Multifactorial: Microangiopathy leads to connective tissue ischaemia with resultant fibrosis.

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2. **Dr. Khwaja Nazimuddin**, FCPS (Medicine) Assoc. Professor, BIRDEM (Medicine unit -I) and Ibrahim Medical College
3. **Dr. Sadia Afrin Huq**, MBBS Honorary Medical Officer, Medicine unit-I, BIRDEM Hospital, Dhaka
4. **Dr. Rene Suzan Claude Sarker**, MBBS Assistant Registrar, Medicine unit-I, BIRDEM Hospital, Dhaka
5. **A. K. M. Shaheen Ahmed**, FCPS (medicine), MCPS (Medicine) Registrar, BIRDEM (Medicine unit -I) and Ibrahim Medical College



Fig-1: Diabetic cheiroarthropathy



Fig-2: Dupuytren's contracture

Symptoms

Stiffness of finger & restriction in normal activity such as :

- Using insulin syringe.
- Difficulty in forming a fist.
- Reduction in grip strength
- Problem in fine movement.

On Examination

Prayer sign positive

Patient may not be able to closely appose some or all fingers when palms are placed together.

In differentiating with scleroderma

- Raynaud's Phenomenon is absent (positive in 90% cases of scleroderma).
- ESR or CRP is not raised.
- Topoisomerase & centromere activity is not present.
- Radiologically- no pulp atrophy.

Management

- Strict glycaemic control.
- Physiotherapy.

Dupuytren's contracture

Occurs in 33%-60% of patients with IDDM. Patients present with nodular thickening of the palmar fascia leading to flexor contracture usually of the fourth and fifth digits^{1,2,3}.

Flexor tenosynovitis

Occurs in 5%-33% of diabetic patients. Females with long standing Diabetes are more commonly affected than males. Patients complain of aching and stiffness in the palmar aspect of the hands. A trigger finger may occur as a result of an inflammatory nodule getting caught in the proximal pulley at the base of the finger. The thumb of the dominant hand is most commonly involved (75%). Laboratory findings and radiographs are unremarkable. Treatment includes NSAIDs, local steroid injection & surgery^{1,2,3,4}.

Treatment includes : NSAIDs, Physical therapy, Vit-E, Local corticosteroid injection & rarely surgery.

Carpal tunnel Syndrome (CTS)

CTS commonly occurs in diabetic patients. Up to 15% of all patients with CTS will have diabetes. Patient presents with numbness in the Median nerve distribution, nocturnal paresthesia, hand pain and pain radiating to the arm and shoulder. Tinels and Phalens signs may be positive. NCV can be done for confirmation^{1,2,5}

Treatment

Splints, NSAIDs, Diuretics, local steroid injection into the Carpal tunnels, surgical decompression..

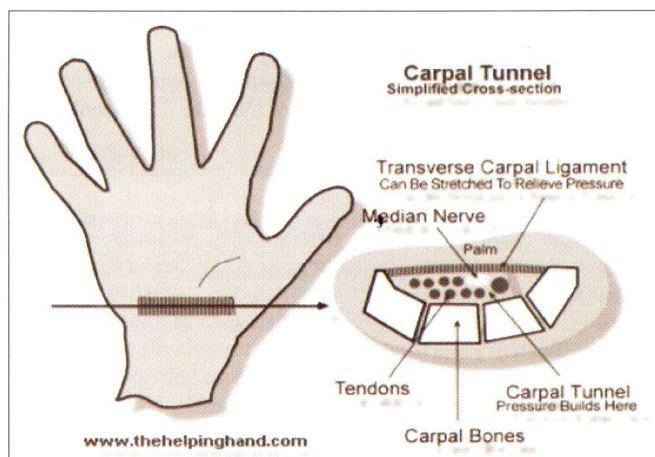


Fig-3: Carpal tunnel syndrome

Adhesive capsulitis/frozen shoulder

It occurs in 10% -33% of Diabetics and is more common in Diabetics than in non-Diabetics. The typical patient is female with NIDDM of long duration who present with diffuse soreness and global loss of motion of shoulder. Up to 50% of patients have bilateral involvements. Laboratory studies and radiographs are unremarkable^{5,6,7,8}.

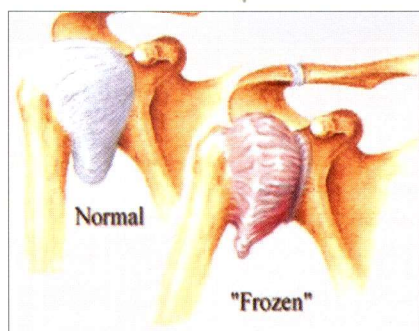


Fig-4: Frozen shoulder

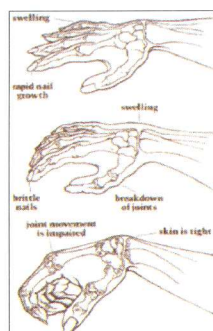


Fig-5 : Shoulder hand syndrome

Treatment

Treatment includes NSAIDs, rarely intra-articular steroids and vigorous physical therapy to improve range of motion.

Shoulder hand syndrome

Also known as Reflex Sympathetic Dystrophy Syndrome and is referred to as Complex Regional Pain Syndrome Type-1. It is characterized by pain and swelling usually in the distal extremity accompanied by vasomotor instability, trophic skin changes and rapid development of bony demineralization^{8,9}.

Neuropathic joint (Charcot's joint)

Progressive destructive arthritis associated with loss of pain, proprioception or both. First described by Jean Marfin Charcot in 1968 in patients with Tabes dorsalis. Charcot's joint occurs in <1% of all diabetics-both male and female are equally involved. Most patients are (>66%) are over age 40 and have had long standing >10 yrs poorly controlled Diabetes mellitus complicated by a diabetic peripheral neuropathy^{1,9}.

Table -2 : Pattern of involvement of neuropathic joint disease.

Disease	Involved Joint
Diabetes mellitus	Tarsal and Tarsometatarsal joint
Tabes Dorsalis	Knees, Hips & Ankles
Syringomyelia	Glenohumeral, Elbow & Wrist



Fig-6 : Charcot's Foot X-ray



Fig-7 : Charcot's Foot

Pathogenesis

Increased blood flow through the foot, secondary to local autonomic denervation, together with abnormal pressure loading may lead to unsuspected fracture with minimal normal daily trauma.

Symptomatology

The usual presentation is swelling of the foot with no or little pain with progression of disease. The patient can develop "Rocker bottom" feet due to metatarsal collapse.

Diagnosis

Radiographs frequently show severe abnormalities characterized by the 5D's-Destruction, Density (increased), Debris, Disorganization, and Dislocation. The increased density and sharp margin of the bony debris help in separating a Charcot's joint from infection.

Isotope bone scan using Indian 111- labeled WBC is helpful in differentiating from Osteomyelitis (Test positive cases). Sometimes CT scan or MRI scan may be required.

Treatment

- Immobilization.
- Bisphosphonates to reduce osteoclastic activity
- Reconstructive orthopedic techniques.

In Diabetics early recognition and treatment of a Charcot's foot by prohibiting weight bearing for at least 8 weeks may lower the chance of severe disease^{1,2,7,9,10}.

Osteoarthritis

Diabetic subjects are more likely to be involved with degenerative arthritis earlier and in the more severe form. Osteoarthritis may be linked with obesity in Diabetes¹.

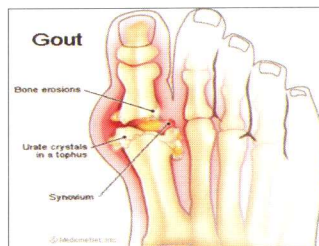


Fig-8 : Gout



Fig-9 : Hyperuricaemia

Gout & hyperuricaemia

An increase in serum uric acid concentration is a marker for CHD and is associated with glucose intolerance. Hyperuricaemia is also more prevalent among individuals with obesity, hyperlipidaemia and hypertension and so has been considered by some investigators to be part of Insulin Resistance Syndrome⁷.

Pseudogout

Calcium pyrophosphate deposition arthropathy is characteristically seen in older subjects and usually affects the larger joints such as the knees. Radiography shows features of chondrocalcinosis^{1,7}.

Bone problems in diabetes mellitus

Diffuse Idiopathic skeletal hyperostosis (DISH; Forestier's disease) is a non inflammatory disease occurring in male aged over 50 years. It is characterized by flowing hyperostosis (Bone formation), calcification of the anterior longitudinal ligament of at least 4 contiguous vertebral bodies and non erosive enthesopathies (Whiskering). The disease is not associated with sacroilitis, apophyseal ankylosis or HLA B-27. Patients are frequently are asymptomatic. DISH occurs in upto half of diabetic patients compared to nearly 13% in the general population^{1,8,12}.

Treatment is with NSAIDS if there is pain, exercise to retain movement and muscle strength. Osteopenia & fracture particularly with type I diabetes of long duration may occur due to reduced bone mineral density compared to non-diabetic population^{1,8}.



Fig-10: DISH

Conclusion

It has been clear that a good number of musculoskeletal disorders are associated with Diabetes mellitus. These disorders not only increase the disability of patients but some of the musculoskeletal syndrome has definite correlation with other

diabetic complications for example LJM and retinopathy has been well established. Finally Diabetes must be considered in the differential diagnosis of Musculoskeletal Syndromes when other signs and symptoms suggestive of Diabetes is present ^{1,2,10}.

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MSD NEWS

Medicine Unit-II, SOMCH, Sylhet

A round table meeting was arranged by OLL with the doctors of medicine unit-ii, Sylhet M.A.G. Osmani Medical College Hospital on 'Inj. Ceftriaxone (Vertex)-Unique & Unparallel' on 30 October '05. Dr. Shetu, IMO, MU-II, SOMCH was discussed on the topic.



Thana Health Complex, Modhukhali, Faridpur

A RTM was held on 'Role Of Zinc' at Modhukhali Thana Health Complex, Faridpur on 13th July '05. Dr. Taposh Kumar, MO, T.H.C. Modhukhali, Faridpur, discussed on the topic.

Surgery Unit IV, SBMCH, Barisal

A round table meeting was organized by surgery U-IV, SBMCH on 'Injectables of Orion' on 15th August '05. Dr. Osman Gani, C. A. Surgery Dept. SBMCH was the speaker of the session.



Pediatric Ward, SOMCH, Sylhet

A round table meeting on 'Inj. Vertex-Unique & Unparallel' was held at Pediatric ward (unit-iii), SOMCH on 31st October '05. Dr. Muzibur Rahman, C/A, Dept. of Pediatric was the chairperson on the session.

Surgery Ward, SOMCH, Sylhet

A RTM on 'Inj. Vertex-Unique & Unparallel' was held on 26th October '05. Dr. Hasanuzzaman Shishir, C/A, SU-II, SOMCH chaired the session.

Gynae Ward, SOMCH, Sylhet

MSD of Orion Laboratories Ltd. arranged a round table meeting on 'Vertex' at gynae ward on 27th October '05. Dr. Kiahowara, C/A, gynae unit-ii chaired the session. Dr. Monir, Intern doctor was discussed on the topic.

Pediatric Ward, Unit-II&III, RMCH, Rajshahi

A round table meeting was conducted by pediatric ward (Unit-II&III), RMCH at Charming Chinese restaurant, Rajshahi on 'Vertex' on 20th October '05.



Pediatric Surgery, SBMCH, Barisal

A round table meeting on 'Injectables of Orion' was held on 17th July '05 at Pediatric surgery department, SBMCH. Dr. Zahid Hossain, Head of dept. of pediatrics SBMCH was the key note speaker of the session.

Surgery Unit-II, SBMCH, Barisal

A Iftar Mahfil was arranged by OLL with the doctors of surgery Unit-II, SBMCH on 30th October '05.

Thana Health Complex, Keshobpur, Jessore

A RTM was held on 'All Injectable Antibiotics' at T.H.C. room, Keshobpur, Jessore on 15th August '05.

Intern Doctors Reception Programs

Dhaka medical college hospital, Dhaka

Orion Laboratories Limited congratulated the Intern doctors of Dhaka Medical College Hospital (Batch-K57) and arranged a successful reception party on 10th September '05 at China Kitchen Restaurant, Dhaka. Prof. Mahbubul Alam, Vice Principle of DMCH chaired the occasion.



Chittagong Medical College Hospital, Chittagong

A successful intern reception program of Chittagong Medical College Hospital with batch-41 was held on 27th September 2005 at Dr. Samiuddin Hall, BMA Bhaban, Ctg. It was sponsored by Orion Laboratories Limited. Dr. Khurshid Jamil Chowdhury, Civil Surgeon, Ctg. Vice president, Central BMA was the Chief guest and all other honorable BMA members were also present on the occasion.



Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet

Orion Laboratories Limited arranged a grand gala intern reception program of Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet on 17th September 2005 at Royal Chef Chinese Restaurant, Lavabazar, Sylhet. All doctors enjoyed the raffle-draw and prizes of the program.

Dinaipur Medical College Hospital, Dinaipur

An intern doctors reception program of Batch-9, Dinaipur Medical College Hospital held on 30th October '05 at Dinaipur Medical College Hospital. Orion Laboratories Ltd. arranged the program successfully and 180 doctors were present on the occasion.

Sir Salimullah Medical College Hospital, Dhaka.

Orion Laboratories Limited arranged a grand gala intern doctors reception program of Sir Salimullah Medical College Hospital with SS-28 batch on 2nd October '05 at China Kitchen Restaurant, Dhaka. More than 250 doctors participated in that program and they enjoyed the raffle draw session. It was a very successful program ever organized in SSMCH, they mentioned.



Ovarian fibrothecoma with degenerative change

Annie SH¹

The ORION 2006 ; 23 : 347

Abstract

We report a case of ovarian fibrothecoma with degenerative change and oedema. A type of ovarian tumour less common in young population. The patient was a fifteen years old unmarried girl. She had a mass measuring about 12 x 10 x 6 cm. Microscopically the tumour mass was diagnosed as fibrothecoma of ovary with degenerative changes myxomatous type. The age of the patient and histologic observations are important.

Key words

Ovary, fibrothecoma, myxomatous changes.

Introduction

Ovarian fibrothecoma can usually be diagnosed easily by magnetic resonance imaging¹. But unusual features may sometimes make the diagnosis difficult. Because of their predominantly low signal intensity on T₂ weighted images. Fibrosis and fibrothecoma display a relatively specific appearances on MR images². The case being reported did not undergo MRI or any hormone investigation.

Case report

A 15 years old young unmarried girl suffering from abdominal distension and lower abdominal pain of short duration, approximately one month. Her clinical examination revealed a solid mass in lower abdomen of 12 cm x 10 cm (approximately) smooth in consistency and freely mobile. Ultrasound report commented a mass which is mostly solid with partly cystic areas in abdomen to pelvis. No ascitis or degenerative changes were commented. However the mere appearance of solid is not diagnostic of malignancy³. MRI or hormonal investigation facilities were not performed.

The clinical view was in favour of benign growth other than the mass being solid. Laparotomy was done and mass occupying most of right ovary and compressing the normal ovarian tissue to periphery was found. The border between the mass and normal tissue was obvious but it was not encapsulated which correlates with other reports⁴. Peroperative appearance did not give any evidence of malignancy. As the tumour arose from one end of the right ovary, only removal of the tumour mass was done and remaining ovarian tumour kept *in situ*. The mass then sent for histopathological examination. She had an eventful postoperative period and was discharged at due time. Histopathologically described the tumour to be of fibrothecoma variety having degenerative changes of myxoid type and having no evidence of malignancy.

Discussion

Ovarian tumours are a group of neoplasms affecting the ovary and have a diverse spectrum of features according to the particular tumour entity⁵. Fibromas and thecomas are ovarian tumours of gonadal stromal origin and account for about 4% of all ovarian tumours⁶. The difference between fibromas and thecomas is occasionally imprecise because of histological and immunological overlap. Therefore the term fibrothecoma is frequently used⁶. The clinical presentation of ovarian fibrothecoma is relatively non specific namely pelvic or abdominal pain or distension. Grossly ovarian fibrothecomas are unilateral in 90% of all cases and are usually solid, spherical, slightly lobulated,

greyish white mass covered by glisening and intact ovarian tissue⁷. Fibromas are a type of sex cord stromal tumours usually present in 4th & 5th decade⁵. Ovarian fibrothecoma of large size tends to be associated with varying degree of oedema, myxoid changes and cystic degeneration⁶. There is a paucity of cytogenetic data available on sex cord stromal tumours. Trisomy 12 is frequent finding and often sole anomaly of sex cord stromal tumour⁵. The mechanism of extensive cystic degeneration is unclear. Sawant et al reported that ovarian tumours of the thecoma fibroma group larger than 10 cm in diameter tends to be associated with myxoid changes and vascular a discrepancy between arterial supply and venous drainage⁸. The patients age is also important. This type of mass affects young women with average years⁵, whereas 84% of the patients are postmenopausal⁴. Ovarian myxoma has recently been a new distinct pathological entity that show moderate cellular proliferation of spindle cell increased with areas of fibrosis and haemorrhage this has been reported in fibrothecoma 40 % of cases⁹. Costa et al insisted that myxoma may be at one end of differentiation in the thecoma, fibroma because the myxoid changes in fibrothecoma histologically and immunologically detected⁹. Ovarian neoplasm have become increasingly important not only because the large variety of neoplastic entities but more because they have gradually increased the mortality rate in female genital cancer. It is generally impossible to diagnose the nature of ovarian tumour preoperatively just by clinical examination and even an exploration, though certain investigation like peritoneal fluid cytology examination of serum lactate dehydrogenase, fibrin degrading product and immunological test have been reported to be of more help as well as MRI. Predicting the nature of pathology but that leads to an expenditure. Hence depending on microscopic appearance leads further management.

As well as treatment of ovarian tumour during childhood and adolescence is complex requiring a delicate balance be achieved between eliminating the tumour and if possible preserving the child's capacity to conceive and bear children which is often possible in benign cases¹⁰.

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Associate Professor, Dhaka national Medical College Hospital

Launching of New Products

Zeta

Paracetamol 500 mg, Caffeine 65 mg

A potentiated analgesic

Zeta is a combination of paracetamol and caffeine. It is a unique combination to treat fever, headache, migraine and other types of pain. Paracetamol (An NSAID) relieves pain by inhibiting prostaglandin synthesis and reduces fever through action on hypothalamus. Caffeine (An Alkaloid) is used in combination with Paracetamol to increase the analgesic action of paracetamol. Zeta is indicated for the treatment of Headache & Migraine, Fever & Flu, Toothache & Earache, Rheumatic & Muscular pain, Sore throat, Dysmenorrhoea. The usual dosage for adult and children of 12 years of age and over: 1-2 tablets every 6 hours; not more than 8 tablets in 24 hours. It is presented as 100 tablets in one box. MRP of Zeta is TK. 150/box.



Onium Injection

Tiemonium Methylsulphate INN 5 mg

Freedom from VISCERAL PAIN

Onium (Tiemonium Methylsulphate), the novel antispasmodic is now available as injection. Onium ensures freedom from visceral pain within 10 minutes after injection. It has superior antispasmodic activity & unlike most other antispasmodic drug Onium does not exhibit atropinic, central, ocular effect. Onium is indicated for the treatment of spasmodic Dysmenorrhoea. Other indications are Gastroenteritis, Diarrhoea, Dysentery, Biliary Colic, Enterocolitis, Cholecystitis, Colonopathies, Mild Cystitis. Each 2 ml ampoule of Onium injection contains Tiemonium Methylsulphate INN 5 mg. In adults the usual dosage is 1 ampoule of Onium injection by slow IV or IM 3 times a day. Pack size : 1x 5's, MRP TK.75/pack.



Axet-500

Cefuroxime Axetil USP

Extended power for versatile activity

Axet-500 tablet (Cefuroxime Axetil) is a prodrug of cefuroxime, a semisynthetic analog of cephalosporin, which is active against a wide range of gram-positive and gram-negative bacteria. Axet-500 tablet is a safe solution to versatile infections during pregnancy. It is indicated for the treatment of upper & lower respiratory tract infections, acute bacterial otitis media, uncomplicated skin & skin structure infections, uncomplicated urinary tract infections, uncomplicated gonorrhoea. The usual dosage for adult and children of 13 years of age: 1 tablet every 12 hours. It is presented in blister box. MRP of Axet-500 tablet is TK. 45/=per tablet.



Reactin

Cyproheptadine HCl USP 4 mg

An effective appetite stimulant

Cyproheptadine hydrochloride is a potent serotonin and histamine antagonist with appetite stimulant properties. Appetite stimulants have been used to help overcome decreased appetite and malnutrition in children and adults. Reactin is indicated for appetite stimulant, improved weight gain in children and adults, seasonal and perennial allergic rhinitis, allergic conjunctivitis, mild & uncomplicated allergic skin manifestations of urticaria and angioedema, amelioration of allergic reactions to blood or plasma, cold urticaria. The usual dosage in adults: 1 tablet 3 times daily, Children tablet 2-4 times daily. It is presented in tablet form. MRP of Reactin is TK. 2.00/Tablet.



Maxical

Calcium carbonate 1250 mg, Vitamin D3 200 IU

Generates maximum Calcium

Maxical is a combination of Calcium and Vitamin D3. Calcium is an essential element and plays vital roles in the body. It makes body's framework stronger by building bones. Vitamin D is needed for Calcium to be absorbed from the gut, and deficiency can lead to low Calcium level and subsequent weakening of bones. Maxical is indicated for the treatment of osteoporosis, rickets, osteomalacia and tetany; as supplement during pregnancy & lactation; for prevention and treatment of Calcium and Vitamin D deficiency. The usual dosage in adults and children above 12 years of age: 2 tablets per day, preferably one tablet each morning and evening with a full glass of water. It is presented as 15 tablets in one plastic bottle. MRP of Maxical is TK. 45/ph.



Zimplex

Iron, Vitamin B- Complex & Zinc syrup

Nutrition triad for children

Zimplex syrup contains Iron, Vitamin B- Complex & Zinc in a single preparation. Conventional nutritional supplements for children do not contain all the three nutrients, that's why pediatric patients face inconvenience while receiving Iron, Vitamin B-Complex & Zinc syrup separately. Zimplex is indicated for the prevention and treatment of Iron, Vitamin B-complex and Zinc deficiencies. The usual dosage for adult is 5 to 10 ml TDS; for children 5 ml TDS, and for infant 5 ml daily. It is presented in 100 ml syrup form with a measuring cup. MRP of Zimplex is TK. 50/bottle.



Pedicef-DS

Cefpodoxime proxetil 50 ml double strength suspension

Safe and well-tolerated in children

Pedicef-DS (Cefpodoxime proxetil double strength) is a potent orally active 3rd generation Cephalosporin, which has wide spectrum of activity against gram-positive and gram-negative bacteria with enhanced anti-staphylococcal activity and stability in the presence of several β -lactamases. Pedicef-DS is essential for the paediatric patients of > 2 years. Pedicef-DS is indicated for the treatment of Upper & Lower respiratory tract infections, Urinary tract infections including gonorrhoea, Skin & soft tissue infections, Gynecological infections, Acute otitis media & Childhood infections. Pedicef-DS is presented in the form of dry powder for 50 ml suspension. The dose of pedicef-Ds suspension may be given to patients without regard to meal. The recommended dosage schedule is 12 hourly as follows: 15 days to 6 months - 4mg/kg body wt/ day, 6 months to 2 years - 40 mg/day, 3 to 8 years - 80 mg/day, over 9 years - 100 mg/day. The strength of Pedicef-DS is 80mg/5ml and MRP TK.175/= per phial.

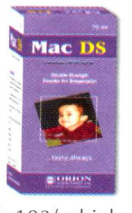


Mac-DS

Erythromycin USP 250 mg/ 5 ml

Tasty, always

Mac DS (Erythromycin Ethylsuccinate USP) is a macrolide antibiotic, which is highly effective for the treatment of typical & atypical pneumonia and infectious diarrhoea of children. The usual dosage for infant & babies up to 2 years : 125 mg 4 times daily and for children of 2 to 8 years : 250 mg 4 times daily. Mac DS is introduced in two pack size: 70 ml & 100 ml. The strength of Mac DS is 250 mg/ 5 ml. Price: Mac DS 70 ml @ Tk 74/ phial, Mac DS 100 ml @ Tk 103/ phial.



MSD NEWS

Medical Services Department of Orion Laboratories Limited (OLL) has successfully arranged a large number of Scientific Seminar, Internee Doctors Reception Program, Round Table Meeting in different venues of all over Bangladesh in last quarter of 2005.

Scientific Seminars

Management of burn - DMCH, Dhaka

A scientific seminar was arranged by the department of surgery-casualty, DMCH on 'Management of burn' at conference room DMCH on 30th October 2005. Prof. Shafquat Hussain Khundker, Head of the department of plastic & reconstructive surgery, DMCH was the key speaker and Dr. Feroz Quader, Associate Prof. of surgery chaired the session.



ECG Interpretation - SSMCH, Dhaka

Orion Laboratories Limited arranged a scientific seminar on 'ECG Interpretation' at Medicine Seminar Room, SSMCH on 8th October 2005. Dr. A.H.M. Mazharul Islam, Indoor Medical Officer, MU-I, SSMCH was the speaker of the session.



Value of Antibiotics In COPD - SSMCH, Dhaka

A scientific seminar was conducted by OLL on 'Value of Antibiotics in COPD' at Medicine Seminar Room, SSMCH on 12th October 2005. Dr. Matiur Rahman, Ass. Prof. of Medicine (MU-II) was chaired the session. Dr. Hassan Rashid, IMO, MU-II, SSMCH was the speaker of the session.



Common Joint Diseases - CMCH, Chittagong

A scientific seminar was held on 'Common Joint Diseases' at hospital conference room, CMCH on 22nd August 2005. Brig. Gen. Dr. Ismail Hossain, Director, CMCH was the honorable chairperson of that seminar. Prof. Sujon Al-Hasan, Head of Dept. of Physical Medicine was the speaker of the session. About 250 doctors were present on the occasion.

Pain Management of Dysmenorrhoea - CMCH, Chittagong

A seminar was organized by Gynae & Obstetrics department (Unit-iv) of Chittagong Medical College Hospital on 'Pain Management of Dysmenorrhoea' at gynae class room, CMCH on 24th September '05. Dr. Shahanara Chowdhury, Asso. Prof. Dept. of Gynae & Obs. CMCH chaired the session. Dr. Barna, Asst. Registrar, GU-IV, CMCH discussed on the topic.

Prophylactic Antibiotics in Surgery - FMCH, Faridpur

A scientific seminar on 'Prophylactic Antibiotics in Surgery' was held on 26th September '05 at nuclear medicine conference room, FMCH, Faridpur.

Ceftriaxone & Tiemonium Methylsulphate - CMCH, Chittagong

Gynae & Obstetrics department (Unit-iii) of Chittagong Medical College Hospital organized a seminar on 'Ceftriaxone & Tiemonium Methylsulphate' at gynae class room, CMCH on 18th October 2005. The number of participant were about 35.

Management of Meningitis - DMCH, Dhaka

A scientific seminar on 'Management of Meningitis' was conducted by OLL on 11th October '05 at conference room, DMCH. Dr. Sahidur Rahman, Asst. Registrar, Medicine, discussed on the topic.

Idiopathic Thrombocytopenic Purpura - SSMCH, Dhaka

Medicine Unit-III, SSMCH organized a seminar on 'ITP' at Medicine seminar room on 18th October '05. Dr. Syed Al-Mamun, IMO, MU-III, SSMCH was the speaker of the session.



Mechanical Bowel Preparation - DMCH, Dhaka

A scientific seminar on 'Mechanical Bowel Preparation, Advantage-Disadvantage' was held on 18th October '05 at Professor's room, Ward-20, Surgery unit, DMCH. Dr. Faruque Ahmed, Asso. Prof, W-20, Surgery Dept. DMCH was chaired the occasion. Dr. Habiba Begum, HMO, Surgery Unit, DMCH was the speaker of the session.



Management of Burn - DMCH, Dhaka

A scientific seminar was organized by Burn & Plastic Surgery Unit, DMCH on 'Management of Burn' on 17th October 2005 at conference room, DMCH. Dr. Enayet Kabir, Medical Officer, Burn, DMCH was the speaker and Dr. Abdur Rashid, Asst. Prof. Burn and Plastic surgeon was chairperson of the session.



Ceftriaxone as a prophylaxis regarding operative procedure in comparison to other antibiotics - CMCH, Chittagong

MSD of OLL arranged a scientific seminar on 'Ceftriaxone as a prophylaxis regarding operative procedure in comparison to other antibiotics' at gynae class room on 25th September '05. Dr. Rokeya Begum, Asso. prof. Dept. of Gynae & Obs. CMCH chaired the session.



A patient with long term pyrexia with breathlessness - DMCH, Dhaka

A scientific seminar organized by W-4, Medicine Unit, DMCH on 'A patient with long term pyrexia with breathlessness' at post graduate class room on 17th October 2005. Prof. F. M. Siddique, W-4, Medicine Dept. DMCH chaired the session. Dr. Sadia Sharmin, HMO, W-4, DMCH presented the case.



Onium Is The Novel Antispasmodic - CMCH, Chittagong

MSD of OLL conducted a seminar on 'Onium Is The Novel Antispasmodic' on 19th November '05 at gynae class room, CMCH with the doctors of GU-I, CMCH. Dr. Nasima Akhter, Head of the Dept. of Gynae & Obs. chaired the session.

Medical Record Keeping - DMCH, Dhaka

A scientific seminar was organized by the doctors of Ward-I, Dept. of Medicine, DMCH on 'Medical Record Keeping' on 19th October 2005. Dr. M.A. Khan, Prof. & Head of the dept. of Haematology, Dr. M.A. Masud, Asso. prof. of Gastroenterology, DMCH was present on the occasion. Dr. Rabiul Islam Sarkar, Asst. Registrar, W-I, Dept. of Medicine, DMCH was the speaker of the session.



Clinico-Pathology & Management of Septicemia in Obstetrics - SSMCH, Dhaka

A scientific seminar organized by GU-II, SSMCH on 'Clinico-Pathology & Management of Septicemia in Obstetrics' on 20th October 2005 at gynae seminar room, SSMCH. Prof. Maliha Rashid, Dept. of Gynae & Obs. SSMCH was the honorable chairperson of the session. Dr. Shikha Ganguly & Dr. Roksana Rahman was discussed on the topics.



Role of Combination Drug for Hypertension Management - FMCH, Faridpur

A scientific seminar on 'Role of Combination Drug for Hypertension' was held at conference room, FMCH on 11th July '05. Dr. Md. Enamul Karim, Asso. Prof. Dept. of Medicine, FMCH chaired the session.

Acute Appendicitis - SSMCH, Dhaka

The doctors of Surgery Unit-II, SSMCH organized a seminar on 'Acute Appendicitis' on 19th October 2005 at Prof. Anisuddin Ahmed Memorial Seminar room, SSMCH. Prof. A.N.M. Ziaur Rahman, Dept. of Surgery, SSMCH chaired the session. Dr. Tanjina Afria discussed on the topic.

The rest of the MSD news at page-343

Medi News

Zinc improves Capacity for Exercise

Active people who get too little zinc in their diets may tire sooner than they should, new research suggests. The study found that when 14 active young men followed a 9-week diet low in zinc, their cardiovascular fitness dropped in comparison to their performance during 9 weeks on a zinc-fortified diet. The reason appeared to be related to an enzyme called carbonic anhydrase, which relies on zinc for proper functioning. The carbonic anhydrase enzymes in RBC help the body expel CO₂, with the demand rising substantially during exercise. When men in the new study followed a low-zinc diet, these enzymes were less active. The result was that, during exercise, their bodies were less efficient at "getting rid of CO₂", explained study author Henry C. Lukaski, a researcher with the U.S. Department of Agriculture's Human Nutrition Research Center in Grand Forks, North Dakota. The 14 men in Lukaski's study were in their 20s and 30s and regularly active. The low-zinc diet provided 3.5 mg of the mineral per day through food, while the high-zinc diet comprised the same foods, but with a daily 15 mg zinc supplement. Study participants followed one diet for 9 weeks, during which they underwent two types of exercise tests on a stationary bike. Then, after a 6-week break, they followed the other diet and took the same exercise tests. Based on the men's exercise performance, the low-zinc diet "made it much more physically challenging to perform," Lukaski explained. While on the diet, the exercisers' heart rates climbed, whereas the efficiency of their breathing declined. Blood tests showed that the low-zinc diet lowered the men's stores of the mineral, and diminished the activity of the carbonic anhydrase enzymes in their RBC. Some past studies have found associations between low zinc intake and poorer muscle strength, a tendency to fatigue easily and diminished speed during exercise. This study, according to Lukaski, suggests that dampened carbonic anhydrase activity may explain these effects.



www.izincg.ucdavis.edu

Circumcision 'helps to halt HIV'

New research suggests circumcision could be effective in preventing the spread of HIV among men. The study of more than 3,000 men in South Africa was done by the French agency for Aids and Viral Hepatitis. The data, outlined at a conference in Brazil, shows male circumcision prevented about seven of 10 infections. UN health agencies have cautioned that more trials are necessary before they will recommend this as a method to protect against Aids. Previous studies have suggested that men who are circumcised have a lower rate of HIV infection. It is thought that the cells of the foreskin are much more susceptible to HIV than cells on other parts of the penis, so by removing the foreskin, the likelihood of infection drops. Further trials are being carried out in Uganda and Kenya to measure the effect of circumcision on other populations. If similar results are found, then circumcision could be used alongside condoms to prevent the spread of HIV.



Tissue under the foreskin

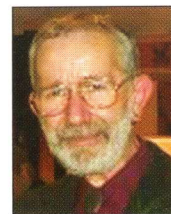
bbc.com/health

Nobel Prize in Medicine 2005

This year's Nobel Laureates in Physiology or Medicine made the remarkable and unexpected discovery that inflammation in the stomach (gastritis) as well as ulceration of the stomach or duodenum (peptic ulcer disease) is the result of an infection of the stomach caused by the bacterium *Helicobacter pylori*. **Robin Warren** (born 1937), a pathologist from Perth, Australia, observed small curved bacteria colonizing the lower part of the stomach (antrum) in about 50% of patients from which biopsies had been taken. He made the crucial observation that signs of inflammation were always present in the gastric mucosa close to where the bacteria were seen. **Barry Marshall** (born 1951), a young clinical fellow, became interested in Warren's findings and together they initiated a study of biopsies from 100 patients. After several attempts, Marshall succeeded in cultivating a hitherto unknown bacterial species (later denoted *Helicobacter pylori*) from several of these biopsies. Together they found that the organism was present in almost all patients with gastric inflammation, duodenal ulcer or gastric ulcer. Based on these results, they proposed that *Helicobacter pylori* is involved in the aetiology of these diseases. Even though peptic ulcers could be healed by inhibiting gastric acid production, they frequently relapsed, since bacteria and chronic inflammation of the stomach remained. In treatment studies, Marshall and Warren as well as others showed that patients could be cured from their peptic ulcer disease only when the bacteria were eradicated from the stomach. Thanks to the pioneering discovery by Marshall and Warren, peptic ulcer disease is no longer a chronic, frequently disabling condition, but a disease that can be cured by a short regimen of antibiotics and acid secretion inhibitors. nobelprize.org



Barry Marshall



Robin Warren

Mobile phone cancer link rejected

Mobile phone use does not raise the risk of cancer, at least in the first 10 years of use, the largest investigation to date shows. Some past studies had suggested an increased risk of acoustic neuroma—a tumour of the nerve connecting the ear and the brain—but others did not. The latest Institute of Cancer Research work includes data from five European countries and more than 4,000 people. There are more than one billion mobile phone users worldwide. An independent group for the UK government, led by Sir William Stewart, that looked into the safety of mobile phones in the late 1990s also concluded mobile phones did not appear to harm health. However, the group said there was evidence that radiation from mobile phones could potentially cause adverse health effects, and therefore a "precautionary approach" to their use should be adopted. The government currently advises mobile phone users to keep their call times short. And children under the age of 16 should use mobile phones for essential calls only, because their head and nervous systems may still be developing.



No risk of cancer in using Mobile

cnn.com/health

Medi News

Smoking ban for new WHO employees

The World Health Organization has said it will no longer recruit people who smoke or otherwise use tobacco. The ban, which came into effect on Thursday, December 1, 2005 applies to all applicants who smoke and say they would continue to smoke, either daily or occasionally. Tobacco chewers and those who use snuff tobacco are also affected. The WHO said the decision was based on its position at the helm of the global campaign against smoking. Existing staff will be encouraged to quit. The UN agency, which is based in Geneva, Switzerland, employs some 2,400 people. In a letter distributed to staff, the WHO said it needed to ensure that its efforts to curb the "tobacco epidemic" were reflected internally. Advertisements for positions at the WHO now carry the notice: "WHO has a smoke-free environment and does not recruit smokers or other tobacco users." Spokesman Iain Simpson told the AFP news agency: "The WHO is campaigning against tobacco and the tobacco industry, and has led efforts to adopt the international anti-tobacco treaty. For us it's a question of principle." The decision to ban smoking came one day after several hundred staff staged a temporary walkout in protest at job cuts.



WHO says no to smoking

bbc.com/health

Unhappy workers are more likely to become ill

People with low job satisfaction are most likely to encounter emotional burnout, reduced self-esteem, anxiety and depression, say researchers. Even a modest drop in job satisfaction could lead to burnout of "considerable clinical importance", the report warned. The study of 250,000 employees was carried out by Lancaster University and Manchester Business School. Depression and anxiety were now the most common reasons for people starting to claim long-term sickness benefits, overtaking illnesses such as back pain, it found. Professor Cary Cooper, of Lancaster University Management School, urged employers to seriously tackle the issue with "innovative policies". "This would be a wise investment given the potential substantial economic and psychological costs of unhappy or dissatisfied workers," he said. "Workers who are satisfied by their jobs are more likely to be healthier as well as happier." Professor Cooper said the changing nature of work was also having an impact on employee's health.



Dis-satisfaction invites ill health

cnn.com/health

Breastfeeding 'good for mothers'

A team from Harvard Medical School found one year of breastfeeding was associated with a 15% drop in a woman's risk of developing type 2 diabetes. Each additional year of breastfeeding was associated with a greater reduction in risk. The study, published in the Journal of the American Medical Association, found the protective effect lasted for up to 15 years after a woman's last birth. The findings suggest that if a woman had two children



Breastfeeding cuts off many risks

and breastfed each child for a year, her risk of diabetes would be reduced by a third. The study also suggested that women who used medications to prevent lactation had an increased risk for type 2 diabetes. The Harvard team analysed data on more than 157,000 mothers enrolled in two separate studies. Lead researcher Dr Alison Stuebe said: "We've known for a long time that breastfeeding is good for babies. In this study, we found that it's good for mums too. The World Health Organization recommends that mothers feed their babies exclusively on breast milk for six months, and continue to offer it alongside other food for up to two years." bbc.com/health

Positive thinking a pain reliever

Positive thinking was as powerful as a shot of morphine for relieving pain and reduced activity in parts of the brain that process pain information. The Wake Forest University researchers say their findings show that by merely expecting pain to be less it will be less. Dr Robert Coghill and his team studied 10 normal, healthy volunteers who had a heat simulator applied to their legs while their brains were being scanned using functional magnetic resonance imaging (fMRI). The heat simulator was used to produce pain and fMRI was used to map brain activity. Before subjects underwent brain imaging, they learned to expect mild, moderate, or severe painful heat stimuli following different signals.



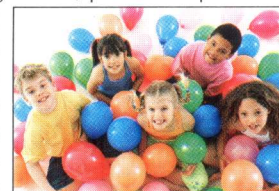
Think positively gain properly

None of the stimuli were hot enough to cause burns or damage the skin. During brain imaging, a small percentage of the severe stimuli were incorrectly signalled as moderate stimuli to create expectations of decreased pain. All 10 volunteers reported less pain when they expected lower levels of pain. These expectations reduced reports of pain by more than 28% - similar to an analgesic dose of the potent painkiller morphine. Dr Coghill explained: "Pain is not solely the result of signals coming from an injured body region. Pain needs to be treated with more than just pills. The brain can powerfully shape pain, and we need to exploit its power."

bbc.com/health

Health-Effect of supplemental zinc on the growth of children

Dr Kenneth H Brown and colleagues have carried out a meta-analysis of 33 studies to assess the effect of zinc supplementation on children's growth. The results of these studies show that zinc supplementation produced highly significant, positive responses in height and weight increases. Growth responses were greater in children with low initial weight-for-age scores and in those aged >6 months with low initial height-for-age scores. The researchers conclude that interventions to improve children's zinc nutrition should be considered in populations at risk of zinc deficiency, especially where there are elevated rates of underweight or stunting. The population mean serum zinc concentration is a useful indicator of the successful delivery and absorption of zinc supplements in children.



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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 presents 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**.

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