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"The ORION", is one of the leading Medical Journals of the country which has been published successfully for the last 10 years. "The ORION", not only meets the quantity but also satisfies the quality of the publication by peer review, reference input, text index, latest medical & scientific news and information which is more user friendly to the authors, readers, members and subscribers. This issue (Volume 32, Issue 2) comprises 05 original articles and 04 case reports.

Editorial (P-642) of this issue `An overview on vascular surgery in Bangladesh' focuses on advancement of vascular surgery as a new specialty and its substantial progress in Bangladesh since early 80s. It also states that almost all types of investigations and treatment facilities are now available in both public and private sectors in our country.

The first original article (P-643) `Clinical review of stroke: Study of 100 cases in a district hospital' states stroke as a major cause of death and disability worldwide. The greatest advancement in its management is the recognition of Stroke Care Unit management, which reduces mortality and improves clinical outcome. Second original article (P-647) `A study on lower reproductive tract infection among the women using contraceptives' reveals RTIs as growing public health problem in Bangladesh, which requires immediate attention by the policy makers and service providers. Third original article (P-650) `A retrospective study of illness and admission pattern of emergency patients utilizing a corporate hospital in Dhaka, Bangladesh: 2006-2008' analyzes patients attending emergency department that can save lives and also reduce the severity and duration of illness, and concludes on its implication on healthcare policymakers for overall improvement of emergency service both in private and government hospitals in Bangladesh. Next original article (P-654) `The relationships of parasympathetic nerve function parameters with endogenous estrogen level in postmenopausal women' reveals that postmenopausal women may suffer from alteration of parasympathetic nerve function due to lack of estrogen hormone and supplementation with estrogen hormone can give a better finding. Last original article (P-657) `Bidirectional glenn shunt without cardiopulmonary bypass' describes superiority of bidirectional glenn shunt for single ventricle patients without cardiopulmonary bypass by using temporary extracardiac venovenous shunt which is safe and offers good result.

The first case report (P-659) of this issue `The surgical management of trigeminal schwannomas' describes 6 rare cases of tumors of nerve sheath which is called schwannoma and its clinical presentations, radiological features and surgical strategies. It concludes that, complete microsurgical removal is the best treatment option. Next case report (P-663) `Orbital pseudotumor: A conservative management' demonstrates management procedure of an orbital pseudotumor patient to raise the awarness among the eye practitioners about the disease and its management. Next case report (P-666) `Decannulation problem following tracheostomy' stands with a case of decannulation problem in a young 17 years old boy with tracehostomy wound with tracehostomy tube in situ for last five years which was removed by some surgical intervention. The last case report (P-668) `Caroli's disease: A case report' reports a 20 years old lady with extensive stone formation at intrahepatic duct, she was diagnosed Caroli's disease which a rare congenital condition and accordingly treatment was done.

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May the Almighty bless all in the spirit of good health.

DR. KAZI RAFIQUL ALAM
Chief Editor
The ORION Medical Journal

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An overview on vascular surgery in Bangladesh

Rahman M[1]

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Vascular surgery as a self-contained and distinct specialty has a very brief history. Virtually all its development has taken place in the last 50 years. In Bangladesh, the history of this specialty is more recent. In National Institute of Cardiovascular Diseases (NICVD) vascular patients were being admitted and treated in early 80s. There was no different entity of the specialty and patients were mainly admitted on emergency conditions. Afterwards, in late 80s definitive operations for vascular disease were being performed scatteredly in addition to cardiac surgery in NICVD, Dhaka. In Bangladesh till that time there was no specialist in the field of vascular surgery. Later on in early 90s as specialists became available in the country and vascular surgery as a distinct entity began to establish. Only in 2001 separate vascular surgery unit was established in NICVD. But as there was no self-sufficient department the development of this specialty was little. A little later, in 2004 an independant department in Bangabondhu Sheikh Mujib Medical University (BSMMU) was established. At present, our country is having 7 (seven) recognized vascular surgeons and both NICVD and BSMMU are treating vascular patients in Bangladesh. Although, all specialists in different fields of medical science are indiscriminately treating vascular patient's, as a result vascular surgeons are getting their patients very lately. Awareness regarding vascular disease in general population has not grown very much. People cannot usually distinguish vascular disease as it is not very much commonly seen. Actually, cardiovascular disease can be regarded as the disease of civilization. Till today this disease is very rarely found in village population.

The scope of diagnosis and treatment eg. surgical intervention were very limited in first half of 20th century, since lesions producing surface manifestations could be diagnosed and successful results were rare. This was so, since even simple vascular procedures were far more fastidious in their demands for an appropriate operative environment and more technically demanding than operations on other anatomical systems. Vascular surgery's emergence in early twenty centuries based on the essential triad: anticoagulants, antibiotics and synthetic arterial substitutes. In 1947, Cid dos Santos (the son of Raimundo), who is regarded as father of vascular surgery, performed operations on a femoral artery in 1947, the two decades between 1950 and 1970 saw unprecedented advances of the clinical use of the new-found vascular surgical techniques.

At present in Bangladesh, as a new specialty-vascular surgery has made substantial progress. Diagnosis of the disease can be made both in private and public sector. Almost all type of investigation can be performed in Bangladesh eg. doppler and duplex study, arteriograpghy, venography, lymphscintography, CT angiogram and CT venogram, MRA and MRV etc. Almost all types of treatment facilities are also available both in private and public sectors eg. operations for venous diseases including operation for varicose vein, haemangioma, venous malformation, arterio-venous malformation, operations for arterial diseases including aortic bypass surgeries; all types of anastomosis and graft replacement, carotid endarterectomies, and endarterectomies at different sites, operations for lymphatic diseases eg. lympho-venous anastomosis but these facilities are now available in Dhaka city only as enough specialists are lacking in this field. Efforts are going on to produce more specialists in this new and emerging field of medical science.

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Clinical review of stroke : Study of 100 cases in a district hospital

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Abstract

Objective: Stroke is a major cause of death and disability worldwide. However, in recent years the trend is declining due to early intervention, improved primary and secondary prevention strategies, recognition of people at highest risk and improved care process and stroke rehabilitation. The aim of this study is to see the clinical data and outcome of stroke patients after routine management in general medicine ward of a district hospital. *Methods*: 100 patients recruited prospectively who were admitted in the medicine ward of Noakhali District Sadar Hospital from January'08 to December'08. Their personal data, risk factors for stroke including hypertension, diabetes and smoking habit were noted. They were investigated with routine examination of blood and urine, blood biochemistry, serum lipid profile, ECG, chest X-ray and CT scan of the brain. The results were recorded. Routine management were started after admission. Special care was given to correct dehydration, maintain nutrition, early mobilization and prevention of bedsore and venous thromboembolism, control of hyperglycemia and of fever. Outcome of every patient were also recorded. *Results*: Maximum number of patients was admitted during the winter season. The age ranges were 35-80 years, mean age was 64.84±10.50 (SD) years. Majority of patients (55%) were in the age group of 50-70 years. 60% patients were male and 40% were female, 50% patients were smoker. 45% patients were hypertensive, 20% patients found to have diabetes. Coronary artery disease was detected in 37% patients. 5% patients had chronic kidney diseases. 64.7% patients had cerebral infarction and 35.2% patients had intracerebral hemorrhage. Lipid profile were estimated in 45 patients, out of them 22.2% patients were found to have dyslipidaemia. 7% patients had recurrent stroke. 24% patients were unconscious on admission. 8% patient were referred to tertiary hospital, 6% patient died due to massive cerebral infarction or intracerebral hemorrhage and aspiration pneumonia. *Conclusion*: Routine management including maintenance of fluid and electrolyte balance, nutrition, oral feeding, early mobilization, control of blood pressure, hyperglycemia and fever is effective in all subtypes of acute stroke. Care must be given to prevent aspiration pneumonia, bed sore and venous thromboembolism. Small number of patients need transfer to specialized hospital for specific management like decompressive hemicraniectomy after massive cerebral infarct, drainage of intracerebral haematoma, clipping of berry aneurysm, carotid endarterectomy and endovascular intervention (stent). Identification of risk factor for stroke is important as their proper management will reduce recurrent stroke. Lastly, the role of physical exercise will be helpful for the primary and secondary prevention of stroke.

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Introduction

Stroke is defined by WHO as a clinical syndrome consisting of rapidly developing clinical signs of focal (at times global) disturbance of cerebral function lasting for more than 24 hours or leading to death, with no apparent cause other than that of vascular origin[1]. Symptoms of stroke include numbness, weakness or paralysis, slurred speech, blurred vision, confusion and severe headache. Transient ischemic attack (TIA) is defined as stroke symptoms and signs that resolve within 24 hours. Stroke is the second commonest cause of death and major cause of disability worldwide. It comprises 9% of all deaths around the world and imparts a significant economic burden that consumes about 2-4% of total health costs. The total cost to society have been estimated at US$ 40.9 billion in the USA at 1997 prices which represents about US$ 100 per head of population per year[2].

The average age adjusted stroke mortality in developed countries is about 50-100 per 100000 populations per year. There is geographical variation in stroke mortality which is 180 per 100000 people in Russia and 15 per 100000 people in Canada[3]. However, the mortality rate is declining in developed countries though it is uncertain in developing countries. The reduction in mortality might be due to improved control of risk factors (HTN, diabetes and smoking) combined with improvement in living standards. There is also a variation in stroke incidence from country to country which ranges from 240 per 100000 people in France to about 600 per 100000 people in Russia[2]. However, there is a substantial reduction in stroke incidence observed in developed countries. 25% reduction in Perth[3], Australia during period of 1989 and 1995 and 29% reduction in UK during period of 1981 and 2002. A large number of people are living with the consequences of stroke (500 per 100000 populations)[2]. The common modifiable risk factors for stroke are hypertension, diabetes and smoking, while more specific risk factors are atrial fibrillation and TIAs which are amenable to treatment. In about 40% stroke no risk factor is identified[2].

Strokes are classified into ischemic or hemorrhagic. Clinical distinction between the sub types are very important for acute stroke management. The introduction of CT and MRI made the distinction easier. The most common causes of hemorrhagic stroke (intracerebral hemorrhage) is hypertension (HTN). Other causes of hemorrhage are intracranial vascular malformation, amyloid angiopathy and secondary hemorrhage into infarcts. Subarachnoid hemorrhage (SAH) accounts for about 5% of all strokes. Ischemic stroke comprises about 80% of all strokes. Sub types of acute Ischemic stroke are:

1. Large artery atherosclerosis (embolism or thrombosis)
2. Cardio embolism (high risk)
3. Small-vessel occlusion (lacunae)
4. Stroke of other determined cause
5. Stroke of undetermined cause.

This classification influence acute treatment and secondary prevention strategies[4].

Remarkable advancement has occurred in the management of acute stroke in last 10-15 years and consists of four proven interventions, of these the most substantial advancement in acute stroke management has been the routine management of patients in Stroke Care Units (SCU) which is effective and appropriate for all stroke subtypes and provides a focus for professional in stroke care[2]. Treatment of patients in SCU with special attention to blood pressure control, early mobilization, prevention of venous thromboembolism, aspiration pneumonia, bed sore, control of blood sugar and fever. Acute management in SCU reduces mortality by about 20% and improves functional outcome[5]. Other acute interventions are (i) thrombolysis with recombinant tissue plasminogen activator (rtPA) within 3 hours, (ii) oral aspirin within 48 hours and (iii) decompressive hemicraniectomy for massive cerebral infarction. The greatest advance is the recognition that SCU management reduces mortality and improves clinical outcomes. The aim of this study is to see the clinical data of individual patient and outcome after routine management in medicine ward like SCU.

Methods

100 patients recruited prospectively who were admitted in the medicine ward of Noakhali District Sadar Hospital from January'08 to December'08. These patients presented with acute stroke symptoms (hemiplegia, speech disturbance, altered consciousness). Exclusion criteria was Intracranial space-occupying lesion (ICSOL), subdural haematoma and hypoglycaemia. All patients were investigated with complete blood count (CBC), urine analysis, chest X-ray and ECG. Echocardiography was done in selective cases. The duration of symptoms at the time of admission, blood pressure, blood glucose, ECG report were recorded. Personal data of each patient including age, sex, occupation, smoking habit and family history of stroke were also noted. CT scan of brain was done in most patients and the findings were noted. Serum electrolytes were estimated in selective cases. Serum lipid profiles were carried out in most patients. Co-morbid conditions were also noted in some patients. All patients were treated conservatively. Treatment included intravenous fluid infusion with normal saline in dehydrated patients, glucose infusion in those who were hypoglycemic on admission. Anti platelets were given on admission in patients who had clinically ischemic stroke, with aspirin (75-150 mg) or clopidogrel (75 mg). Antiplatelets were withdrawn in those who were found to have hemorrhages on CT scan. Statins were given to all patients. Neuro protective agents (vinpocetin, duxil:- almitrine + raubasine, or piracetum) were added in all patients with ischemic stroke. Intravenous dexamethasone used in those who developed cerebral edema. Mannitol was also used in a small number of patients. Prophylactic antibiotics were used in patients who were catheterized for urinary retention. Patients with fever and/or aspiration pneumonia were given parenteral high dose broad spectrum antibiotics (ceftriaxone). Electrolyte imbalance was corrected in a few patients. Every patient was given special care for hypertension. Accordingly antihypertensive drugs (like ramipril, losartan and valsartan) were added. Calcium channel blocker- nimodiphine 60 mg every 4 hours was given in all patients with hemorrhagic (intracerebral and subarachnoid) stroke. Insulin was added in those who were hyperglycemic. Other conservative measures including oxygen supplementation, oropharyngeal suction, bronchodilator and I/V steroid were added who developed aspiration pneumonia. Physiotherapy started immediately as soon as the general condition became stable. Regular change of posture, passive exercise of paralysed limbs, bladder catheterization and oral hygiene were maintained in all patients. Lumbar puncture for CSF study were not done in any patients due to technical reason. Low molecular weight heparin (enoxaparin) was used in one young female patient who developed cardioembolic stroke and deep vein thrombosis.

Results

Maximum number of patients were admitted during the period of January'08 and September'08 to December'08, that is during the winter season. The age range of patients was 35-80 years. The mean age was 64.84±10.5 (SD) years and male: female ratio was 1.5: 1. Maximum number of patients (55%, n=55) were in the age group of 50-70 years. Out of 100 patients 60% (n=60) were male and 40% (n=40) were female (Figure 1).

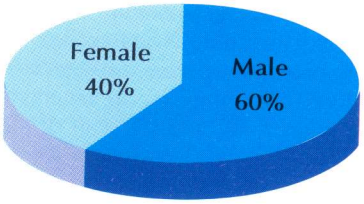

Figure 1: Gender wise distribution

50% (n=50) patients were smoker. Blood glucose level were estimated in 75 (100%) patients, of them 26.3% (n=20) patients were found to have diabetes mellitus, and 45% (n=45) patients were hypertensive. Associated co-morbid condition like coronary artery disease was detected in 37% (n=37) patients. 5% (n=5) patients were found to have chronic kidney diseases. CT scan of brain were carried out in 85 (100%) patients, of them 64.7% (n=55) patients had cerebral infarction and 35.2% (n=28) patients had intracerebral hemorrhage, 2% (n=2) patients had subarachnoid hemorrhage (Figure 2).

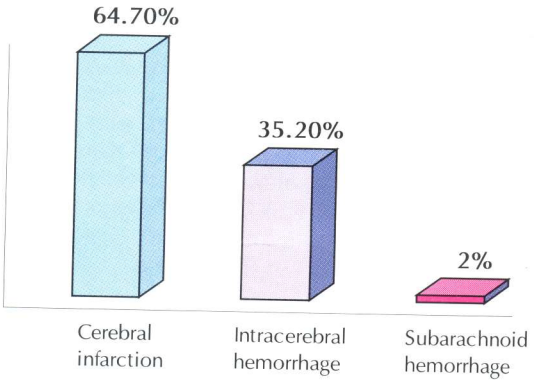

Figure 2: CT scan findings

Serum lipid profile were estimated in 45 (100%) patients, of these 22.2% (n=10) patients were dyslipidaemic. 6% (n=6) patients died due to massive intracerebral hemorrhage and massive cerebral infarction with aspiration pneumonia. 8% (n=8) patients were referred to tertiary hospital due to clinical deterioration. Bed sore developed in 4% (n=4) patients. The rest of the patients with hemiplegia were discharged in stable condition. 2% (n=2) female patients were found to have mitral

valvular disease and cardioembolic stroke. One of them needed low molecular weight heparin for deep vein thrombosis (DVT). All patients with ischemic stroke were advised to continue aspirin or clopidogrel and statin. Dipyridamole was not used in any patients. All patients including hemorrhagic stroke were advised to continue physiotherapy for their paralysed limbs and to control their blood pressure and blood glucose level. Finally they were dischared in stable condition and advised to come back for regular follow up.

Discussion

Stroke is defined by WHO as a clinical syndrome consisting of rapidly developing clinical signs of focal (at times global) disturbance of cerebral function lasting for more than 24 hours or leading to death, with no apparent cause other than that of vascular origin[1]. Stroke is the second commonest cause of death all over the world after ischemic heart disease and it is also the major cause of disability. It causes 9% of all deaths around the world[2]. However reduction in stroke incidence in recent years is observed in developed countries due to improved control of stroke risk factors. The incidence of stroke in different studies differs widely in different countries. It is about 240 in 100000 people in Russia[2]. A 25% reduction in stroke incidence were reported in Perth, Australia during period of 1989 to 1995, and a 29% reduction was seen in UK during period of 1981 to 2002[3]. These reductions were likely due to improved risk factors management. In Bangladesh, the incidence and mortality rate of stroke in general population is not yet available. In this study, most patients (55%, n=55) were in the age group of 50-70 years, and the number of male patients predominate over the female (male: female ratio was 1.5:1), this coincides with other studies. The risk factors of stroke are hypertension, diabetes mellitus, smoking which are modifiable while atrial fibrillation and TIA are more specific and less common. In this study, 45% (n=45) patients were hypertensive, 20% (n=20) patients had diabetes, 50% (n=50) patients were smoker and all were male, 22.2% (n=10) patients had dyslipidaemia. Coronary artery disease was detected in 37% (n=37) patients. In addition two young patients admitted with cardioembolic stroke due to rheumatic valvular heart disease. So, stroke risk factors were not uncommon in this study population.

Stroke can be divided into ischemic and hemorrhagic, 80% of the total stroke are ischemic in origin and the rest 20% are hemorrhagic. In this study, 64% (n=64) of stroke were ischemic and 36% (n=36) were hemorrhagic. This difference might be due to benign nature of the ischemic stroke than the hemorrhagic one. This might lead to infrequent hospitalization of ischemic stroke patients. Ischemic strokes are mainly due to large artery atherosclerosis (embolism or thrombosis), cardioembolism and small-vessel occlusion (lacunae).

While hemorrhagic stroke (intracerebral hemorrhage) are mainly due to hypertensive small vessels disease, which causes small lipohyalinotic aneurysm that subsequently rupture. The next important cause is hemorrhage into a previous infarction. Two third of primary intracerebral hemorrhage are due to hypertension. In this study, 45% (n=45) patients were hypertensive and 35% (n=35) patients had intracerebral hemorrhage, only 2% (n=2) patients had subarachnoid hemorrhage. Other causes of haemorrhagic stroke are vascular malformation, cerebral amyloid angiopathy, or infarcts into which secondary hemorrhage has occurred.

Rapid recognition of stroke symptoms are important for early intervention. FAST (face, arm, speech, test), a diagnostic tool has been developed, is more used outside hospital to screen for the diagnosis of stroke or TIA[6]. Similarly ABCD[2] (A for age>60, B for blood pressure>140/90, C for clinical feature of TIA, D for duration of symptom and diabetes mellitus) has been developed with scoring system for TIA. A score of 4 or above is considered as high risk of stroke in patients with suspected TIA and is used for prompt intervention with aspirin (300mg daily) may be started immediately to prevent stroke[7]. In this hospital, we tried to used this tools for rapid diagnosis and early intervention. Brain imaging with CT or MRI is important for diagnosis of ischemic or hemorrhagic stroke and for decision making to introduce thrombolytic therapy within 03 hours of stroke symptoms[8]. There is evidence that intervention improves outcome after stroke or TIA. Management of patients in a stroke care unit reduces mortality by about 20% and also improves functional outcome through improved control of blood pressure, early mobilization and general measures and prevention of venous thromboembolism from DVT by using low molecular weight heparin. SCU is a physical space where only stroke patients are treated[2]. The components of SCU management so far identified are improved blood pressure control, early mobilization and other general measures. It is expected that widespread introduction of SCUs will likely to reduce high rates of stroke death in developing countries. Acute thrombolysis with recombinant tPA is one of the most effective treatments for acute ischemic stroke (within 3 hours of stroke onset). It is effective in reducing disability. The major adverse effect of thrombolysis is intracerebral hemorrhage seen in 6-7% of cases. The administration of oral aspirin within 48 hours of onset of ischemic strokes reduces 14-day morbidity and mortality[2,6]. Because of its low cost, ease of administration and low toxic effects it is now widely used in stroke patients. Early use of aspirin will possibly salvage ischemic penumbra (non functioning but structurally viable tissue) and prevent recurrent stroke. The ischemic penumbra is the target of all therapeutic interventions since it's salvation is associated with neurological improvement and recovery. This penumbra is seen upto 48 hours after stroke onset[9]. All of the patient in this study was given aspirin (75-150 mg/day) early after admission in ischemic stroke. A cascade of neurohumoral events occur within the ischemic penumbra that begins with energy depletion, disruption of ion homeostasis, release of glutamate, calcium channel dysfunction, release of free radical, membrane dysfunction and ends with necrotic and apoptotic cell death. Neuro protective therapies can arrest these cascades at various points[10].

Decompressive surgery (hemicraniectomy) is another break through of early intervention in acute stroke. Large infarct with space occupying brain edema (middle cerebral artery territory) can be relieved with hemicraniectomy. Hypodensity of more than 50% of the supratentorial hemisphere on CT scan can be a predictor of fatal brain edema and will be benefited by hemicraniectomy[11]. This specialized intervention is not available in this hospital.

Various other interventions under evaluation are recombinant factor-VII for growing intracerebral haematoma, surgical drainage of intracerebral haematoma, use of alternate thrombolytic agent- desmoteplase. Combined (bridging) approach with intravenous thrombolytic therapy followed by intra-arterial therapy, use of low frequency ultrasound to enhance endogenous tPA, mechanical device, for thrombectomy that is removal of clot from middle cerebral or basilar artery[2].

Primary prevention of stroke with improved control of risk factor, specially control of blood pressure reduced the incidence of stroke. Other risk factor management by use of statin for lipid reduction, warfarin for atrial fibrillation, aspirin in coronary artery disease and control of diabetes will reduce mortality from stroke. Various strategies are effective for secondary recurrent stroke prevention are by using aspirin, dipyridamole, warfarin, carotid endarterectomy, clopidogrel, perindopril, indepamide, ramipril and atorvastatin. Aspirin and dipyridamole combination[4] has been shown to be more effective than aspirin alone. Carotid angioplasty with stenting is another promising intervention is under evaluation[12]. Ximelagatran, a thrombin inhibitor is another new molecule showed promise in early trials[13]. However, prevention of stroke recurrence by modification of risk factors such as blood sugar reduction in diabetes, cessation of smoking, reduction of alcohol consumption and increased physical exercise is very effective. In this study, 24% (n=24) patients were unconscious on admission, 11% (n=11) patients developed aspiration pneumonia, and 6% (n=6) patients died despite our sincere efforts. So there is scope to improve the management strategies. This picture is not better than other studies.

The greatest advance in the stroke management is the recognition that SCU management reduces mortality and improve clinical outcome.

Conclusion

Management of acute stroke like stroke care unit (SCU) with general measures like early mobilization, control of blood pressure with ACEI, control of blood sugar, use of aspirin within 48 hours of stroke will improve outcome that is reduction of stroke mortality and disability. Oral feeding seems maintain oral hygiene and prevent aspiration pneumonia. As fever and hypoglycemia aggravate stroke these conditions should be managed effectively. Identification of risk factor such as hypertension, diabetes, smoking, hyperlipidaemia and their proper management will prevent recurrent stroke. Other modalities of treatment including anticoagulant (warfirin) for atrial fibrillation, decompressive hemicraniectomy for massive cerebral infarction, carotid endarterectomy or carotid angioplasty with stent for more than 70% carotid artery stenosis and use of low molecular heparin for prevention of deep vein thrombosis might improve survival in specific cases, though most of these specific measures are not available in this hospital. Lastly, physical exercise (that is vigorous walking for 30 minutes daily) will be helpful for primary prevention and recurrent stroke.

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A study on lower reproductive tract infection among the women using contraceptives

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Abstract

Background: Premarital, extramarital and commercial sex workers and the floating sex workers are not uncommon in Bangladesh. Usullay we consider that contraceptives specialy condom prevent RTIs and IUCD increase the chance of RTIs. But how much this assumptions are true, this will be justified through this study. The purpose of the study was to find out the prevalence of the disease and the risk factors which might be associated with lower reproductive tract infection. *Objectives*: The specific objectives of the study were to find out the lower reproductive tract infections caused by bacteria among the women using contraceptives. The aim of the study was also to find out the risk factors and behaviors of the study women and improve the women of reproductive health. *Methods*: Endocervical and vaginal swab of the respondents were cultured and stained. Sterile endocervical and vaginal swab specimens were collected aseptically. The growth of bacteria done by culture in selective media. Gram's stain method was used for microscopic morphological identification. *Treponema pallidum* identified from the smear by dark field illlimunation method. Blood was collected for TPHA (Treponema palladium haemagglutination assay). *Results*: The use of contraceptive was found about 77% among the respondents. Highest users were oral pills (30.7%) followed by injections (20.5%) and IUDS (19.2%). The proportion of RTIs was more than thrice (84.7%) in the IUD users than those of other modern contraceptives methods. Materials used for menstrual protection were mostly home made pads (93%). Proportion of RTIs were highest (60.4%) among respondents who used dirty cloths or rags to absorb menstrual blood. *Conclusion*: The proportion of RTI found in the study population was comparatively high which requiring immediate attention by the policy makers, service provides, as well as the general population.

Key words

Intrauterine contraceptive device (IUCD), reproductive tract Infection (RTI), menstrual regulation (MR), Treponema palladium haemagglutination assay (TPHA).

Introduction

An attempt was made to study the reproductive tract infections caused by bacteria among the women attending in gynecology out patient department of Dhaka Medical College hospital. In Bangladesh, the conservative environment created by the deep rooted religious, cultural and social values act as hindrance for obtaining information about the actual situation of RTIs. However the limited available data confirm the presence of these diseases in this country. Sex with multiple partners is not uncommon in Bangladesh. A study among slum dwellers of Dhaka found age at first intercourse ranges from 12 to 15 years for both men and women[1]. Incidence of pre and extra marital sex was also reported. It was also seen in one study that massive gap in knowledge regarding sexual and reproductive capacities, disease transmission and safer sex practices exist in the society. Both social and economic conditions for women favor a continued high prevalence of RTIs in Bangladesh. Fairly large percentages of permissiveness and practice of premarital sex were estimated to occur in 50% of all youths having multiple partners including Isosexual/ Homo- sexual behavior[2]. Extra-marital sex is common in most societies in Bangladesh and among the specific groups like long distance truck drivers. The number of CSWs (commercial sex workers) and the floating sex workers are increasing numbers and there are more easily accessible to the young adults.

Methods and materials

Bacteria identified on the basis of microscopic and cultural morphology. Endocervical and vaginal swab of the respondents were cultured and Gram stained. Sterile endocervical and vaginal swab specimens were collected aseptically. The growth of bacteria done by culture in selective media. Gram's stain method was used for microscopic morphological identification. *Treponema pallidum* identified from the smear by dark field illlimunation method. Blood was collected for TPHA.

Study period and population

The period of the study was for one year, from the March 2005 to March 2006. The study was conducted on 200 non pregnant married women aged between (15-49) years.

Collection of data and specimen

Structural data was collected from respondents by the investigator himself and from the laboratory investigation.

Collection of cervical and vaginal specimens: Sterile swab specimens were collected for the isolation of microorganism by culture. A sterile vaginal speculum was used to examine the cervix, vagina and collect the specimen.

1. Moistened the speculum with sterile warm water and inserted it into the vagina lying position.
2. Sterile cotton-wool swab 20-30 mm were passed into the vagina and endo-cervical canal and gently rotated the swab against the wall to obtain specimens.

Laboratory procedure[3]

(a) Collected specimen cultured in the selective media and incubated at 37^{0}C for 24 hours in the incubator.

(b) One smear on one slide was made for each sample and stained by Gram's method. Microscopically examine were done.

Smear preparation

1. At first a clean and grease free slide was used.
2. A thin film was made with a saline suspension of colony from a culture on a slide with a sterilized loop.
3. And film was dried in air.
4. The film was fixed on slide by bunsen flame heat.

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Gram's method of staining[4]

1. Primary staining: Flooded slide with methyl violet stain and allow acting for 30 seconds.
2. Mordanting: Flushed with iodine solution and allow fresh iodine solution to act for 30 seconds.
3. Decolouring: (a) Decolorized with absolute alcohol. (b) Washed quickly in distel water.
4. Counterstaining: (a) Counterstained with 1:10 carbol fuchsin for 60 seconds (b) Washed in water, dried in air.

Microscopic morphology of detected microorganism

Nisseria gonorrhoeae (gonococcus)

Gram negative cocci. It was kidney shaped, each having a concave and a convex margin. Arranged in pairs with concave surfaces apposing each others. freshly isolated strains areas capsulated. Non flagellated, non motile & non sporing.

Staphylococcus aureus

Gram positive, It was spherical & rounded in shape, about 1 micro meter in diameter. It was generally arranged in grape like clusters. Non flagellated, non motile & non sporing.

Escherichia coli

Gram negative rods, non sporing and non motile.

Pseudomonas spp.

Gram negative rods. Non sporing & motile rod, pili extend from the cell surface.

Treponema pallidum

Look brightly illuminated, thin, delicate spiral or coil shaped.

Media used:

1. Mueller Hinton Agar.
2. Mannitol Salt Agar.
3. Cetrimite Agar.
4. Blood Agar (BA).
5. Thayer Martin medium.

Incubation of media

Mueller Hinton Agar, MacConkey Agar plate, Blood Agar plate and Mannitol Salt Agar, Thayer Martin medium (modified) plate was incubated for 24 hours at 37^0c for growth of specific bacteria.

Coloney morphology and other characteristics of specific organism on MacConkey Agar.

Escherichia coli- Colonies were rose pink which indicates that the organism was lactose fermenter.

Pseudomonas produced pale colored colonies on MacConkey Agar. Green colored coloney in Mueller Hinton Agar.

Coloney morphology and other characteristics of specific organism on Mannitol Salt Agar-

Staphylococcus produced catalase. Fermented mannitol producing acid no gas.

Coloney morphology and other characteristics of specific organism on Thayer Martin medium (modified)-

This medium consists of a GC Agar base (prepared from dehydrated powder), enriched with haemoglobin and Vitox growth factors and made selective for *N.gonorrhoeae* using an antibiotic supplement.

Results

The proportions of RTIs were highest (64.7%) in the IUD users group of women than other methods of contraception. Among 200 respondents 154 (77%) respondents used contraceptive methods (Table 1).

Table 1: Distribution of respondents in relation to RTI and IUD users

RTIs	Contraceptive users		Total
	IUD	Others method	
Yes	22	19	41
	64.7%	15.8%	26.6%
No	12	101	113
	35.3%	84.2%	73.4%
Total	34	120	154
	(100%)	(100%)	(100%)

$X^2 = 43.4$, df = 1, P<0.0001

Out of 200 respondents 46 (23%) did not use any modern methods of contraception. The contraceptive user rate was found about 77% among the respondents (not shown in the table). The highest user was oral pill (30.7%) followed by injections (20.5%), IUD (19.2%), condoms (5.7%) and sterilization (5.7%) (Table 2).

Table 2: Distribution of respondents by contraceptive method used

	Respondents	Percentage
None	46	23
Oral pill	54	30.7
Injection	36	20.5
Condom	10	5.7
IUD	34	19.2
Sterilization	10	5.7
Others	10	5.7
Total	200	100

The highest occurrence of RTI (60.4%) was with the respondents who used dirty and not always washed old cloths and reused. The next frequency of RTIs were with the group who used combination of home made and commercial pads and washed clean home made pads (6.2%). The minimum frequency was with the group who used commercial pads (Table 3).

Table 3: Distribution of respondents with RTI and use of sanitary materials during menstruation

RTIs	Sanitary materials used				Total
	Washed clean cloths	Not always washed & reuse	Commercial pads	Combination	
Yes	5	58	1	2	66
	(6.2%)	(60.4%)	(7.1%)	(20%)	(33%)
No	75	38	13	8	134
	(93.8%)	(39.6%)	(92.9%)	(80%)	(67%)
Total	80	96	14	10	200
	(100%)	(100%)	(100%)	(100%)	(100%)

$X^2 = 13.82$, df = 3, P<.05

Only 14% out of 200 interviewed were given the history of genital problems in their husband's genitalia in the form of blister, itching ulcers and some sort of whitish discharge through urethra. Proportion of RTI cases were very high among

the respondents whose husband had or have any kind of genital problems (75%) (Table 4).

Table 4: Distribution of respondents with RTI and kinds of problems in husband's genitalia

RTIs	Genital problems		Total
	Have / had	Don't / don't have	
Yes	21	45	66
	(75.0%)	(26.2%)	(33%)
No	7	127	134
	(25.0%)	(13.8%)	(67%)
Total	28	172	200
	(100%)	(100%)	(100%)

The 13% respondent had been engaged in coitus during menstruation and among 38.5% had RTI. It was little higher than the respondents who did not have coitus during menstruation (Table 5).

Table 5: Distribution of respondent's relation of RTIs and coitus during menstruation

RTI	Coitus during menstruation		Total
	Had	Don't have coitus	
Yes	10	56	66
	(38.5%)	(32.2%)	(33%)
No	16	118	134
	(61.5%)	(67.8%)	(67%)
Total	26	174	200
	(100%)	(100%)	(100%)

The highest rate of reproductive tract infection was caused by *Staphylococcus aureus* 57.6% (Table 6).

Table 6:Table shows the percentage of bacteria which was found in cervical and high vaginal swab

Name of the organism	Number of patient	Percentages
Staphylococcus aureus	38	57.6%
Gonococcus	14	21.2%
Pseudomonas	2	3%
Treponema pallidum	4	6.1%
Escherichia coli	8	12.1%
	66	100%

Discussion

The study was conducted on 200 non pregnant married women aged between (15-49) years. In this study it was found that proportion of RTIs was more than thrice (64.7%) in the IUD users than the others contraceptive methods (Table 1). This finding also statistically highly significant ($p<0.0001$). This result is similar with the study conducted by Hussain et.al. which shows IUD users had highest prevalence of RTI amongst the contraceptive users[5]. The contraceptive user's rate was found to be high about 77% among the respondents. Highest users were oral pills (30.7%) followed by injections (20.5%) and IUDs (19.2%) (Table 2). However RTIs proportion was found lowest among pill users (7.4%) and highest in the IUD users (64.7%) (Table 1). All respondents were habituated to use some sorts of protection during menstruation. Use of home made pads was most commonly reported (93%) and followed by commercial pads (7%) and combinations (5%) which are home made pads and commercial materials such as panties, pads and cotton wool. Proportion of RTIs were highest (60.4%) among the respondents who used not always washed cloths (Table 3). The relationship between the dirty cloths used as protection of menstruation and proportion of RTIs is statistically significant ($P<0.05$). The study conduct by Naved et al, coincide with this result, which shows the respondents who were using dirty rags washed improperly by the polluted surface water and dried by stuffing them in dark corners had more RTIs related problems[6]. A good number of respondents (13%) gave history of coitus during (Table 5) menstruation. But there was no significant relationship found amongst the respondents who engaged or did not engage in coitus during menstruation.

Conclusion

The magnitudes of the problem of RTIs are a growing public health problem in developing countries, like Bangladesh, which requiring immediate attention by the policy makers, service providers.

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A retrospective study of illness and admission pattern of emergency patients utilizing a corporate hospital in Dhaka, Bangladesh : 2006 -2008

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Abstract

Background: Emergency medicine leaves a lot to be desired as a specialty and the emergency care needs of the patients are catered through the "Casualty" unit, often staffed by juniors in majority hospitals in Bangladesh. However, the advent of super specialty corporate hospitals establishes independent emergency medicine department (EMD) to serve the community towards international standard of care. Workload on this department and the emerging needs of the department as well as patients, play a very crucial role in providing quality of services and patient's safety. *Objectives*: A study was undertaken to analyze the sickness pattern of patients coming to the emergency medicine department and their subsequent pattern of admission. *Methodology*: A retrospective study was carried with and data was collected from secondary sources, (e.g. hospital information statistics, bed census etc.) of all patients attending emergency department between January, 2006 and October, 2008. *Results*: This emergency department, which receives approximately 600-800 patients per month, accounts for 48% of total admissions to the hospital. Though the emergency department represents only 7% of total OPD attendance. Findings showed that the majority of the patients are admitted under general medicine (68%); of which, internal medicine (22%), cardiology (13%), paediatrics (10%), neurology (8%) and gastroenterology (6%) accounted for the maximum number. One third (36.87%) patients were admitted under surgical disciplines. It was also realized that one third admissions were (32.85%) shifted to critical care unit. Interestingly, most of the admissions took place in the afternoon and night shift (87%). About half of the total EMD attendances have discharged and only 10% remained to medico legal cases (MLC) and discharge against medical advice (DAMA). Death noticed around 1% of total EMD admission in two categories like brought-in-death (1.3%) and deaths in EMD (0.22%). *Conclusion*: The emergency service brings about an interface between the hospital and community, an exposed area with a very high expectation from the patient and emotionally charged attendances. The study hospital is considered the modern concept of EMD as `minihospitals' with subsequent definitive care plan under highly experienced emergency physician and critical care specialist. Similar concept may have an implication on healthcare policy makers for overall improvement of emergency service both in private and public hospitals in Bangladesh.

Key words

Admissions, sickness, specialty, emergency department (ED), corporate hospital, Dhaka.

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Introduction

"Medical Emergency" is defined as a situation when the patient requires urgent medical care to prevent loss of life or limb and initiate action for the restoration of normal healthy life. Emergency medicine is not a specialty in Bangladesh as yet and hence, very few public medical college hospitals in our country currently have emergency medicine department (EMD). However, most hospitals have an area designated as "Casualty", which is most often staffed by junior doctors and is inadequately equipped to effectively handle emergencies[1]. The advent of super specialty corporate hospitals establishes independent emergency medicine department to serve the community towards international healthcare standard of care.

Emergency care should be of high quality, cost effective and compassionate. The accident & emergency services are one of the mainstays in the chain of medical care offered by the present day hospitals. An emergency medicine department is well recognized and all hospitals must be able to provide basic and advanced life support through their emergency services to the patients in need. With emergency department admissions accounting for about 40% of all hospital admissions in most countries, managing and improving processes in the EMD is crucial to both care quality and operational profitability[2].

Common denominators of any successful emergency care are[3]:

- Availability of adequate physical facilities, equipments and supply of all life saving drugs and surgical items.
- Immediate professional attention after arrival in the hospital ED (emergency department).
- Continued medical support till the patient is in the ED.
- Speedy diagnosis and resuscitation so as to make it possible for integrating a patient into an existing system of patient care services in the institution.
- Lists of policy, procedure and protocols should be in practice for the management of every emergency situation in relation to treatment, imaging technique, laboratories services, blood transfusion, customer services, code and disaster management and others.

Aim & objectives

The aim of the present study is to analyze the illness profile of patients attending the emergency department at super specialty corporate hospital in Dhaka; and their subsequent admission pattern.

The key objectives were to:

1. Determine the workload of the hospital emergency department and find out trends over a specified period of time (3 years) in terms of number of patients.
2. Ascertain the category of patients based on the type of illness they are diagnosed to have during the specified period of time.
3. Analyze the admission patterns under various medical and surgical disciplines during the specified time period with the type of sicknesses the patients reported with.
4. Elicit the correlation between the pattern of admission and illness profile.

Methodology

A retrospective study was carried out of the patients who had reported to the emergency department of the super specialty corporate hospital in Dhaka over a period of three years. Data was collected from secondary sources, (e.g. hospital statistics, hospital information systems, bed census etc.); and focus group discussions were held with the doctors and nurses at the emergency medicine department to get insight into various illnesses for categorization of patients. Descriptive statistics was used and findings were discussed with suitable explanations.

To study the type of sicknesses vis-a-vis the pattern of admission among the patients reporting to the EMD, a detailed study was carried out of the patients admitted to the super specialty corporate hospital, Dhaka.

Variables studied were:

1. Average monthly admission and its ratio to total admissions.
2. Distribution of admitted patients across specialties during these 3 years.
3. Distribution of discharge patient across medico legal cases (MLC), discharge against medical advice (DAMA) and death.

Results

The study revealed that during the last 3 years there has been a steady rise in the emergency department attendance, both in absolute terms as well as monthly averages (Table 1).

Table 1: Average monthly attendance in the EMD

Year	EMD attendance	Average monthly attendance
2006-2007	9637	803
2007-2008	9880	823
2008-2009 (till October 2008)	8543	854
Total	26259	

However, it was also evident that the EMD attendance as a percentage of total attendance has decreased from 8% to 6% during this period (Table 2).

Table 2: Casualty attendance as a percentage of total OPD attendance

Year	Total OPD attendance	Total emergency OPD (EOPD) attendance	% EOPD / OPD attendance
2006-2007	114872	9637	8.4%
2007-2008	141002	9880	7.0%
2008-2009 (till October 2008)	133278	8543	6.4%

It is seen that on an average about 25-28 patients have visited daily from the emergency medical department of the hospital. However, emergency admission figures have remained more or less static, seeming to suggest that emergency admissions have reached saturation point (Table 3).

Table 3: Total monthly emergency admission and total EMD attendance

Month	2006		2007		2008	
	Total EMD Patient (n-9637)	Total Admission Patient (n-4703)	Total EMD Patient (n-9880)	Total Admission Patient (n-5043)	Total EMD Patient (n-8543)	Total Admission Patient (n-4027)
Jan	764	263	955	428	826	363
Feb	945	304	864	360	869	398
Mar	780	325	980	440	879	376
Apr	891	387	844	389	803	352
May	697	342	967	501	778	343
Jun	787	352	911	456	804	354
Jul	747	534	913	460	932	462
Aug	768	583	856	440	977	479
Sep	698	483	805	397	808	434
Oct	909	427	600	387	867	466
Nov	776	342	581	396	-	-
Dec	875	361	604	389	-	-

Emergency admissions, as a percentage of total admissions to the hospital have remained static at around 48-46% (Table 4).

Table 4: Total admission, emergency admissions and their percentage

Year	Total admissions	Admission through EMD	Percentage
2006-2007	9715	4703	48.41
2007-2008	10449	5043	48.26
2008-2009 (till October 2008)	8700	4027	46.29

Emergency discharges, as a percentage of total EMD attendance to the hospital have remained static at around 50% for first 2 years and dropped down to 40% this year. Medico legal cases (MLC), discharge against medical advice (DAMA) have remained static to 10% and both the deaths have remained below 1% (Table 5).

Table 5: Total Emergency discharge, MLC, DAMA, death & brought-in-death

Year	Discharge From EMD	MLC	DAMA	Death in EMD	Brought in death
2006-2007	4934	424	394	8	27
2007-2008	4837	557	422	12	49
2008-2009 (till October 2008)	2715	389	348	9	35

Admissions from EMD

Patients admitted from EMD during the study period (n-13773) were studied and categorized into various medical and surgical specialties and super specialties. The following observations were made:

About two third (67.15%) of the patients admitted through EMD are admitted in wards and about one third (32.85%) in critical care unit which includes coronary care unit-CCU, intensive care unit-ICU and high dependency unit-HDU (Table 6).

Table 6: Distribution of patients admitted in wards and critical care unit thorough emergency

Year	Admitted to ward	Admitted to critical care unit	% admitted to ward	% admitted to critical care unit
2006-2007	3190	1513	68%	32%
2007-2008	3547	1496	70%	30%
2008-2009 (till October 2008)	2549	1478	63%	37%

About 48% patient's admitted through emergency department of the hospital over total admission. Though month wise variance was observed but more or less the EMD admission percentage are static (Figure 1).

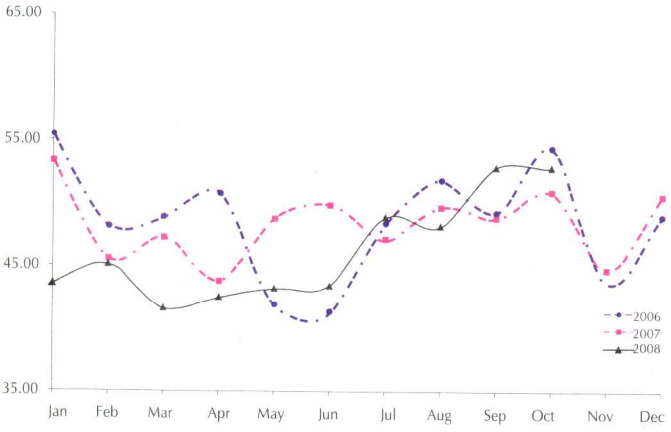

Figure 1: Percentage of EMD admission over total admission

It is evident that the hospital have 5 centre of excellence concept under whom the admissions takes place from EMD were 16.2% in neuro science center (neurology and neurosurgery), followed by 15.3% in mother and child center (obs/gynae, paediatics, paediatric surgery), 14.1% in heart center (interventional cardiology, cardiac surgery and respiratory medicine), 7.6% in bone & joint center (orthopaedics, rheumatology and physical medicine) and 7.5% in kidney center which consists of nephrology and urology (Figure 2).

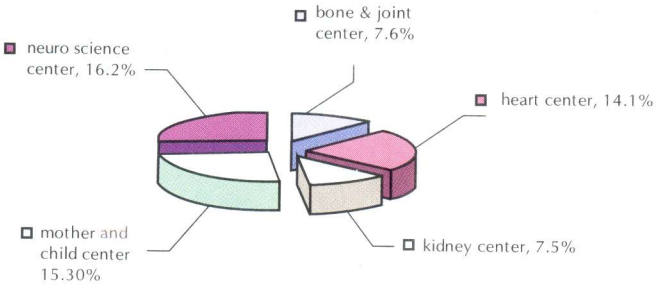

Figure 2: Distribution of patients admitted through emergency to centre of excellence

It is evident that about two thirds (67.6%) were admitted under general medicine; of which, internal medicine (22%), cardiology (13%), paediatrics (10%), neurology (8%) and gastroenterology (6%) accounted for the maximum number. One third (36.87%) patients were admitted under surgical disciplines, with neurosurgery, general surgery, orthopaedics and others (Table 7).

Table 7: Distribution of patient's specialty wise admitted from EMD

Name of the specialty	2006		2007		2008	
	Total admitted patient (n-4703)	%	Total admitted patient (n-5043)	%	Total admitted patient (n-4027)	%
Internal medicine	1084	23.0%	970	19.2%	873	21.7%
Interventional cardiology	527	11.2%	597	11.8%	516	12.8%
Neuro surgery	497	10.6%	485	9.6%	317	7.9%
Adult neurology	452	9.6%	423	8.4%	336	8.3%
Paediatrics	281	6.0%	436	8.6%	379	9.4%
General and lap surgery	315	6.7%	327	6.5%	238	5.9%
Gastroentrology	297	6.3%	320	6.3%	236	5.9%
Nephrology	201	4.3%	239	4.7%	219	5.4%
Obs/gynae	199	4.2%	238	4.7%	195	4.8%
Orthopaedics and trauma	185	3.9%	215	4.3%	201	5.0%
Rheumatology	51	1.1%	286	5.7%	98	2.4%
Urology	140	3.0%	134	2.7%	83	2.1%
Respiratory medicine	188	4.0%	108	2.1%	7	0.2%
Others	52	1.1%	20	0.4%	137	3.4%
Cardio thoracic	48	1.0%	62	1.2%	46	1.1%
Plastic & cosmetic surgery	61	1.3%	51	1.0%	13	0.3%
Otolaryngology	43	0.9%	30	0.6%	20	0.5%
Oncology	9	0.2%	31	0.6%	41	1.0%
Paed. surgery and paed. urology	0	0.0%	11	0.2%	41	1.0%
Diabetology and endocrionology	9	0.2%	26	0.5%	1	0.02%
Neonatology	30	0.6%	2	0.04%	1	0.02%
Psychiatry	17	0.4%	8	0.2%	5	0.12%
Dermatology	5	0.1%	13	0.3%	8	0.20%
Ophthalmology	9	0.2%	6	0.1%	6	0.15%
Haematology	1	0.0%	3	0.1%	5	0.12%
Orthodontics/ dental surgeon	0	0.00%	2	0.04%	4	0.10%
Physical medicine	2	0.0%	0	0.0%	1	0.02%
Total	4703	100%	5043	100%	4027	100%

The following findings were observed during the study:

- The study revealed that during the last 3 years there has been a steady rise in the emergency department attendance, both in absolute terms as well as monthly averages.
- Emergency wards receive 48% of total hospital admissions while emergency department attendance represents only 7% of total OPD attendances.
- Of those patients who go directly to admission, 33% are admitted directly in critical care units (ICU, CCU and HDU).
- About 50% of total EMD attendance have discharged and 10% remained to medico legal cases (MLC), discharge against medical advice (DAMA) and death in EMD and brought in death remained below 1%.
- The bulk of the patients admitted from the emergency are admitted under the discipline of internal medicine (22%). Of whom, internal medicine (22%), cardiology (13%), paediatrics (10%), neurology (8%) and gastroenterology (6%) accounted for the maximum number.
- It was also evident that more than one third (36.87%) patients were admitted under surgical disciplines, with neurosurgery (9.4%), general (6.4%) and orthopaedics (5%) surgery.
- Paediatric patients comprise nearly 10.4% of the admissions from the EMD under the disciplines of paediatric medicine (9.4%) and paediatric surgery (1%).
- General surgery discipline and orthopaedics accounted for about 10.9% of the admissions each.

- Least number of admissions took place under physical medicine and endocrinology (0.02%), followed by dental surgery (0.10%), psychiatry and heamatology (0.12%), ophthalmology (0.15%) and dermatology (0.20%). It is noted that endocrinologist position was vacant during the study.
- The other disciplines under which large number of admissions takes place from the emergency are cardiology (12.8%), neurosurgery (7.9%) and gastroenterology (5.9%). Head injuries from road traffic accidents resulting in intracranial bleed is the commonest neurosurgical problem. Coronary artery disease (CAD) accounts from the majority of the admissions under cardiology and cirrhosis of liver with either upper GI or lower GI bleed are the commonest cause for admission under gastroenterology.
- The hospital have 5 centre of excellence concept under whom the admissions takes place from EMD are 16.2% in neuroscience center (neurology and neurosurgery), followed by 15.3% in mother and child center (Obs/Gynae, paediatics, paediatric surgery), 14.1% in heart center (interventional cardiology, cardiac surgery and respiratory medicine), 7.6% in bone & joint center (orthopaedics, rheumatology and physical medicine) and 7.5% in kidney center (nephrology and urology).
- It was seen that 45% of the admissions were made in the night shift, 42% in the afternoon shift and only 13% of the admissions took place in the morning shift.

In the United States of America studies have revealed that [6]:

- Most admissions are routine admissions to the hospital-not through the emergency department.
- However, over a third of all hospital admissions are through the emergency department.
- Five of the top 10 conditions for which people are admitted through the emergency are heart problems, like heart attack.
- Two of the top 10 conditions are infections: pneumonia and blood infection (septicemia).
- Nearly 55 percent of hospital stays for the very old (80 years and older) start in the emergency department, compared with 45 percent for younger age groups.
- Over half of all hospitalized patients have at least one co morbidity. Co-morbidities are coexisting conditions that are not the main reason for the hospital stay. About a third of patients have two or more. High blood pressure (hypertension) is the most common co-morbidity. Other common co-morbidities are lung disease and diabetes.

Discussion

Emergency services are a vital component of the hospital and has become the round the clock physician of the community[6]. The EMD of the corporate hospital which receives approximately 600 and 800 patients every month accounts for 48% of the admissions to the hospital. During the study, it was found out that most of the admissions took place in the afternoon and night shift (4 pm to 2 am) and least admissions were made in the morning shift. The possible explanation for this could be that during morning shift OPD is open and most patients prefer to go there, where as during later half of afternoon shift only emergency department is accessible for patient care. Majority of the patients were admitted under the discipline of general medicine. The other disciplines under who bulk of the admissions take place are neurosurgery, cardiology and gastroenterology. The five centers of excellence under which a large number of admissions take place are neuroscience center (16.2%), mother and child center (15.3%) and heart center (14.1%). Physical medicine, endocrinology, dental surgery, psychiatry, haematology, ophthalmology and dermatology accounted for the least number of admissions. Nearly 10% of the admissions were of the paediatric age group and 10% admissions were in the 70 plus age group. About half of the total EMD attendances have discharged and only 10% remained to medico legal cases (MLC) and discharge against medical advice (DAMA). Death noticed around 1% of total EMD admission in two categories like brought-in-death (1.3%) and deaths in EMD (0.22%). All diagnostic and therapeutic facilities for the emergency are allocated close to emergency department along with priority contact agreement so that the emergency patient received fastest services from the diagnostic and therapeutics. Additionally, a multidisciplinary team was involved to counter the emergency code and disaster management in the hospital. The study helps us to focus and plan on the specific areas of manpower and infrastructure needed to increase the efficiency and effectiveness of the emergency department. Data on average and peak daily emergency department admissions helps predict the demand and allows for planning for the capacity needed and system adjustments to meet the demand[7]. A multidisciplinary care coordination team perhaps would improve emergency department practice[8].

Conclusion

The emergency service provides the first impression on the patients and their attendances which must be a positive one. Quick and competent care can save lives and also reduce the severity and duration of illness. The EMD of corporate hospital catering to about 800 patients, admits about 26-28 patients daily. Emergency admission have remained more or less static, seeming to suggest that emergency admissions have reached saturation point. Results showed that majority of patients are admitted under medicine specialty; one third patients were admitted under surgery. Physical medicine, endocrinology, dental surgery, psychiatry, heamatology, ophthalmology, and dermatology accounted for the least number of admissions. EMD managed critical care patients very frequently, which accounted one third of total ER admission. Modern concept of emergency as `minihospitals' model may have an implication on healthcare policy makers for overall improvement of emergency service both in private and government hospitals in Bangladesh.

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Original Article

The relationships of parasympathetic nerve function parameters with endogenous estrogen level in postmenopausal women

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Abstract

Background: The risk of cardiovascular diseases gradually increases in postmenopausal women may be due to decreased level of estrogen in this period of life. This study was carried out to observe relationships of estrogen with parasympathetic nerve function parameters, which may help in early detection of parasympathetic nerve dysfunction in this group of women. *Methods:* This cross sectional study was carried out in the Department of Physiology, BSMMU, Dhaka from January 2007 to December 2007. For this study 60 subjects were selected among them 30 were postmenopausal women aged 45 to 60 years (study group) and 30 were premenopausal women aged 20 to 30 years (control group). Premenopausal women were studied during the follicular phase of menstrual cycle. Serum estrogen level was measured in each subject by MEIA (microparticle enzyme immunosorbent assay) method and parasympathetic nerve functions were evaluated by three non invasive cardiovascular reflex tests. *Results:* Estrogen level was significantly ($p<0.001$) lower in postmenopausal women than that of premenopausal women during follicular phase of menstrual cycle. Parasympathetic nerve function parameters such as heart rate response to deep breathing and heart rate response to standing were significantly ($p<0.001$ and $p<0.01$ respectively) lower in postmenopausal women than premenopausal women. Again, valsalva ratio ($r=0.531$, $p=0.003$**), heart rate response to deep breathing ($r=0.450$, $p=0.013$*) and heart rate response to standing showed ($r=0.419$, $p=0.021$*) significant positive correlation with serum estrogen level in postmenopausal women. *Conclusion:* Therefore, parasympathetic nerve functions are related with serum estrogen level and reduced level of this hormone in postmenopausal women may lead to decrease in parasympathetic nerve function.

Key words

Postmenopausal women, parasympathetic nerve function, estrogen.

Introduction

Women, during their childbearing age have reduced risk of cardiovascular diseases than man. However, this risk gradually increases in postmenopausal women, which may be due to decreased level of estrogen in this period of life[1]. Moreover, alterations in autonomic nerve function have been observed in postmenopausal women that commonly affect cardiac vagal control[2]. Alteration in autonomic nerve function may lead to hypertension, cardiac arrythmia or sudden cardiac death[3,4].

Cardiovascular autonomic balances are related to baroreceptor sensitivity and heart rate variability (HRV)[4]. It has been observed that in women, ovariectomy suppresses baroreflex sensitivity and HRV[5]. Estrogen supplementation increases baroreflex sensitivity and HRV as well as parasympathetic control of the heart in postmenopausal women[1,6,7]. Therefore, cardiovascular autonomic dysfunctions may be improved following hormone replacement therapy (HRT)[8,9]. However, some other group of investigators have demonstrated no improvement in cardiac autonomic dysfunctions following estrogen administration[10].

In several countries the relationships of decreased level of estrogen with autonomic nerve dysfunction has been observed[1,2,4,7,11,12]. However, no published available data were reported in our country. In the present study, the relationships of parasympathetic nerve dysfunction with estrogen levels have been observed in healthy Bangladeshi postmenopausal women. So, this study may contribute to identify the parasympathetic nerve dysfunction in postmenopausal women population, which may also help the physicians to take appropriate measure for the improvement of health status.

Methods

The present cross sectional study was carried out in the Department of Physiology, BSMMU, Dhaka from January 2007 to December 2007. In this study a total number of 60 apparently healthy subjects were selected, of whom 30 postmenopausal women with age ranged from 45 to 60 years were included in the study group (group B) and 30 premenopausal women with age ranged from 20 to 30 years were selected as control group (group A2). Control group was studied during follicular phase (9^{th} to 14^{th} day) of menstrual cycle. The duration of natural and surgical menopause was at least one year and they were not on any form of HRT.

Objectives of the study were explained to each of the subject in details and then written informed consent was taken. Parasympathetic nerve functions of each of the subject were evaluated by cardiovascular autonomic nerve function test like heart rate response to valsalva maneuver, heart rate response to standing and heart rate response to deep breathing. Serum estrogen level of each subject was measured by MEIA method.

All the parametric variables were expressed as mean ± SD (Standard Deviation). Comparison between the groups were done by unpaired students 't' test. 'r' value was obtained by Pearson's correlation coefficient. The statistical analysis was done by SPSS program version-11.5. "p" value <0.05 was considered as statistically significant.

Results

The mean (± SD) age and Body Mass Index (BMI) of the subjects are shown in Table 1. The mean value of estrogen was

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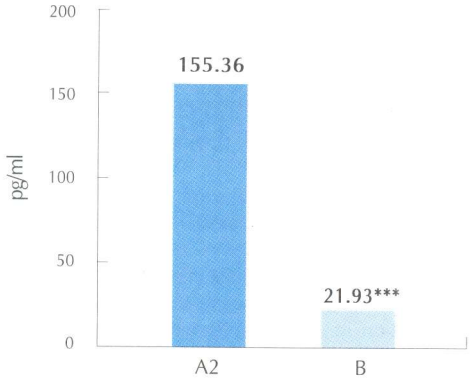
significantly ($p<0.001$) lower in group B (postmenopausal women) than that of group A2 (premenopausal women during follicular phase) (Figure 1).

Table 1: Age and BMI in different groups (n=60)

Variables	A2 (n=30)	B (n=30)
Age (years)	24.30±3.88 (20-30)	50.53±3.02 (47-60)
BMI (kg/m^2)	20.80±1.40 (18.4-22.94)	22.18±3.08 (18.42-28.20)

Data are expressed as mean ± SD. Figures in parentheses indicate ranges
A2= Premenopause during follicular phase (control)
B = Postmenopause (study), n = Total number of subjects



A2=Premenopausal during follicular phase (control)
B= Postmenopausal (study)
***= significant at the p<0.001

Figure 1: Serum estrogen levels in different groups (n= 60)

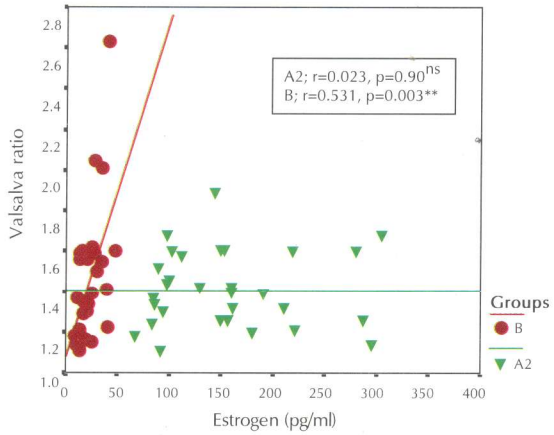
Parasympathetic nerve function status had been observed in both the groups and comparisons were made among them (Table 2). The mean value of valsalva ratio was higher in group B than that of group A2, however the differences were not statistically significant. Significantly lower value of heart rate response to deep breathing ($p<0.001$) and heart rate response to standing ($p<0.01$) were observed in group B than that of group A2.

Table 2: Parasympathetic nerve function parameters in different groups (n=60)

Parasympathetic nerve function parameters	Group A2 (n=30)	Group B (n=30)
Heart rate response to valsalva maneuver (valsalva ratio)	1.41±0.18 (1.11-1.89)	1.44±0.32 (1.11-2.63)
Heart rate response to deep breathing (beats/min)	26.79±7.09 (11.83-39.57)	12.62±3.83*** (5.72-21.82)
Heart rate response to standing (30th: 15th)	1.20±0.26 (1.04-2.50)	1.07±0.08** (0.93-1.30)

Data are shown as mean ± SD. Figures in parentheses indicate ranges
A2 = Premenopausal during follicular phase (control)
B = Postmenopause (study)
***= significant at the p<0.001, **= significant at the p<0.01
n = Number of subjects

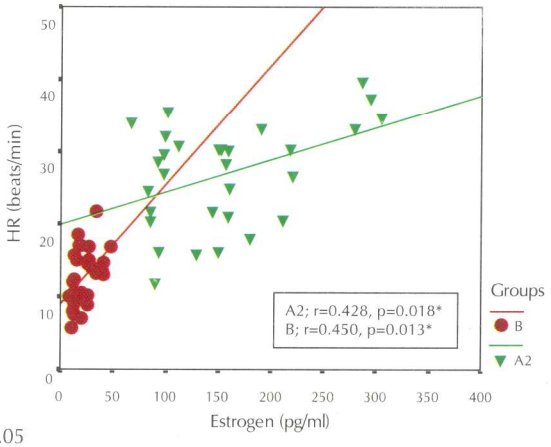
Valsalva ratio was positively correlated with serum estrogen level both in group B and in group A2 but the relationship was statistically significant ($p<0.01$) only in group B (Figure 2).



**= p<0.01, ns= not significant

Figure 2: Correlation of serum estrogen level with valsalva ratio in different groups (n=60)

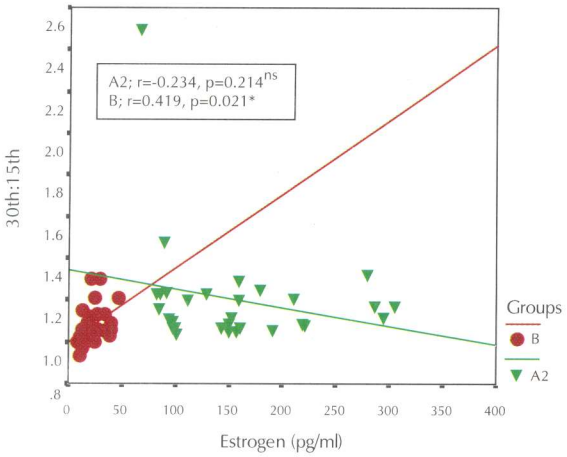
Heart rate response to deep breathing showed significant ($p<0.05$) positive correlation with serum estrogen level in both group B and in group A2 (Figure 3).



*= p<0.05

Figure 3: Correlation of serum estrogen level with heart rate response to deep breathing in different groups (n=60)

Again, heart rate response to standing also showed significant ($p<0.05$) positive correlation with serum estrogen level in group B. In group A2 this relationship was negative and non significant (Figure 4).



*= p<0.05, ns=not significant

Figure 4: Correlation of serum estrogen level with heart rate response to standing in different groups (n=60)

Discussion

In this study serum estrogen level was significantly ($p<0.001$) lower in postmenopausal women compared to the follicular phase of the premenopausal women. Fadel et al. (2004) also observed similar findings in postmenopausal women in comparison to follicular phase of premenopausal women[13].

Again, serum estrogen showed significant positive correlation with valsalva ratio, heart rate response to deep breathing and heart rate response to standing in postmenopausal women. Some group of investigators of different countries had also observed the relationship of the autonomic nerve function with estrogen level in postmenopausal women. However, they have used other non invasive parameters like time domain and frequency domain indexes of HRV. Neves et al. (2007) observed significant positive correlation of estrogen with HFnu (high frequency normalized unit) in postmenopausal women, which represent parasympathetic nerve function[1].

In premenopausal women heart rate response to deep breathing showed significant positive correlation with estrogen level during follicular phase. However, relation with valsalva ratio and heart rate response to standing were non significant. Anthony, David and Graham (2003) reported significant positive correlation of estrogen with all the absolute measures of HRV (heart rate variability) like LF, HF and TP (low frequency, high frequency and total power respectively) during follicular phase of premenopausal women[14]. However, Matsumoto et al. (2006) observed non significant relationships of parasympathetic nerve functions with estrogen level during follicular phase[15].

In this study significant positive correlation of estrogen with parasympathetic nerve function parameters indicates that reduced parasympathetic nerve functions are associated with decreased level of estrogen in postmenopausal women and this also suggestive of decreased baroreflex activity and vagal tone. However, the role of estrogen on the modulation of the autonomic nerve function has not yet been established. Several investigators have demonstrated that estrogen has regulatory influences on parasympathetic nerve function[16,17,18].

It has been suggested that estrogen acts on central neural pathway of baroreceptor reflex arc and facilitates the baroreflex sensitivity as well as the activity. The exact central mechanisms involved in the baroreflex enhancement by estrogen have yet to be established. However, some investigators suggested that estrogen has facilitatory roles on glutamatergic neurotransmission in nucleus tractus solitarius (NTS) and thereby modulate the central baroreflexes and vagal tone[16,17]. Therefore, decrease in baroreflex sensitivity and HRV may be the consequences of estrogen deficiency in postmenopausal women[18].

Conclusion

Postmenopausal women may suffer from alteration of parasympathetic nerve function due to lack of estrogen hormone and estrogen has positive relationships with parasympathetic nerve function. However, exact mechanisms involved for this impairment of autonomic nerve function in postmenopausal women cannot be elucidated from this type of study. Supplementation with estrogen hormones in this group of women can give a more conclusive finding.

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Bidirectional glenn shunt without cardiopulmonary bypass

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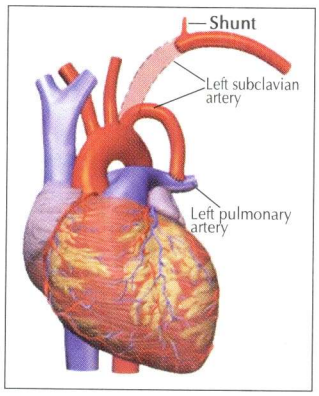
Abstract

Background: Various methods have been described for fashioning of the superior bidirectional cardiopulmonary shunt. We herein present our early experience for performing this procedure without cardiopulmonary bypass in some patients. *Patients and methods*: From January 2004 to December 2006, 46 patients with single ventricle anomaly with pulmonary stenosis underwent bidirectional glenn (BDG) shunt without cardiopulmonary bypass. All patients underwent BDG without CPB and by using temporary venoatrial shunt. *Results*: The outcome was favorable with mean systematic oxygen saturation increased form 68.85±2.58% to 87.35±1.69%. Mean SVC clamp was 15.92±1.97 minutes (range from 14 to 20 minutes). There was no observable clinical neurological deficit after operation with no postoperative mortality and smooth postoperative course. *Conclusion*: The use of a temporary extra cardiac venoatrial shunt when performing BDG without CPB is safe, offers better results by avoiding the problem of CPB, easily reproducible and recommended in selected patients' population.

Introduction

BDG is the first surgery for palliation for patients with single ventricle physiology. Various techniques have been described for performing this cavopulmonary anastomosis with or without the use of CPB.



Material & methods

From January 2004 to December 2006, 46 children with single ventricle and pulmonary stenosis anomaly underwent a BDG shunt without CPB or with temporary venoatrial shunt.

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The criteria to select patients for BDG without CPB were- mean pulmonary artery pressure ≤15 mm Hg, good ventricular function, no AV valve regurgitation. Unrestrictive AV valve regurgitation, unrestrictive atrial septal defect (ASD), and no restrictive pulmonary arterial architecture. The preoperative, operative and postoperative details for the patients are shown in table 1.

Procedure

A median sternotomy was performed in all patients. The thymus gland was removed completely and pericardium was opened. The right and left superior vena cavae (if present) were dissected and mobilized upto the inominate vein. Also the right and left pulmonary arteries were dissected and mobilized. PDA was dissected and looped. Azygos vein was doubly ligated and divided.

After systemic heparinization (2mg/kg) a veno venous (veno atrial) shunt was established between distal SVC and inominate vein and the right atrium using two right angled metal tipped cannulae after de airing the circuit. After establishing the shunt, the cannulae were placed parallel to the patient for better drainage without rising them above the patient body level.

At this stage, BDG was performed as usual where the SVC was clamped and divided just above the cardiac end. The proximal end of the divided SVC was over sewn with 6-0 prolene suture. The right pulmonary artery was partially occluded with large c-shaped Cooley vascular clump and opened at its superior aspect. The distal end of the SVC was anastomosed end-to-side to the right pulmonary artery incision using prolene suture creating a very wide anastomosis as much as possible.

After establishing the shunt, the clamps were removed. PDA was ligated and the temporary veno venous shunt was disconnected and general homeostasis achieved. During the entire procedure, the patient's head was elevated to minimize the brain congestion by more venous drainage.

Results

46 patients with single ventricle with PS underwent BDG without CPB. The age ranged from 1 to 15 years. There were no operation mortalities, oxygen saturation improved to mean of 87.35±1.69%, the mean cross clamping time was 15.92±1.97 minutes and the mean postoperative mechanical ventilation was 2.06±2.1 hours. Two patients developed right sided pleural effusion and one patient developed chylothorax. Those 3 patients were managed conservatively with chest drain insertion, diuretics and fat free diet and discharged free with clear chest X ray.

Table 1: Shows the preoperative, operative and postoperative data for patients

Age (Yr)	Wt (Kg)	No.	Preop O_2 saturation	Cross clamp time	Postop O_2 saturation	Ventilation time: hours
1-5	6-13	19	65-70%	14-20 min	85-90%	2.5-4
5-10	13-20	21	65-70%	14-20 min	85-90%	2.5-4
10-15	20-30	6	65-70%	14-20 min	85-90%	2.5-4

Table 2: Shows preoperative diagnosis, previous operation and complication

No. of patients	Preoperative diagnosis	Previous operation	Complication
25	TA, ASD, VSD, PS	MBT (3 patients)	Right-sided chylothorax (1 patient)
2	PA, VSD		Pleural effusion (2 patients)
5	TGA, VSD, PS		
3	DORV, PS		
1	DILV, VSD, PS		
15	Single ventricle		

Discussion

William W.L. Glenn a professor of surgery at Yale University first reported the clinical application of this concept in 1958[1,3]. The Glenn shunt and its modification have become the mainstay of first stage palliation for patients with single ventricle pulmonary stenosis physiology[3]. BDG may be performed as an interim step in the partway to Fontan type circulation, as part 1 to 1.5 ventricle repaired and some times to reduce right ventricular volume overload[3].

When first performed, CPB was an essential part of the procedure in 1990. Lambarti and associates reported new technique of preforming BDG without CPB by establishing temporary veno atrial shunt between SVC and right atrium to decompress the systemic hypertension during clamping the SVC.

For the best outcome of glenn flow, the proper alignment of SVC and RPA is the key factor since venous pressure head is the only factor that maintains the glenn circuit. The slightest variation in the alignment while performing anastomosis can lead to loss of laminer flow[3].

We have followed up the patients for 2 months to 24 months and have found no instance of pulmonary arteriovenous fistulla or increased incidence of pleural effusion[3].

Bidirectional cavopulmonary shunt procedure remains an attractive option in these patients which, besides palliating them to a large extent, also reduces the cost and an option of a BT shunt[3].

Further, a cavopulmonary shunt reduces the morbidity and possible mortality of an acute blockage of a modified BT shunt, as it is a more dependable shunt with native tissue to tissue anastomosis capable of grouping with the child. May be this and the reduced cost, will make this shunt mort attractive in children, particularly for surgeons practicing in the developing world[3].

The bi-directional cavo-pulmonary shunt was first performed in 1966[3].

In contrast to our veno-venous temporary shunt, Murthy et al reported a different temporary bypass shunt which is a veno-arterial shunt between the SVC or inominate vein and the main pulmonary artery using two venous metal cannulae and closed circuit toward pulmonary artery branch on the opposite side of the BDG. They believe that this shunt not only decompress the venous blood during the SVC clamping but it also improves the pulmonary blood flow thereby increasing the oxygen saturation during the procedure[1].

Conclusion

Performing the superior BDG for single ventricle patients without cardiopulmonary bypass by using temporary extracardiac venovenous shunt is safe and offers good results and better brain protection during SVC clamping and avoids the problem of cardiopulmonary bypass.

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The surgical management of trigeminal schwannomas

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Introduction

Schwannomas are tumors of the nerve sheath that usually exhibit benign behavior[1,5,8]. Benign trigeminal schwannoma of the trigeminal nerve comprises only 0.2% to 0.4% of all intracranial tumors and primarily arises in the gasserian ganglion[2,9,11,12]. Trigeminal schwannomas are benign tumors of schwann cell origin, are relatively rare and much less common than acoustic neuroma[5,8,12]. Most trigeminal neurinomas irrespective of the site of spread have an association with this region of the nerve[5]. The tumor grows larger and spreads in the available spaces[7].

The Meckel's cave can accommodate a large amount of the tumor, which bloats up the cave[7]. The tumor being soft is unable to open up the dural sheath beyond the ganglion into the roots. This may be the reason that in most of the cases tumor does not extend beyond the dilated cave[3,7]. The tumor presses the adjacent normal fifth nerve, most of which is clinically involved by direct pressure of the tumor[7]. In the posterior fossa the trigeminal neurinomas are located intradurally[7]. The part in proximity to the brain stem is in most cases like any other extra-axial tumor with a well-defined plane of cleavage[7,9]. In general these tumors involve the adjoining cranial nerves, blood vessels and brain only by displacement and not by invasion[7,10]. We retrospectively analyzed the clinical profiles of 6 patients who were surgically treated for trigeminal schwannomas. The aim of this study was to analyze the presenting clinical and radiological features of these tumors, to establish factors that might affect surgical decision-making, to critically evaluate the appropriate surgical route, depending on tumor location and to assess the long-term outcomes after radical tumor resection.

Surgical anatomy

Recent advances in understanding the microsurgical anatomy of skull base structures are hallmarks of modern neurosurgery[6]. The trigeminal nerve has an extensive anatomic course[2,6]. Comprehensive knowledge of trigeminal nerve anatomy facilitates understanding of the relationship between the brainstem, skull base and facial area[2]. The trigeminal nerve trifurcates into ophthalmic, maxillary and mandibular nerves distal to the trigeminal ganglion[2]. The ophthalmic nerve passes forward in the lateral wall of the cavernous sinus. It gains access into the orbit via the superior orbital fissure. The ophthalmic nerve then divides to supply sensation to the eyeball, lacrymal glands, conjunctiva, part of the nasal mucosa, skin of the nose, eyelid and forehead[3,6].

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Classification of tumor extension

Trigeminal schwannomas may originate from the root, the ganglion or the peripheral branches of the trigeminal nerve[8]. Jefferson initially divided these tumors into 4 groups depending on their anatomical location: Posterior fossa (Root type), Combined posterior fossa-middle fossa (Dumbbell type), Middle fossa (Ganglion type), and Peripheral (Division type)[8]. Samii et al[13] classified the tumor extension into 4 categories based on radiological findings: Type A- Intracranial tumor predominantly in the middle fossa; Type B- Intracranial tumor predominantly in the posterior fossa; Type C- Intracranial dumbbell-shaped tumor in the middle and posterior fossa; and Type D- Extracranial tumor with intracranial extensions[13].

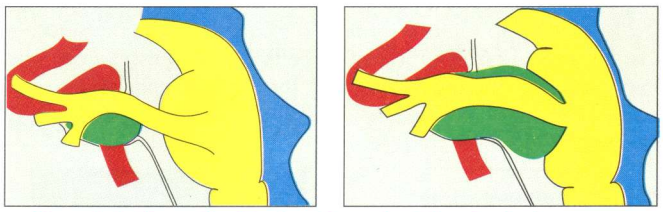

Figure 1, 2 : Shows the direction of growth of trigeminal schwannoma

Methods

This series includes 6 patients who were surgically treated between 2005 and 2008 at BSMMU. No patients received a diagnosis of NF2.

Results

Total tumor excision was possible in 4 patients, whereas total removal were not achieved in 2 patients. The extent of resection was graded according to the surgeons' impressions, confirmed by postoperative imaging in all patients. "Total" resection was defined as complete resection of the tumor and its capsule. "Radical subtotal" was assigned to the resection when tumor capsule fragments remained on vital structures. When the tumor capsule remained in the cavernous sinus or on the brain stem, the resection was graded as "Subtotal"[2,3]. Out of the six patients one undergone subtotal resection, two patient required a staged procedure with a large dumbbell type lesion. There were no operation related death or mortality.

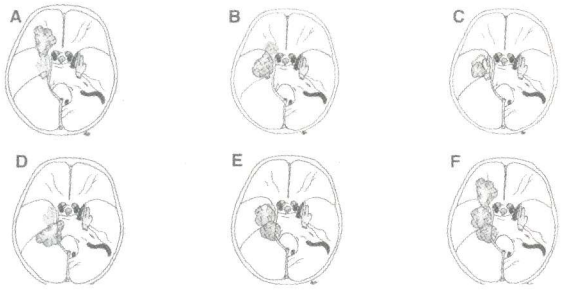

Figure 3: Drawings showing the 6 types of TS. A: Large extracranial TS with a small middle fossa extension (Type A). B: A TS with its main portion in the middle fossa and a small extracranial extension (Type B). C: A middle fossa TS (Type C). D: A posterior fossa TS (Type D). E: A TS with middle and posterior fossa extensions (Type E). F: A TS with extracranial, middle,and posterior fossa extension. (Type-F)

Table 1: Results of surgical procedures and outcomes after surgery of patients with TSs

Operative approaches	No. of patients (%)	Operative outcomes	No. of patients (%)
Retrosigmoid approach	3 (50%)	Total resection	4 (66.6%)
Subtemporal transtentorial approach	3 (50%)	Radical subtotal resection	1(16.6%)
Subtemporal interdural approach	2 (33.3%)	Subtotal	1 (16.6%)
		Recurrence	1
Fronto temporopolar extradural approach	1 (16.6%)	Op-related death	Nil

"Functional outcome was assigned a grade of 'excellent' if the patient returned to his or her preoperative employment and was living independently"[2]. It would be preferable to compare the real functional outcome (i.e., according to the functions of the fifth nerve and/or other neural structures of the neighboring areas)[2]. Hence, an excellent result is achieved when there are no new neurological deficits[2].

Discussion

Trigeminal neurinomas are relatively rare tumors and represent 0.2% of all intracranial tumors[1,2,9,11]. Trigeminal neurinomas usually arise from the Schwann cells of the sensory root and can originate in any section of the fifth cranial nerve and correspondingly a variety of symptoms and signs may develop[2,5,7,9].

Clinical presentation

There was significant sex variation in our series, with the male/female ratio being 2:1. The age of presentation varied from 12 years to 55 years.

The clinical presentation was usually in the form of paresthesia or numbness, often in more than one division of the nerve. Severe or neuralgic pain was uncommon and was not observed in any cases. Wasting of the temporalis and pterygoid muscles were common and occurred in 66.6 % of cases. The corneal reflex was depressed or absent for all patients. The symptoms of involvement of adjacent cranial nerves in the cavernous sinus and in the cerebellopontine angle have been frequently reported in 2 cases. These symptoms probably because of the large sizes of the tumors encountered in this series.

The large tumor size was also responsible for the relatively infrequently encountered symptoms of increased intracranial pressure and ophthalmoscopically demonstrated papilledema, which were observed in 4 cases (66.6%). One patient demonstrated contralateral hemiparesis and pyramidal signs related to severe compression of the brainstem. The unusual symptom of pathological laughter was observed in one case of large, dumbbell-shaped tumors. The clinical features of slowly progressive symptoms and the predominant presence of trigeminal nerve-related symptoms of numbness and muscle wasting are usually diagnostic[5,7].

Table 2: Preoperative clinical symptoms in 6 patients with TSs

Symptom	No. of Patients (%)	Symptom	No. of Patients (%)
Trigeminal hypesthesia	6 (100%)	Diplopia	2 (33.3%)
Facial pain	4 (66.6%)	Ataxia	2 (33.3%)
Headache	3 (50%)	Pathological laughter	1 (16.6%)
Hearing symptoms	3 (50%)	Hemiparesis & increased ICP with papilledema	2 (33.3%)
Seizure	Nil		

Table 3: Shows the distribution of cases

Case no	Age/sex	Presentation	Location	Name of operation	Complications	Follow up
1.	28/F	Headache, facial hypoaesthesia	Middle fossa	Fronto temporopolar extradural approach	No	Lost from follow up
2.	55/M	Deafness, facial hypoaesthesia, ataxia	Posterior fossa	Stages 1. Retrosigmoid approach 2. Subtemporal transtentorail	No	3 yrs no recurrence
3.	35/M	Headache, visual blurring	Combined	Extended subtmeporal transtential approach	3rd nerve palsy, tinnitus	2 yrs no recurrence
4.	25/M	Facial hypoaesthesia, facial asymmetry due to atrophy of muscle	Middle fossa	Subtemporal interdural approach	No	1 yrs no recurrence
5.	12/F	Ataxia, deafness, respiratory distress, dysphagia	Combined	Stages 1. Retrosigmoid approach 2. Subtemporal and retrosigmoid approach	Facial palsy, exposure keratitis, dysphagia	9 months recurrence
6.	35/M	Dysphasia, facial asymmetry	Combined	Extended subtemporal appraoch	No	no recurrence

Radiological features

Erosion of the petrous apex, as noted on plain x-rays or computed tomographic scans, was uniformly observed for larger tumors, and this finding was of diagnostic significance[5,7] (figure 4). Lesions are usually isodense on unenhanced CT but may reveal variable attenuation. There is usually homogenous enhancement with contrast[9,11]. Because of its multiplanar capability, exquisite anatomic detail and characteristic tissue signal intensity, MRI is helpful in the differential diagnosis of primary tumours of the trigeminal nerve and Meckel's cave and in the evaluation of tumor involvement for preoperative planning[7,9]. MRI with contrast enhancement is preferable to CT scanning because of multiplanar capability and absence of Hounsfield artifact from the skull base[11,14]. In addition MRI is sensitive for detection of additional neuromas, which is a consideration in neurofibromatosis (NF2) patients[5,6].

Trigeminal schwannomas show homogeneity on T1-weighted images and variable heterogeneity on T2-weighted images with prolongation of T1 and T2 relaxation times[5,7]. There is usually intense heterogeneous enhancement with gadolinium. MRI signal characteristics are similar to those of acoustic schwannoma; the key to this diagnosis is the neuroanatomic localization along the fifth nerve pathway[5,7,11,13].

Figure 4: Shows erosion of petrosal apex on left side

Figure 5: Shows bright homogenous contrast enhancement

Figure 6: Shows hyperintense in T2WI

The postcontrast T1-weighted image (Figure 5) reveals a mass lesion in the left cerebellopontine angle extending anteriorly. The lesion is predominantly hyperintense on T2-weighted image (Figure 6), and enhances homogenously with CT of the skull base shows the grossly enlarged left foramen ovale[5,9].

The characteristic anatomical location, extent and signal characteristics make the diagnosis of trigeminal nerve schwannoma almost certain[3,5,8].

Although there have been reports of malignant trigeminal neuromas, none of the patients in our series had a malignant neuroma.

Several contemporary series have demonstrated no deaths or major surgical complications with radical removal of TSs[7,11,13,14]. In a classic series of 44 patients reported by Dolenc, total resection was achieved in 100% of the patients, including 5 who had undergone incomplete resection elsewhere and underwent another surgery to excise the remainder of the tumor[3]. The authors recommend an epidural approach to schwannomas originating in the fifth cranial nerve peripherally to the Gasserian ganglion and either an epidural-transdural or an epiduraltransdural- transpetrous approach to lesions originating in the Gasserian ganglion or in the root of the fifth nerve[3,14].

Surgical strategy

Recent reports demonstrate a higher percentage of tumor resection, a low surgical morbidity rate and a lower rate of recurrence. Various reports have stressed the need for radical surgery, because total resection leads to tumor cure and the recurrence rate for cases with partial resection is relatively higher for trigeminal neuromas, compared with acoustic neuromas[6].

Konovalov et al[9]. on the basis of a comparatively large experience, the authors demonstrate some important points for trigeminal neuroma surgery, as follows: 1) These tumors are usually well separated from the cavernous sinus and the carotid artery, which facilitates their radical removal. 2) Usually the tumor does not completely destroy the trigeminal nerve, and some of its fibers can be preserved (preservation of the first trigeminal nerve division, if possible, is especially important). 3) The basal extradural approach (which the authors call "interdural") is an effective way to reach and remove small and medium-size trigeminal tumors. There is a behavioral difference between neuromas and neurofibromas, which may infiltrate the nerve. Tumors may spread along the nerve division, far from the Meckel cavity and other approaches may be necessary for their removal. In every case, selection of an appropriate approach should be strictly individualized[9].

The major impediment to complete removal is inadequate exposure[2,3,5,7]. Because of the location within the layers of the dura in the middle fossa, there was no specific need to achieve proximal control of the carotid artery, as would probably be necessary for some other lesions in this location[5,7]. Under surgical technique, the authors state, "a temporal craniectomy (if needed) is performed to obtain a flat viewing angle across the floor of the middle fossa." Naturally, it is always needed, because this provides better access to the parasellar region and does not necessitate any retraction of the brain. Another statement, "If necessary, the middle meningeal artery is ligated to increase exposure of the lateral middle fossa floor" [3,5].

Retrosigmoid approach

This approach is performed by placing the patient in the dorsal (mastoid) position with the head turned to the opposite side and the ipsilateral shoulder elevated. A linear incision is placed 4 cm behind the external auditory canal. The asterion is exposed to determine the junction of the tranverse and sigmoid sinuses. A craniectomy 4 cm in diameter is performed, with the superior and anterior margins bordering the transverse and sigmoid sinuses, respectively. The dura mater is opened parallel to the sigmoid sinus; CSF is drained from the cerebellomedullary cistern; and CNs VII-XI are identified. The tumor is thereby exposed near the tentorium margin. After intracapsular tumor debulking, microsurgical radical removal is accomplished[3].

Lateral basal subtemporal approach

The skin incision extends from in front of the ear and travels superiorly and posteriorly. The branches of the facial nerve are saved by working deep to the fascial layers. The exposure is centered on the external ear canal. The temporalis muscle is elevated and displaced anteriorly. The basal extension of the exposure was achieved by resection of the roots of the zygomatic arch, roof of the external ear canal and superior third of the mastoid bone (Figure 7). The temporalis muscle was rotated anteriorly and was thus away from the field. The exposure was centered over the external ear canal in line with the petrous apex. The direction of the approach to the tumor was the shortest and perpendicular from the surface and avoided any neural or vascular manipulation. Inclusion of mastoidectomy in the exposure added the advantages of petrosal approach[5,7].

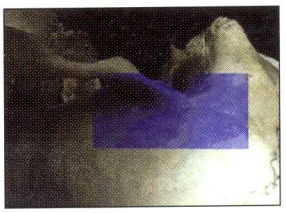

Figure 7: Shows extent of craniotomy in lateral basal subtemporal approach

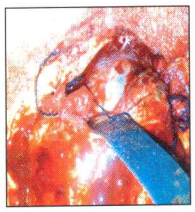

Figure 8: Shows operative picture of trigeminal schwonnoma in frontotemparopolar approach

Subtemporal transtentorial approach

This approach provides a limited view of the underside of the tumor and its relationship to the vessels and cranial nerves below. A better view of the tumor's relationship to cranial nerves VI, VII, and VIII, the vertebrobasilar system and the anteroinferior cerebellar artery is provided via the suboccipital portion of the combined petrosal approach[2,3,5,7,14].

Combinned (retrosigmoid with subtemporal transtentorial approach)

This is the combination of subtemporal and lateral suboccipital approach for dumbbell shaped schwannoma. This approach do not need drilling of petrosal bone and exposure of sigmoid sinus, hence less time consuming, disadvantage is cerebellar retraction[2,3].

Frontotemporal extradural temporopolar approach

Lesions of the orbital-cavernous and ganglion types were approached via an extradural approach to the cavernous sinus. With the head in three-pin fixation, supine, rotated approximately 30 degrees, a pterional skin incision is made. The scalp and temporalis muscle are then reflected anteriorly in one layer. In selected cases, a two-layer scalp flap is fashioned to retract the temporalis muscle inferiorly and posteriorly. This maneuver provides a widened corridor to the anterior middle fossa, necessary in approaching larger tumors. A pterional craniotomy is performed, which typically measures 3 x 5 cm. A temporal craniectomy (if needed) is performed to

obtain a flat viewing angle across the floor of the middle fossa. The dura is then elevated from the sphenoid ridge and medial frontal fossa. Elevation of the dura of the middle fossa proceeds laterally, to the foramen spinosum. If necessary, the middle meningeal artery is ligated to increase exposure of the lateral middle fossa floor[2,3,5,7].

Combined petrosal approach

Patients with lesions that involve both the cavernous sinus and posterior fossa, the so-called "dumbbell" type, underwent surgical resection via the combined petrosal approach. The patient is placed in the three-quarter lateral position. An "L" shaped craniotomy is made around the ear to expose temporal and retromastoid dura. A mastoidectomy is then performed, preserving the structures of the bony labyrinth. Extradurally, the petrous apex medial to the internal auditory canal is fenestrated to create a window via the middle fossa trajectory to the posterior fossa[3,7,14].

Conclusion

On the basis of our limited experience, we believe that the best treatment for TSs is complete microsurgical removal of the lesion and that this treatment should be considered the gold standard therapeutic modality for the majority of cases. Hypesthesia, to some degree, is common after surgery, at least in the early postoperative period.

Bibiloraphy

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6 Natural Tips for Deep Sleep

Would you like to sleep like a baby without taking drugs? Americans spend upwards of 3 billion dollars a year on sleep medications, but to avoid the side effects, there are a number of natural remedies you can try first. Read on to learn some of the ways to get a good quality night's sleep.

1. *Relaxing Rituals to Rest Easy:* In Chinese Medicine, night time is yin time-or, simply, when the body takes care of itself instead of your desires. Proper sleep is required for your body to repair itself and regenerate. To reach deep, restful sleep, your spirit and heart must be calm. Excessive worry, anxiety, and depression can all disturb the spirit and activate the mind-making it near impossible to fall asleep and stay asleep. Rituals to sooth your spirit and induce a sleep response before bed include soaking your feet in Epson salts for 15 minutes, writing all of your thoughts in a journal to get them out of your head, and practicing relaxation before bed, like the Stress Release meditation below.

2. *When Food Disturbs Sleep:* When you eat late, you wake up tired. Your body will be busy digesting your dinner while you are trying to sleep, so you won't feel rested in the morning. Do not eat anything for at least three hours before bedtime. Also, cut back on eating bacon, cheese, chocolate, ham, potatoes, tomatoes, and sausage, especially before bed. These foods contain tyramine, which inhibits neurochemicals like norepinephrine and can cause insomnia. And, of course if you have sleep problems, caffeine should be cut out. Eat for sleep! Try eating more grains at dinner; carbohydrates tend to make people sleepy. Another snooze snack is a warm cup of milk; because milk is rich in the amino acid tryptophan, it can sometimes aid in deep sleep. Mix in natural vanilla flavoring for a soothing snack. Or if you prefer, eat 1 cup of natural yogurt an hour before bedtime.

3. *A Peaceful Place for Sleep:* Your sleeping environment makes a huge difference to the quality of your sleep. Do everything you can to create a quiet and cozy atmosphere. Ideally, your bedroom should be located in the quietest area of your home. Keep the décor minimal. Lighting should be dim and any music that is played should be soothing. Research has found that lavender, vanilla, and green apple are among the best scents to help lower anxiety and induce sleep, making these smells a good choice for a scented candle or heated essential oil. Try to limit your pets to outside of the bedroom because their movements will keep with your body from fully relaxing into deep R. E. M. sleep. As much as possible, your bedroom should be only for sleep.

4. *Exercise Enables Sleep:* People with regular exercise routines often sleep better and have fewer incidents of insomnia than those don't get regular physical activity. Exercise promotes sleep and improves sleep quality by altering brain chemistry. Exercising moderately for 20 to 30 minutes three times a day, combined with meditation or tai chi in the evening, will not only help you fall and stay asleep, but will also increase the amount of time you spend in R.E.M. sleep. In fact, for some people, exercise alone is enough to overcome sleep problems. Exercise in the morning or afternoon, but do not exercise for at least two hours before bed.

5. *Herbs to Sleep Tight:* A calming tea before bedtime can ensure a good night's sleep. Drink valerian or passionflower (or passiflora) tea before bedtime every night for one month. Simply steep 1 to 2 tablespoons of the dried herbs in one cup of hot water and drink just before bed. Or look for one with the traditional Chinese herbs zizyphus or jujube seed, bamboo shavings, and oyster shell, which soothe the mind and spirit. You might also try Calm-Fort/Sleep formula with useful herbs like lily bulbs, polygala and turmeric that help manage stress and calm the spirit while relieving restlessness and insomnia.

6. *A Sleep-Friendly Meditation:* I had one patient with insomnia who also felt anxious and even a little depressed. In addition to acupuncture and herbal therapies, I decided to teach her a stress release meditation that she could do before bedtime to help with her anxiety. I am happy to report that she is now sleeping like a baby.

Try this Stress Release meditation, which works for the majority of my patients who have sleeping problems:

Sit comfortably or lie down on your back. Slow your respiration to deep, abdominal breathing. Utter the word "calm" in your mind with every exhalation. Focus on relaxing each area of your body in sequence, from the top of your head to your toes. Starting with the top of your head, inhale and then exhale while visualizing your scalp muscles relaxing. Say "calm" in your mind. Repeat this with each body part as you move down through all body parts, front, back, and sides, in succession: your face, throat, chest, arms, stomach, abdomen, thighs, knees, legs, ankles, until finally you reach your feet. When you've relaxed your feet, visualize all the tension in your body leaving through your toes as dark smoke. Practice this for at least 15 minutes before bedtime.

It will have you sleeping in no time. If you do better with meditative visualizations that are narrated, try the Stress Release CD.

Hope you find the ways to resting easy and waking up refreshed!

Dr. Maoshing Ni Yahoo! Health Expert

Orbital pseudotumor : A conservative management

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Abstract

A Sixty five years old female reported to eye OPD of Centre for Woman and Child Health (CWCH), Baron, Ashulia, Dhaka. On 27/5/2008, with the complaint of headache, unilateral proptosis in her left eye, swelling of the left eyelid for 3 years, congestion of the conjunctiva and chemosis of the left lid. Nasal pterygium of left eye. Cornea was clear, pupil was reacting to light. No abnormalities were detected on anterior chamber. No history of vomiting, no loss of vision and her vision was 6/6V6/6, she was suffering from pansinusitis. Ophthalmoscopic examination on both eyes revealed no abnormality. On slit lamp examination right eye was normal in size and shape. On left eye there was a swelling in the medial canthus which shifted the eye ball towards left side on looking forward; eye ball deviated towards left about less then 45 degree from the coronal plain. Her x-ray chest showed no abnormality. All haematological parameters were found within normal range. CT scan of the orbits, PNS & brain done. On orbits isodense intraconal soft tissue density oblong fashion mass was seen on left orbit, which shows moderate heterogeneous enhancement after contrast introduction. No evidence of erosion or sclerosis of bone adjacent to mass. The mass compressed & closely adheres to sclera but may not invaded to intrabulbar space. Mild proptosis of left eyeball. Right orbit appears to be unremarkable. In Brain- no evidence of intra or extra axial hematoma, contusion, mass (especially in the visual pathway), infarct, abnormality in gray-white matter interface or in the appearance of sulci & gyri. Ventricles and basal cisterns are unremarkable. Impression says a soft tissue intraconal mass in left orbit, possibilities were inflammatory pseudotumor, hemangioma, schwannoma and dermoid. Although the incidence of orbital pseudotumor is low in our country. The aim of the article is to raise the awareness among the eye practitioners about the disease and its management[1].

Keyword

Orbital pseudotumor, proptosis.

Introduction

The orbit is a bony, pyramid-shaped cavity in the skull. It contains and protects the eyeball and related structures. The eyeball lies in the anterior part of the orbit, enclosed in a facial sheath which separates it from the orbital muscles and fat[2]. Orbital pseudotumor is a benign idiopathic inflammatory process involving the structures in the orbit which may present in several different patterns. It may be acute, subacute, chronic or is rare cases recurrent. It may diffusely involve the entire orbit or present in a localized fashion involving either the anterior orbit, posterior orbit, lacrimal gland or extraocular muscles. Most cases are unilateral, but bilateral cases are seen and are more common in children.

Orbital pseudotumor is a swelling of the orbital tissues behind the eye, but unlike cancerous tumors, it cannot invade other tissues or spread elsewhere. The cause is unknown. It most commonly affects young women, although it can still occur at any age. Pain on eye movement, decreased vision, eyelid swelling, red eye (rare). Most cases are mild and do well. Severe cases may be resistant to treatment and visual loss may occur. Orbital pseudotumor usually involves only one eye. Severe cases of orbital pseudotumor may push the eye forward to the extent that the lids can no longer protect the cornea, leading to drying of the affected eye. This can lead to damage to the clarity of the cornea or to corneal ulcer. The eye muscles may not be able to properly aim the eye and double vision may result. The changes of pseudotumor can be seen when the eye is examined. Tests to differentiate a pseudotumor from a tumor include the following: ultrasound, skull x-ray, biopsy[3]. There is no racial or gender predilection with orbital inflammatory pseudotumor (OIP) and patients may range from 4 to 80 years[4]. While chronic forms do exist, the typical presentation includes acute onset of orbital pain, swelling, chemosis and proptosis[5]. Orbital pseudotumor may be associated vision loss with concurrent disc edema or optic atrophy secondary to nerve compression & often ophthalmoplegia and diplopia. The disease is typically unilateral and may be recurrent. However, this condition may be commonly bilateral in children. The term is used to describe any idiopathic inflammatory lesion that simulates a neoplasm within the orbit. It presents with compressive effects to orbital structures with evidence of inflammation and infiltration. It is believed to be a self-limiting disease and while benign in nature, can cause serious ocular damage and possibly vision loss from optic nerve compression.

Orbital inflammatory pseudotumor can be subdivided into different types: granulomatous, sclerosing, vasculitic and eosinophilic, depending upon the histological characteristics[6]. Granulomatous orbital pseudotumor is characterized by histiocytes and multinucleate giant cells. Sclerosing orbital pseudotumor presents with minimal inflammatory infiltrate with a greater degree of interstitial connective tissue. Vasculitic inflammatory pseudotumor involves primary vasculitis of small vessels with lymphocytes and granulocytes destroying the muscularis and elastic lamina of the vessels. Eosinophilic pseudotumor involves tissue eosinophilia without vasculitis. Mechanisms ranging from autoimmunity to infectious to poor wound healing have all been proposed to account for the development of orbital inflammatory pseudotumor. The end effect is an inflammatory infiltrate occupying space and compressing tissues, vessels and nerves with a mass-lesion effect similar to a true tumour.

There are strong similarities between orbital inflammatory pseudotumor (OIP) and the Tolosa-Hunt syndrome of painful ophthalmoplegia, which is rare condition caused by non-specific granulomatous inflammation of the cavernous sinus, superior orbital fissure and orbital apex, signs are proptosis,

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ocular motor nerve palsies, often with involvement of the pupil sensory loss along the distribution of the first and 2nd division of trigeminal nerve[7]. Diagnostic neuro-radiological testing of these two diseases shows identical signal intensity, though it is in different locations. Orbital inflammatory pseudotumor is typically orbital and Tolosa-Hunt syndrome is predominately retro-orbital, specifically localizing to the anterior cavernous sinus. This, in combination with nearly identical clinical presentations and histopathologic findings make the two diseases nearly indistinguishable. Some have theorized that they are on the continuum of the same condition[8]. High-resolution CT scan will demonstrate soft tissue swelling, but this is not the diagnostic modality of choice[9]. Oral corticosteroids are the recommended treatment for OIP. This condition is extremely steroid-responsive and was, at one time, considered a diagnostic finding. Oral prednisone 60mg to 80mg qd with rapid tapering upon clinical improvement is acceptable therapy[5].

Discussion

The orbital pseudotumor is defined as non-specific, non-neoplastic inflammatory process of the orbit without identifiable local/systemic cause. The disorder was first described by Birch-Hirschfield in 1905[10]. This is a diagnosis of exclusion based on history, the clinical course of the disease and the response to steroid therapy, laboratory tests and biopsy in a limited number of cases. There is a group of disease entities that can mimic pseudotumors such as lymphoid tumors, thyroid orbitopathy, sarcoidosis, and other granulomatous diseases.

Figure 1: Orbital pseudotumor

Each of these abnormalities, or at least components of each, has been included under the umbrella term pseudotumor at sometime during the last few decades. Currently the term pseudotumor should be reserved for idiopathic orbital inflammatory syndrome.

Idiopathic orbital inflammatory syndrome accounts for 4.7% to 6.3% of orbital disorders and the disease is more prevalent in adults than pediatric population. The pathogenesis of the disease remains elusive but several lines of evidence point to immune mediated processes as the likely underlying mechanism. Orbital pseudotumor may have protean clinical manifestations. The most common being unilateral, sudden onset ocular pain, proptosis and impaired/loss of vision. Some presentation of idiopathic orbital inflammatory syndrome may mimic conditions such as orbital cellulites[11]. Idiopathic orbital inflammatory syndrome is usually confined to orbit, rarely may extend intracranially. However, when confined to orbit, may be multifocal, involving more than one structure. Most authors recognize it as, (a) myositis, (b) dacrycystadenitis, (c) periscleritis, (d) perineuritis, or (e) diffuse group. The diffuse group refers to the patients in whom involvement of orbital fat predominates. It is the diffuse variety which simulates lymphomatous infiltration and biopsy is helpful in establishing the diagnosis in such cases[12]. In the subgroup of perineuritis, there is inflammation of the sheath surrounding the optic nerve. In addition to idiopathic orbital inflammatory syndrome, optic neuropathy may be seen in number of conditions such as multiple sclerosis, optic nerve sheath meningioma, autoimmune disease (systemic lupus erythematosus), post viral infections (herpes, chicken pox, rubella, etc.) and infective conditions as syphilis, toxoplasmosis, Lyme disease. Radiation optic neuropathy is another rare cause. It is important to diagnose the underlying cause of the optic neuritis since prognosis and treatment varies for each condition[13], acute pain is an important feature of pseudotumors. Multiple sclerosis usually presents with gradual painless loss of vision. Immune markers with other systemic presentation would negate the diagnosis of pseudotumors. Viral neuritis is usually seen after 10-14 days after the primary illness. The index case was found negative for antinuclear antibodies and there was no history of preceding illness. Since patient presented with acute pain with impaired vision without any systemic involvement, hence a diagnosis of optic neuritis or pseudotumor was considered. CT may show some enlargement of optic nerve, usually with some degree of enhancement. MR imaging will depict the thickening of the optic nerve. There may be few streaky densities in contiguous orbital fat. Post contrast fat-suppressed, T1-weighted MR images may be the best technique to demonstrate optic neuritis as seen in index case. Contrast enhancement is often subtle or present in short segment of nerve, particularly in intracanalicular portion of the nerve. Steroids show a dramatic effect in the treatment of acute cases of pseudotumors and usually reverse the changes completely.

Case report

A sixty five year's old female reported to eye OPD with the complaint of headache, unilateral proptosis in her left eye, swelling of the left eyelid for 3 years, congestion of the conjunctiva, chemosis of the left lid. Nasal pterygium of left eye. Cornea clear, pupil is reacting to light. No abnormality were detected on anterior chamber. No history of vomiting, no loss of vision, her vision was 6/6V6/6, she was suffering from sinusitis. Ophthalmoscopic examination on both eyes revealed no abnormality. On slit lamp examination right eye was normal in size and shape. On left eye there was a swelling in the medial canthus which shifted the eyeball towards left side on looking forward; eyeball deviated towards left about more then 45 degree from the coronal plain. "Joffroy's sign-absence of wrinkling of the forehead on looking upwards with the face inclined downwards[14]" was positive. Her x-ray chest showed no abnormality. All haematological parameters were found within normal range. CT scan of the orbits, PNS & brain:- On orbits isodense intraconal soft tissue density oblong fashion mass was seen at left orbit, which showed moderate heterogeneous enhancement after contrast introduction. No evidence of erosion or sclerosis of bone adjacent to mass was found. The mass compressed & closely adheres to sclera but did not invade to intrabulbar space. Mild proptosis of left eyeball was seen. Right orbit appears to be unremarkable. PNS- mucosal thickening is noticed at bilateral maxillary, ethmoidal, sphenoidal & frontal sinuses and hypertrophied left nasal turbinates with narrowing of ipsilateral nasal passage. Brain- no evidence of intra or extra axial hematoma, contusion, mass (especially in the visual pathway), infarct, abnormality in gray-white matter interface or in the appearance of sulci & gyri ventricles and basal cisterns are unremarkable. No evidence of contra lateral shifting of mid-line structures was seen. Pituitary region- no intra, para or suprasellar mass was seen, posterior fossa- no lesion at brain stem, cerebellum or at CP angle was

seen. No mass/ lesion is noticed at initial course of the cranial nerves. Impression- soft tissue intraconal mass at left orbit, possibilities are inflammatory pseudotumor, hemangioma, schwannoma, dermoid. Clinico-pathological correlation is suggested for further evaluation. Normal CT finding of the brain. But about paranasal sinus impression shwos pansinusities. Her x-ray chest P/A view revealed no abnormality. Blood report- haemoglobin(Hb)0.62%, total WBC- 9000 per c.mm. Different WBC count- neutrophil-60%, lymphocyte-34%, monocyte-02%, eosinophil-04%, basophil-00%. E.S.R-20mm in 1st hour. Blood sugar random-4.95 mmol/l, hormone test- T3-0.98ng/ml and T4- 9.66ug/dl (Impression- serum level of T3 & T4 are within normal range). FSH - 72.82 mlU/ml. ECG within normal limit.

Treatment

Patient was treated with oral prednisolone 900 mg/day (Tablet 60mg) in divided doses and it was tapered down with 60 mg per day within 30 days, with under cover of omeprazole 20 mg bid doses. With addition NSAID was given for 3 days bid.

After two week the swelling become just half. Full dose steroid therapy was completed. After one month, swelling reduced to almost normal size. But eye ball was mildly deviated laterally from its normal position. But her vision was intact.

Conclusion

Whenever any patient present to an ophthalmologist with complains of headache, vomiting, swelling and defective vision. He or she should be thoroughly examined & investigated like visual acuity, slit lamp examination, intraocular pressure (IOP), fundoscopy direct and indirect both. If there is any intraorbital swelling, ophthalmologist should ask for CT or MRI[15]. Most of the time orbital pseudotumor present with disturbed vision but in this case it was not. So ophthalmologist should refer the case to radiologist with full clinical notes for CT or MRI. So the radiologist can help the ophthalmologist in diagnosis the diseases type, extension, localization & extension of ocular lesion.

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Decannulation problem following tracheostomy

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Abstract

Almost all emergency and elective tracheostomy wounds are required to be closed either by strapping or gradual reduction in size of the tracheostomy tube. But in some special situations, this procedure may not be applicable to decannulate where some surgical intervention can be taken into account.

Key words

Decannulation, strapping, trimming, inversion, tracheomalacia, scarring, extubation.

Introduction

Decannulation is the process of taking out the tracheostomy tube permanently and closure of the wound after the patient has settled down for the disease for which tracheostomy was performed[9]. Decannulation problem is the difficulty[8] during or after taking out the tube permanently for which tracheostomy was done. Problems encountered are tube dependency, tracheomalacia, scarring of tracheostomy wound, inversion or in folding of the wound margin and skin, tracheal stenosis and also migration of granulation tissue[5] inside the trachea through the tracheostomy wound.

Method of decannulation

To decanulate the patient, tracheostomy tube needs to be plugged[2,4] partially and then completely for a period of 1 hour, 2 hours, 4 hours, 6 hours and a period of 12 hours and finally 24 hours[7] with close observation to see whether the patient can tolerate and passed over night[4,6] with sound sleep and then the tube can be removed. The wound is getting closed either by strapping or by putting in a smaller tracheostomy tube (Downsizing[3]) or stitching (Surgical decannulation[2,3]).

Case report

The boy Md. Yousuf, age 17 years, son of Kamal Uddin of Abdullahpur, Uttara, Sector 9 was admitted in the ENT Department of Moulana Bhasani Medical College Hospital on 16 May 2006 with the following complaints:

- A tracheostomy wound with tracheostomy tube in situ for the last 5 years
- Occasional discomfort in the throat
- Occasional cough and slight blood stained discharge from the surrounding of the tube

According to the patient's statement, he developed breathlessness about 5 years back (The cause of which was unknown as the patient lost all papers of his treatment). Then he was admitted in DMCH where tracheostomy was done to relieve his respiratory distress. At first metallic tube was used then it was replaced by PVC (Poly vinyl chloride) tube. During discharge from the hospital, he was advised to remove the tube within one month. But due to his negligence and financial constraint, the removal of tube and closure of tracheostomy wound was not done at proper time. Then he took admission in this hospital for removal of tube and closure of wound.

On physical examination, locally there was a vertical wound with scar, pus around the wound and tube and there was some granulation tissue around the wound. Air flow through the tube was adequate and the patient could speak after closure of tube by finger. All investigations were normal. The patient was treated conservatively by periodic antiseptic dressing to make the wound clean and healthy under antibiotic coverage.

When the wound became healthy, the tube was removed and strapping was done. On the first day, the procedure was maintained for one hour under close observation, after plugging of the tube lumen. On the successive day the procedure was maintained for 3 hours, 6 hours and upto 12 hours. When the patient can maintain his normal breath after strapping of wound upto 24 hours without any respiratory problem and passed over night with sound sleep for few days and when the wound was not apposed together, then the wound was closed totally.

The infolded skin was removed, and the skin margin was made free well from underlying structure. Due to scarring the margin of the wound could not appose together, then closure of wound was done by 2/0 silk. The procedure was done under local anaesthesia.

Case discussion

Trachea (Wind Pipe[1]) is a fibro cartilaginous hollow tube extends from lower part of the neck upto upper part of chest where it divides and connects with the right and left lung respectively by relatively narrow fibro cartilaginous hollow tube. It carries air during respiration. Above it connects with the Larynx. If for any reason (such as obstruction in the upper airway) one can not take breath, then it will be an emergency condition to establish alternative pathway to maintain airway by making an opening in the anterior wall of the trachea lies at the lower part of the neck called tracheostomy.

Figure 1: Teacheostomy wound with tube in situ

Figure 2: Stoma of tracheostomy wound with scar & unhealthy granulation tissue around it

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The patient with tracheostomy has to lead life for a while with utmost care of wound & tube and after a certain period most of the cases this alternate pathway required to be closed and reestablished the normal airway and this process of closure of the wound is called decannulation. Most of the decannulation can be done normally by simple strapping of the wound from side to side, prior to that it is to be seen wheather the patient can pass overnight with sound sleep either corking or sealing of the lumen of the tracheostomy tube. But in some cases this ordinary (Medical decannulation[3]) process can not possible and need some surgical measure. Where even after extubation the wound margins are not apposed together due to some reasons such as scarring of the wound, inversion of the wound margin inside the lumen of the trachea, change of pattern of epithelial lining around the lumen of the tracheal opening, even formation of granulation tissue around the tracheal opening and consequently loss of elasticity of the surrounding skin in long standing case of tracheostomy wound other than repeated lower respiratory tract infection.

Figure 3: Closure of teacheostomy wound by stitching

Figure 4: Dressing of wound after closure

This poor male patient aged 17 years has come to the ENT department of Moulana Bhasani Medical College Hospital with a history of more than five years tracheostomy wound with tube in situ with unhealthy skin around the tracheostomy tube with some granulation tissue. His tracheostomy tube was tried to extubate after subsidence of infection following repeated cleaning and dressing for about two weeks under antibiotic coverage. When the patient can pass over night with sound sleep after closing of the lumen of the tube then his wound was decided to closed. There was an elliptical stoma and the margin of the wound was partly inverted inside the lumen and change of pattern of the surrounding skin of the stoma with poor elasticity and could not bring the margin together from side to side by strapping for few days.

After that the surgical interference was done such as eversion of the margin of the skin & removal of granulation tissue, trimming of the margin of the skin and separation of the skin from the underlying subcutaneous tissue to some extent then apposition of the skin margin vertically together by 2/0 silk from above downwards with interrupted stitches and dressed aseptically with pressure bandage which changed after 48 hours. The stitches removed after 7 days. And the patient was discharged with advice to attend ENT out patient department after 2-3 weeks or if any difficulty arises at any time for follow up.

Conclusion

During decannulation, one has to see whether the purpose of tracheostomy has served or not and also need to assess the way how to close the wound for reestablishment of normal airway for respiration without any disturbance of breathing.

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Dr. Captain (Rtd.) Sitara Begum, Bir Protik "The Heroines of 1971"

Captain Sitara Begum is the women who hold the title `Bir Pratik' in 1995 for her heroic contribution in our liberation war. Bir Pratik Sitara Begum was born in Kolkata in 1945. Her father Md. Israil was a lawyer. After passing MBBS and completing her internee from Dhaka Medical College Hospital, she joined the arm force in 1970. She was a lieutenant till the liberation war was started in 1971. She was promoted as a `Captain' by the order of General Ataul Gain Osmani. Her elder brother was a freedom fighter. Dr. Sitara Begum reached to Meghalaya of India in August 1971 and after 2-3 weeks she joined Bangladesh hospital in Meghalkaya where wounded freedom fighters were given medical treatments. She was under sector two (2). The hospital was made of bamboo which didn't look like a hospital from outside. Inside the hospital there were 400 beds & there worked more than 400 final year students under the direction of Captain Sitara Begum. There were many Bangladeshi doctors from abroad for the treatment of the wounded freedom fighters, and there were many volunteers from army assisting them. The doctors had to go to Agartala, Udaypur for medicines. The operation theater was a room covered with plastic cloth; the floor was also covered with plastic cloth. Indian armies also used to come to the hospital for treatment. Without Dr. Sitara Begum's devotion and excellent co-ordination it wouldn't be possible to give medical treatment to so many wounded soldiers with such insufficient facilities.

Dr. Captain (Rtd.) Sitara Begum, Bir Protik was awarded for her gracious contribution in the liberation war 1971 by Physicians for Peace Society, Bangladesh & Orion Laboratories Ltd.

Caroli's disease : A case report

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Abstract

Caroli's disease (congenital dilatation of the Intrahepatic ducts) is a rare condition which is usually diagnosed postoperatively. Cholangitis, hepatic abscess, cholangiocarcinoma are it's potential complications. A case of Caroli's disease in a 20 years old lady with extensive stone formation is reported here.

Key words

Caroli's disease, choledocholithiasis, hepaticolithiasis

Introduction

Caroli's disease first described by Jacques Caroli and his associates in 1958, is a rare congenital condition characterized by non-obstructive saccular or fusiform, multifocal, segmental, cystic dilatation of intrahepatic bile ducts[1,2]. Mode of inheritance is usually in autosomal recessive fashion[3] affecting both sexes equally. This disease usually presents with recurrent cholangitis and hepatomegaly.

Case report

A 20 yrs. old unmarried muslim female from poor socio-economic condition came to the Noakhali 250 Bedded General Hospital, with complaints of fever, abdominal pain and distension, yellow discoloration of sclera and urine for 8 days. Fever was high grade, continuous associated with chills and rigor. Abdominal pain was severely aching, maximum in right hypochondrium, no radiation, no relation with meal or change of posture. The patient noticed that she had been suffering from this sort of illness for several times. Her father died of geriatric illness and there is no H/O such illness among her siblings.

Clinical examination revealed she was febrile (Temp = 103°F) icteric, mildly anaemic, her liver was palpable (5 cm from costal margin in mid clavicular plane), tender, firm, smooth surfaced and well defined margin; mild ascites was present. After admission into hospital, laboratory investigations showed anaemia (Hb- 8 gm%), neutrophilic leucocytosis (TLC 13.8 x $10^3/\mu L$, polymorph 83 %), raised ESR (55 mm at the end of 1 hour). Liver function tests showed S. Bilirubin= 6.7 mmol/L, SGPT= 56 U/ml, Alkaline Phosphatase = 516 U/ml, and raised Prothrombin time (18 seconds, control= 12 seconds). Serum Total Protein = 6.2 gm/dl, Serum Albumin = 3.10 g/dl. USG showed hepaticolithiasis in both lobes with choledocholithiasis with features suggestive of chronic cholecystitis and chronic hepatitis. CT scan showed dilated common bile duct and intrahepatic ducts containing multiple calculi within dilatations. Diagnosis was made cholangitis due to Caroli's disease and treated conservatively with antibiotics, analgesics and anti ulcerant. After 14 days she improved clinically and was discharged with advice of follow up with ERCP and oral cholangiogram.

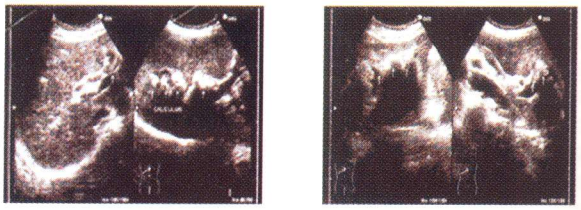
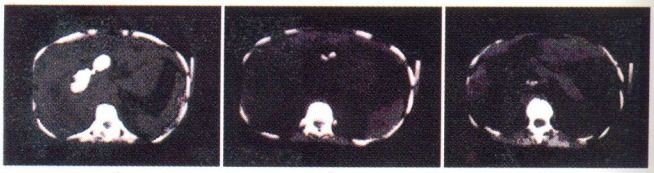


Figure 1: USG showing calculi in dilated CBD, Rt. Intrahepatic duct & Lt. intrahepatic duct



A B C

Figure 2: CT Scan showing A. Calculi in dilated Rt. Intrahepatic duct; B. Calculi in dilated Lt. Intrahepatic duct; C. Calculi in dilated CBD

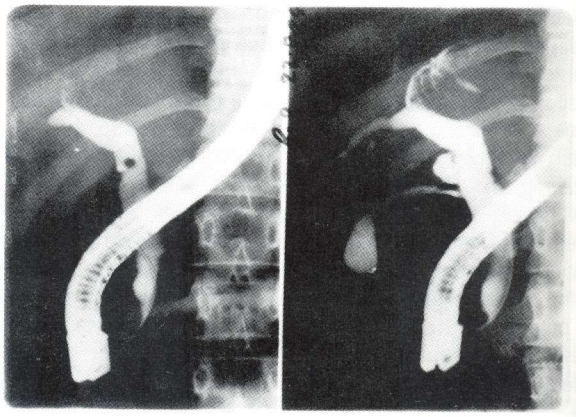


Figure 3: ERCP showing calculi in dilated Lt. Intrahepatic duct with features of cholangitis

In first follow up visit in OPD, oral cholangiogram showed non functioning gall bladder, ERCP showed dilated Intrahepatic ducts containing multiple calculi with cholangitis (papillotomy done). Her clinical condition was found much better and she was counselled with provision of some supportive treatment (multivitamins, antiulcerant) as well.

Discussion

Caroli's disease occurs in two forms : (1) Pure form (Caroli disease) characterized by ectasias of intrahepatic bile ducts often limited to one hepatic lobe (mainly the left) remarkably sparing liver parenchyma and (2) Combined form (Caroli syndrome) in which ectasia of intrahepatic bile ducts is associated with chronic hepatic fibrosis, choledochal cyst and renal cystic disease. The whole liver usually affected and extra hepatic biliary dilatation occures in about one- quarter of

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patients[4]. Kidney lesions include renal tubular ectasia (medullary sponge kidney, cortical cyst), lesions of adult recessive polycystic kidney disease[5]. Clinical presentation of patients with Caroli's disease is heterogenous because symptoms may be absent for years, may occure at a very early age, or infrequently throughout life. Patients may experience recurrent episodes of abdominal pain, fever and intermittent obstructive jaundice caused by cholangitis and stone formation. Complications include biliary abscess, septicaemia and liver chirrhosis. Malignant complication (cholangiocarcinoma) found in approximately 7% of cases[6]. Infectious pathogens may become resistant to antibiotic treatment and sepsis frequently leads to death or secondary biliary cirrhosis[7].

The diagnosis of Caroli's disease involves recognition of the symptoms of liver disfunction and imaging studies. Imaging studies include abdominal sonography, CT scan, Endoscopic Retrograde Cholangiography (ERC), Percutaneous Transhepatic Cholangiography (PTC) and Magnetic Resonance Cholangiography (MRC).

Because of the disease's rarity and rather unspecific symptoms, diagnosis often delayed. Treatment should be focused on conservative or interventional (Endoscopic sphincterotomy) attempts first. Cholangitis is treated with appropriate antibiotics. In case of intrahepatic cholelithiasis, litholytic therapy with urso deoxy cholic acid is indicated. Indications for surgical treatment includes failure of conservative treatment, suspected malignancy or symptoms associated with chronic hepatic fibrosis. In patients with Caroli's disease confined to one lobe, hemi-hepatectomy (Rt./Lt.) is the choice. In contrast diffuse Caroli's disease needs an extended resection (multisectionectomy). For patients with diffuse involement of both lobes in association with cirrhosis or assocated hepatic fibrosis, liver tranplantation is the option[8].

Conclusion

Although Caroli's disease is a rare congenital anomaly, it should be included in differential diagnosis when presenting with abdominal pain and hepatomegaly and sonographic study suggests multiple cystic lesion of the liver and multiple calculi within intrahepatic and extrahepatic biliary channel.

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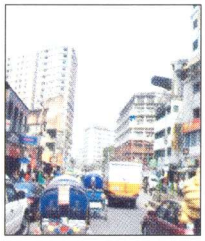
Early growth predicts diabetes later in life

Prior research has linked low birth weights to the development of diabetes later in life. Now, new findings suggest that this is due to both poor growth as a fetus and to premature birth. "Low birth weight is consistently associated with an increased risk of type 2 diabetes in adulthood," Dr. Magnus Kaijser of the Karolinska Institute, Stockholm, Sweden, and colleagues write. Exactly how poor fetal growth and premature birth fit into the picture, however, was not known. As reported in the journal Diabetes, the researchers identified a group of subjects born prematurely or with low birth weight at four delivery units in Sweden from 1925 through 1949. The development of diabetes in these groups was compared with that seen in a similar group of subjects who had normal birth weights and were born at full term. A total of 6425 subjects were included in the study. Of these, 2931 were born prematurely (before the 37th week of pregnancy) and 2176 had a low birth weight (less than 5.5 pounds), but were born at full term. An analysis of hospital databases indicated that 508 of the subjects were treated for diabetes during follow-up from 1987 to 2006. The authors found that subjects who were born very prematurely (before the 32nd week of pregnancy) were 67 percent more likely to develop diabetes than those born at term. Similarly, birth weights that were much lower than the average weight for a given point in pregnancy increased the odds of diabetes by 76 percent. "We have found that the association between low birth weight and risk for diabetes seems to be (the result of) both poor fetal growth and preterm birth," Kaijser and colleagues conclude.

Diabetes

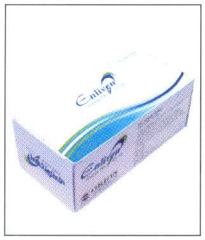
Living near major road may boost rheumatoid arthritis risk



People exposed to high levels of traffic pollution have an increased risk of rheumatoid arthritis, a new study suggests. Researchers analyzed the records of 90,000 women in the Nurses Health Study and used special software to measure the distance between each woman's home and the nearest major roadways. The results showed that women who lived within 50 meters (164 feet) of interstates or primary, multi-lane roads were 31 percent more likely to develop rheumatoid arthritis (RA) than those who lived more than 200 meters (656 feet) from a major roadway. Women who lived within 50 meters of the largest roadways had a 63 percent increased risk. "Even after accounting for the effects of age, race, sex, socioeconomic status and cigarette smoking, the increased risk for women located near major roads remained substantially higher," Jaime Hart, a research fellow in the Channing Laboratory at Brigham and Women's Hospital in Boston, said in a hospital news release. The study was published online in the journal Environmental Health Perspectives. It's believed that genetic factors account for less than 50 percent of rheumatoid arthritis risk, and that environmental factors such as cigarette smoke may increase the risk of developing RA, according to the researchers. "This, coupled with prior research that suggests air pollution from traffic can cause systemic inflammation, prompted us to study whether there was a direct relationship between air pollution and the risk of RA," Hart said. Further research is needed to determine the exact effect that specific, measured levels of pollution have on the risk of developing the condition.

Environmental Health Perspectives

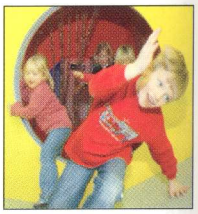
Imatinib prevents return of intestinal cancer, study confirms



Taking Imatinib after surgery to remove a gastrointestinal stromal tumor improves tumor-free survival, a U.S. study has confirmed. Gastrointestinal stromal tumors (GIST), the most common soft-tissue cancer of the intestinal tract, typically occur in the stomach or small intestine. About 3,000 to 4,000 cases are diagnosed in the United States each year. According to background information in the study, about 85 percent of these tumors have a protein that allows them to be inhibited by Imatinib. The finding stems from a phase 3 trial for the drug, which was approved last year by the U.S. Food and Drug Administration to treat people who've had surgery to remove a GIST. The drug already was approved for treating certain types of adult leukemia. The trial included more than 700 people with a GIST at least 3 centimeters in size that tested positive for the protein. The participants were randomly selected to take either 400 milligrams of Imatinib or a placebo once a day for a year after surgery to remove their tumor. After a median follow-up of almost 20 months, 8 percent of people in the Imatinib group and 20 percent of those in the placebo group had experienced tumor recurrence or had died. After a year, recurrence-free survival was 98 percent for those taking the drug and 83 percent for people taking the placebo. Tumor size affected treatment success, the study found. Imatinib had the most effect on tumors that were 10 cm or larger, less effect on tumors between 6 and 10 cm, and the least effect on tumors between 3 and 6 cm, the study reported. The most common serious side effects experienced by people taking the drug were dermatitis, abdominal pain and diarrhea. Dr. Ronald DeMatteo, of Memorial Sloan-Kettering Cancer Center, and his fellow researchers said that their "findings will affect the management of patients with primary gastrointestinal stromal tumor and could have relevance to the adjuvant use of other molecular agents for cancer." The study appears online and in an upcoming print issue of The Lancet. Dr. Peter Hohenberger, of the University of Heidelberg, in Mannheim, Germany, said in an accompanying comment that more research is needed. "There are so many unknowns that this trial might not be able to provide a definitive treatment decision," he wrote. "To refine the indication for adjuvant treatment remains the big task for future studies."

Health Day

Late-life fatherhood may lower child's intelligence



Men who put off becoming dads till later in life may pay a price: slightly lowered intelligence in their offspring. That's the conclusion of an Australian study that found that kids born to older men underperformed on intelligence and cognitive tests from infancy to 7 years of age, compared with children of younger fathers. But on the other hand, children born to older mothers scored higher on the same tests, the team said. "The biological clock ticks for men, too," concluded Dr. Mary Cannon, an associate professor of psychiatry at the Royal College of Surgeons in Dublin, Ireland, and the author of an accompanying editorial in the March issue of the online journal PLoS Medicine. "There are risks associated with delaying fatherhood," she said. "These risks may be subtle, such as a decrement of three to six points on childhood IQ tests, but can also be significant, as in the increased risks of serious mental illnesses like schizophrenia and autism." One reason may be that men's sperm change as they age, the Australian researchers suggested. "We suspect that more mutations accumulate in sperm as the dads age," said Dr. John McGrath, from the Queensland Brain Institute at the University of Queensland in Brisbane, Australia, and the study's lead researcher. "These mutations may cause subtle changes in the way the brain develops. But other social factors are involved also." For the study, McGrath's team collected data on more than 33,000 American children born between 1959 and 1965. The data, which came from the U.S. Collaborative Perinatal Project, included the children's cognitive test results at the ages of 8 months, 4 years and 7 years. The tests included assessments of sensory discrimination and hand-eye coordination, conceptual and physical coordination and, at age 7, reading, spelling and arithmetic skills. In addition, the researchers took into account socioeconomic factors, including family income. They found that the older the father, the more likely the child was to have lower scores on all tests except the test for physical coordination. For example, in one model, children born to 20-year-old men scored an average of 106.8 points on a standard IQ test, whereas kids born to 50-year-old men scored 100.7 points, on average. The researchers also evaluated the children based on their mother's age. They found that the older the mother, the higher the kids' scores on the cognitive tests. The findings suggest that "we need to worry about age of fatherhood as well as age of motherhood," McGrath said. "We need to work out what underlies this association." Other research has suggested that the children of older mothers might do better because they experience a more nurturing, attentive home environment, but children of older fathers may not necessarily experience the same benefit. McGrath's group also speculated that genetics and social factors might play a role in the findings. They point out that a woman's eggs are formed before birth, so DNA may stay relatively stable. But sperm is produced over a man's lifetime. Studies suggest that sperm may gain mutations as men grow older, the researchers said. "Increased age at fatherhood has potentially significant effects on both the medical and psychological/intellectual outcomes for children," Cannon said. "There has been a great deal of emphasis for many decades on the risks associated with increasing age at motherhood, but men somehow have the impression that fatherhood can be delayed with no ill effects on offspring. It may be time to redress this balance in the minds of the public."

PLoS Medicine

Launching of New Products

Novelta

Magaldrate & Simethicone Suspension

A novel antacid with antiflatulent activity

Orion Laboratories Ltd. launched a globally renowned antacid and antiflatulent combination to treat the hyper-acidity & GI related disorders, for the first time in Bangladesh, under the brand name NOVELTA (combination of Magaldrate and Simethicone) as Suspension. Each 5 ml suspension contains Magaldrate USP 480 mg and Simethicone USP 20 mg. NOVELTA Suspension is a well-balanced combination of essential non-systemic antacid with antiflatulent properties that have prolonged acid neutralizing capacity & superb antiflatulent efficacy than the conventional antacid and antiflatulent preparations. Magaldrate is a sulfate containing hydroxymagnesium aluminate complex hydrotalcite like lattice layer structure. After ingestion, it reacts with acid in stages. The hydroxymagnesium is relatively rapidly converted to Magnesium ion and the aluminate to hydrated aluminium hydroxide; the aluminium hydroxide then reacts more slowly to give a sustained antacid effect. From its structure, it was seen that the negative charged layer situated between the positive charged layers that soaks up H+ ions. Simethicone acts as an antiflatulent agent by passing the gas through flatus & belching. NOVELTA is indicated in hyperacidity, gastric and duodenal ulcer, gastritis, heartburn, dyspepsia, gastroesophageal reflux. Also indicated for the relief of flatulence, abdominal distention and windy colic. Dosage and Administration: 2-4 teaspoonful (10 to 20 ml), 20 minutes to 1 hour after meals and at bedtime, or as directed by the physician. NOVELTA is presented in bottle contains 100 ml suspension. MRP of NOVELTA suspension is TK. 55.00.

MSD News

Medical Services Department (MSD) of ORION Laboratories Ltd. successfully arranged significant number of Round Table Meetings, Scientific Seminars, Internee Doctors Reception Programs, Health Camp in different venues of all over Bangladesh during December 2008 to March 2009.

Scientific Seminar (SS)

Physician for Peace Society, Bangladesh: Renowned freedom fighter and American citizen Bangladeshi Dr. M Abidur Rahman, President, Vascular Health Center, Kalamazoo, Michigan, USA is leading to exercise the latest technologies of vascular surgery to the Cardiovascular Surgery Department, NICVD for the last few years. In 2004, 2005 and 2008, with the help of International humanitarian organization 'Physician for Peace' NICVD & Hospital Authority and BMA, he along with 2 special teams of Cardiac and Vascular specialists of Bangladesh had commenced to serve the complicated vascular patients in this country and also set out to transfer latest technologies of vascular surgery in Bangladeshi arena. Mention that, Dr. Rahman is the husband of freedom fighter Mrs. Sitara Begum, Bir Protic. From the last 13 February, Dr. M Abidur Rahman and Dr. Edward L. O'Leary advised the patients, performed operations and demonstrated some educational workshops for the doctors of NICVD. Dr. O'Leary travels throught the country training interventional cardiologists.

On 16 February 2009, Dr. M Abidur Rahman and Dr. Edward L. O'Leary presented papers on "Therapeutic option of left main coronary artery disease" and "Carotid angioplasty and stenting, an alternative to carotid endarterectomy". In the semianr, Dr. Captain (Rtd.) Sitara Begum, Bir Ptorik was awarded for her generous contribution in the liberation war. The seminar was organized by 'Physicians for Peace Society', Bangladesh at Bangladesh China Friendship Conference Centre. Professor KHMS Sirajul Haque chaired the seminar and National Professor Brig. (Rtd.) Abdul Malik was the Chief Guest. Cardiovascular and Endovascular physicians & surgeons from various institutes of Dhaka were present in the seminar. Orion Laboratories Ltd. sponsored the seminar. Mr. Tapan Kumar Roy, Senior Vice President, Marketing and Dr. Kazi Rafiqul Alam, Assistant Manager, Medical Services Department, Orion Laboratories Ltd. were also present on the occasion.

Department of Paediatrics, KMCH: On 25th February 2009, Department of Paediatrics, Khulna Medical College Hospital arranged a scientific seminar on "Child health problem : Rheumatic disorder" at Western Inn Hotel. Dr. Abdullah Al Mahboob, Associate Professor chaired the seminar and Dr. AKM Mamunur Rashid, Associate Professor was the keynote speaker. About 60 doctors enjoyed the seminar.

Internee Doctors Reception Program (IDRP)

Dinajpur Medical College Hospital: An Internee Doctors Reception Program was arranged by internee doctors of Dinajpur Medical College Hospital on 26th January 2009 at Sananda Chinese Restaurant, Dinajpur. Dr. Sinthia Siddika and Dr. Nazbin Akter (Rubi) were the Rapporteur of the occasion. Dr. Md. Samiul Islam, Dr. Morshidul Ahasan, Dr. Md. Moffizur Rahman Chowdhury, Dr. Ashutosh Deb Sharma, Dr. Abdur Rahim and Dr. Monzur Morshed were the special guests of the program. There was a cultural program and an attractive raffle draw on that program. About 75 doctors of Dinajpur Medical College enjoyed the cultural program, raffle draw and the occasion.

Shaheed Ziaur Rahman Medical College Hospital, Bogra: Internee doctors of Shaheed Ziaur Rahman Medical College Hospital, Bogra arranged a Internee Doctors Reception Program on 4th March 2009 at North Way Motel. Dr. Momen Khan, Dr. Meske Alam Jony, Dr. Mahfida Akter Happy and Dr. Shamsul Alam were the special guests. The program was held with active participation of the internee doctors and there was a attractive raffle draw. About 80 doctors attended and enjoyed the occasion.

Rest of MSD news at page- 672

Zinc supplementation in young children with acute diarrhea in India

Sunil Sazawal, Robert E. Black, Maharaj K. Bhan, Nita Bhandari, Anju Sinha, Sanju Jalla

Abstract

Background: In developing countries the duration and severity of diarrheal illnesses are greatest among infants and young children with malnutrition and impaired immune status, both factors that may be associated with zinc deficiency. In children with severe zinc deficiency, diarrhea is common and responds quickly to zinc supplementation. *Methods:* To evaluate the effects of daily supplementation with 20 mg of elemental zinc on the duration and severity of acute diarrhea, we conducted a double-blind, randomized, controlled trial involving 937 children, 6 to 35 months of age, in New Delhi, India. All the children also received oral rehydration therapy and vitamin supplements. *Results:* Among the children who received zinc supplementation, there was a 23 percent reduction (95 percent confidence interval, 12 percent to 32 percent) in the risk of continued diarrhea. Estimates of the likelihood of recovery according to the day of zinc supplementation revealed a reduction of 7 percent (95 percent confidence interval, -9 percent to +22 percent) in the risk of continued diarrhea during days 1 through 3 and a reduction of 38 percent (95 percent confidence interval, 27 percent to 48 percent) after day 3. When zinc supplementation was initiated within three days of the onset of diarrhea, there was a 39 percent reduction (95 percent confidence interval, 7 percent to 61 percent) in the proportion of episodes lasting more than seven days. In the zinc-supplementation group there was a decrease of 39 percent (95 percent confidence interval, 6 percent to 70 percent) in the mean number of watery stools per day (P = 0.02) and a decrease of 21 percent (95 percent confidence interval, 10 percent to 31 percent) in the number of days with watery diarrhea. The reductions in the duration and severity of diarrhea were greater in children with stunted growth than in those with normal growth. *Conclusions:* For infants and young children with acute diarrhea, zinc supplementation results in clinically important reductions in the duration and severity of diarrhea.

N Engl J Med 1995;333:839-44

Zinc supplementation in children with cholera in Bangladesh: randomised controlled trial

Roy SK, Hossain MJ, Khatun W, Chakraborty B, Chowdhury S, Begum A, Mah-e-Muneer S, Shafique S, Khanam M, Chowdhury R

Abstract

Objective: To investigate the impact of zinc supplementation in children with cholera. *Design:* Double blind, randomised, placebo controlled trial. *Setting:* Dhaka Hospital, Bangladesh. *Participants:* 179 children aged 3-14 years with watery diarrhoea and stool dark field examination positive for Vibrio cholerae and confirmed by stool culture. *Intervention:* Children were randomised to receive 30 mg elemental zinc per day (n=90) or placebo (n=89) until recovery. All children received erythromycin suspension orally in a dose of 12.5 mg/kg every six hours for three days. *Main outcome measures:* Duration of diarrhoea and stool output. *Results:* 82 children in each group completed the study. More patients in the zinc group than in the control group recovered by two days (49% v 32%, P=0.032) and by three days (81% v 68%, P=0.03). Zinc supplemented patients had 12% shorter duration of diarrhoea than control patients (64.1 v 72.8 h, P=0.028) and 11% less stool output (1.6 v 1.8 kg/day, P=0.039). *Conclusion:* Zinc supplementation significantly reduced the duration of diarrhoea and stool output in children with cholera. Children with cholera should be supplemented with zinc to reduce its duration and severity.

BMJ. 2008 Feb 2; 336(7638):227-8

MSD News

Round Table Meeting (RTM)

Mymensingh

Atpara UHC, Netrokona: On 17th March 2009, Atpara UHC, Netrokona arranged a round table meeting on "Role of ceftriaxone to treat various infections" at the conference room. Dr. Md. Muzibur Rahman, UH & FPO, was the chairperson. About 20 doctors enjoyed the meeting.

Dhaka

Medicine Unit-2, SSH: Medicine Unit-2 of Shahid Suhrawardy Hospital arranged a round table meeting on "Study updates on Atorvastatin 2008" on 9th February 2009 at the unit doctors' room. Prof Dr. Mujibur Rahman chaired the meeting. About 35 doctors were present at the occasion.

Medicine Unit-3, SSH: A round table meeting was arranged by Medicine Unit-3, Shahid Suhrawardy Hospital on 25th February 2009 on "Role of ceftriaxone to various infections" at unit chief's room. Dr. AHM Feroz, Associate Professor, chaired the session. About 40 doctors attended the seminar.

Comilla

Surgery Department, CoMCH: On 14th January 2009, Surgery Department of Comilla Medical College Hospital arranged a round table meeting on "Septic shock" at the Professor's room. Professor Dr. Shahid Hossain, Head of the Department, chaired the meeting and Dr. M. A. Awal Sohail, HMO was the keynote speaker. About 60 doctors enjoyed the seminar.

Medicine Department, CoMCH: A round table meeting was arranged on 11th January 2009 by Medicine Department of Comilla Medical College Hospital on "Insomnia & Management" at the Professor's room. Professor Abdul Latif, Head of the Department chaired the seminar and Dr. Md. Sayed, HMO was the keynote speaker. About 45 doctors attended the meeting.

Barisal

Orthopaedic Department, SBMCH: Orthopaedic Department of Sher-E-Bangla Medical College Hospital, Barisal arranged a round table meeting on 3rd December 2009 on "Spasticity management" at South King Chinese Restaurant. Dr. Abdul Monaem, Associate Professor was the chairperson. About 20 doctors enjoyed the session.

Feni

NHN, Feni: A round table meeting was arranged by NHN, Feni on "Use of lipid regulating drugs in diabetes mellitus" on 16th March at Food Garden restaurant. About 15 doctors attended the meeting.

Maizdee: On 15th March 2009 a round table meeting was arranged by the duty doctors of all clinics of Maizdee, Noakhali on "Role of ceftriaxone to treat various infections" at Macdonalds Chinese Restaurant. About 15 doctors attended the session.

Desloratadine

Deslor

Tablet & Syrup

Non sedative, more effective

antihistamine

Procap

Omeprazole 20 mg & 40 mg Capsule

Round the clock acid control