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Editorial of this volume `Antiviral resistance with lamivudine therapy in chronic hepatitis B' alerts about the high incidences of viral resistance during prolong lamivudine therapy in chronic hepatitis B. The article recommends that close follow up is required during the treatment with lamivudine (P-546).

The special article on `Ambulatory anesthesia' describes the development of surgical procedure on an ambulatory basis. The article focuses the advantages of the process like cost containment, improved surgical techniques, development of short acting anesthetic as well as establishment of extended recovery centers in which patient can have their further nursing care without a formal hospital admission (P-547). Second special article on `Neuroendoscopic approach to brain tumors' documents 12 cases of brain tumor patients treated by endoscopic approach first time ever in Bangladesh (P-551).

The first original article on `Awake coronary artery bypass' establishes that awake coronary artery bypass enables patient early recovery & mobilization without imposing health risk (P-555). The second original article is on `Abdominal Aortic Aneurysm: Management at NICVD' Dhaka accounts the success of abdominal aortic aneurysm management by various types of graft replacement. The article describes comparative benefits of open graft management than the endovascular graft repair in a poor country like Bangladesh (P-557). Last original article is on `Factors of weaning practices by mothers on children: A hospital based study' describes that proper use of weaning practices among the mother was not up to the mark. For the betterment of child health, existing motivational and awareness programme need to be strengthened (P-561).

The first case report on `Recurrent posterior fossa meningioma in a young child : A case report' demonstrates a 16 years young boy with rare recurrence of meningioma in the posterior fossa, not only from the primary site but also from a new secondary site, both of which were managed by microsurgical approaches successfully (P-565). The next is `Takayasu's diseases: A case report', a Japanese disease in which a 55 years old man developed pain and claudication in both hands & feet with visual disturbance on both eyes which was diagnosed clinically with hematological & imaging values and was managed by medications & surgical treatment (P-568). Last case report of this issue `Quadruplet pregnancy: A rare occurrence' stands with a story of delivering 4 healthy babies in BSMMU in 2006. The article emphasizes on due attention, extra care, extra diet & nutrition to this type of multiple pregnancy case and early diagnosis of possible complications (P-570).

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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

Antiviral resistance with lamivudine therapy in chronic hepatitis B

Khan M[1], Alam MS[2]

The ORION 2008; 30: 546

In Bangladesh about 10 million populations are chronically infected with hepatitis B virus (HBV) and most of them are younger[1]. There are remarkable advances in the treatment of chronic hepatitis B (CHB) in the last few years. One of the nucleoside analogue lamivudine (LAM) has been shown to be highly effective in inhibiting HBV replication[2,3]. LAM therapy for CHB patients with advanced fibrosis significantly reduced the incidence of hepatic decompensation and hepatocellular carcinoma[4]. It is becoming increasingly clear that CHB management requires a long-term therapy. Unfortunately prolonged lamivudine treatment is associated with increasing risk of drug resistance, which may be cross-reactive. Emergence of antiviral resistance may lead to viral and biochemical break through and sometimes hepatitis flare and rapid decompensation[5,6].

High incidences of viral breakthrough (VBT) that a result from viral resistance is major disadvantages of prolong LAM therapy for CHB[7]. Selective amplification of resistant mutants are the main concern of long term LAM therapy[8,9]. During continuation of LAM treatment exacerbation of CHB was reported in 40.6% patients carrying resistant mutants[10]. In liver transplanted cases LAM resistance is associated with recurrent HBV infection, which leads to, advanced hepatic fibrosis and severe necroinflammatory changes[11]. Furthermore, hepatic decompensation and death can occur, particularly in patients with cirrhosis[10,12-15]. The risk of hepatocellular carcinoma may also be increased in patients with LAM resistance[16]. It was observed that resistance to lamivudine in 1 year is 15- 35 % that increases further every year to 70 % after 5 years of treatment[2] . These steady increases in lamivudine therapy warrant close follow up and monitoring.

Baseline predictors of viral resistance are high viral load, male sex[7]. Study from Taiwan reported that HBeAg, HBV DNA level and ALT level and treatment duration were the major determinant of resistance for LAM therapy[19]. On treatment predictors are better than pretreatment predictors of viral resistance in Japanese study[20]. They observed persistence of DNA at 3 months was the strongest predictor. Study from Australia reported that high baseline ALT and persistent viremia at 6 months are independent predictors of development of viral resistance[21].

Proper baseline evaluation of CHB patients before starting the treatment and close follow up is strongly recommended during the treatment with lamivudine.

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Continued from Vol.29

Ambulatory anesthesia

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Introduction

It was predicted that by the mid-1990's over 60% of total surgical procedures in the United States would be conducted on an ambulatory basis. This development is not only attributable to cost containment measures, but also as a result of 1) improved surgical technologies, e.g. fiberoptic instruments for both diagnosis and treatment of diseases of cavitary organs, major joints, intraperitoneal structures and like, 2) development of short acting hypnotic, narcotic and potent inhalation agents, and 3) an increasing desire on the part of patients to return home for the recovery process. A growing trend toward the establishment of extended recovery centres, in which patients can have further nursing care after their release from the formal post-anesthesia care unit without a formal hospital admission, would increase the numbers of procedures suitable for this environment.

Preoperative screening

Effective preoperative screening has the potential to assure access to ambulatory surgery for the widest variety of patients that may benefit from it. This is accomplished principally by the ability of effective preoperative screening to properly evaluate, test and prepare those patients who may otherwise be excluded by the application of arbitrary criteria. An additional benefit of a preoperative screening mechanism is the avoidance of costly (patient and family members' loss of work, unused operating room time, loss of physician productivity) cancellations on the day of surgery occasioned by the arrival of an inappropriately selected or ill-prepared patient. A third benefit of appropriate preoperative screening is the avoidance of unnecessary tests because only those tests that are indicated by the patient's history or symptoms are actually obtained. A fourth benefit is that all or the appropriate information is collected and available to the anesthesiologist by the time of surgery. A fifth benefit is that patients have an opportunity to have their questions answered and their concerns addressed in advance of the day of anesthesia.

Preoperative screening is not used by some anesthesia and surgical staffs who have close working relationships with their patients' primary physicians. The primary physician can accomplish the preoperative preparation and make sure that all of the appropriate information is available. The anesthesiologist must then answer questions and establish rapport with the patient on the day of surgery.

Other centers with a wide referral base or where patients' primary care physicians are located at some distance or are not in regular contact with the ambulatory center team, have come to rely on a number of mechanisms to approach the above goals. Some rely upon surgeons to prepare their patients and obtain preoperative information with varying results. Some contact patients by telephone to identify problems for resolution. If the latter occurs the afternoon before surgery, little time is available for consultations or additional tests and the possibility of cancellations is high.

Another option is the establishment of preoperative patient visits which range from a simple anesthesia evaluation with referral back to the primary provider for tests and consultation, all the way to "one-stop shopping" preoperative visits including anesthesia evaluation, laboratory tests, ECG's, X-rays and needed consultations. Some centers offer the option of performing the preoperative history and physical examination during the patient's preoperative visit to the center by, for example, a nurse practitioner or even by the anesthesiologist. In the latter situations, provision must be made for responsibility for missed findings and for follow-up of unanticipated abnormal findings.

Premedication

Premedication patterns are subject to local variation. Some practitioners are concerned that any premedication what soever will delay recovary of ambulatory surgical patients. However, many of the newer short acting sedative hypnotic agents, when used appropriately, can enhance the quality of the ambulatory experience for patients, family members and perioperative caregivers alike.

In some centers with access to the patients in advance, it is possible to prescribe an oral medication such as diazepam to be taken at bedtime on the night before surgery, on the morning of surgery or both, in attempts to allay anxiety. In other centers, medication may be given after admission to the preoperative preparation area of the ambulatory center. If time allows, oral medications may be given. Less and less often intramuscular medication are used. If appropriate staff is available, intravenous increments of a medication such as midazolam can be titrated for anxiolytic effects in the preoperative preparation area after patients have been evaluated for their suitability and potential benefit. Medication administered immediately prior to transport to surgery may be considered "pre-induction" medications and may serve not only to smooth the patient's transition to the surgical suite, but also smooth the transition to the anesthetic state reduce anesthetic requirements, etc.

Opinions vary regarding premedication for children. One purpose of pediatric premedication is to allay the fears engendered by parental separation. Since children younger than 10-12 months rarely fear parental separation, premedication is not usually required below that age. Local customs for children beyond infancy vary somewhat depend upon the architectural design of the center. In centers where parents may be present for anesthetic induction, premedication is rarely needed, as parental separation prior to the anesthetic does not occur. If children must be transported some distance from the preoperative area to the operating room, plaintive or angry crying down the hallway can be upsetting not only for the pediatric patient and his parents, but for other patients and the staff and result in a negative interpretation of the experience in the ambulatory center.

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Again, a variety of options exists if premedication is desired for an ambulatory pediatric patients while avoiding the necessity for an intramuscular injection. Since modern potent inhalation agents lack vigorous sialagogic properties, prophylactic administration of atropine, even with a mask induction, can frequently wait until intravenous access has been achieved. Non-injection options for pediatric premedication include oral, rectal or nasally administered midazolam (0.5-1.0mg/kg); oral or rectal ketamine; rectal methohexital in sub-induction doses (e.g.- 20 mg/kg), etc. Nasal midazolam avoids the unpleasant taste, but can cause a burning sensation that children dislike. The bitter taste of oral midazolam can be disguised with a small amount of fruit drink, syrup, or cola and administered in a cup or syringed in increments into the mouth. Ten to fifteen minutes should be allowed for these methods of administration to take effect and the parents are advised that the child will not become fully asleep but will become more cooperative with leaving their embrace.

Anesthetic induction and maintenance

One of the major goals of ambulatory anesthesia is to return the patients to his preoperative mental and physiologic state as soon as practicable, thus the thrust for the development and application of agents with suitable pharmacokinetics, i.e.- quick onset and offset, short beta elimination half-lives, inactive metabolites and minimal cardiovascular or other side effects. The fact is that in many centers, propofol has displaced the short acting barbiturates as the induction agent of choice for ambulatory patients, because of prompt wake-up characteristics, antiemetic effects and the extreme clear-headedness that patients achieve soon after a brief propofol-based anesthetic. The versatility of propofol to also serve as a maintenance anesthetic agent by continuous infusion increases it's utility in the ambulatory anesthesia arena and has made it the "control" group for the testing of the newer inhalation agents.

Inhalation agents also play a role in ambulatory anesthesia. Halothane is still widely used for its smooth inhalation induction properties in children. Potent inhalation agents may provide better control of autonomic cardiovascular responses to surgical stimulation that are not easily controlled in a timely manner with propofol alone. There is also the question of cost differential with procedures of longer duration between a pure propofol anesthetic and the presently available inhalation anesthetics. Empirically for longer procedures at our ambulatory center, we sometimes use a technique that consists of anesthetic induction using propofol, inhalation maintenance, then approximately thirty minutes before the anticipated conclusion of surgery, the inhalation agent is discontinued and replaced with titration if continuous propofol infusion. The thirty minutes allows the inhalation agent to dissipate such that the patient experiences an emergence that is characteristic of a propofol emergence.

Newer inhalation agents, such as desflurane and sevoflurane, are presently being used in the ambulatory anesthesia setting with regard particularly to induction and recovery (wake-up times, post-operative nausea incidence, etc.) characteristics. Immediate wake up times may be several minutes faster with desflurane; however evidence has not yet indicated that overall discharge times are any shorter with desflurane. Post-operative nausea and emesis after desflurane is consistent with other inhalation anesthetics. Desflurane is associated with airway irritability and is not suitable for inhalation induction. Heart rate may increase with precipitous increases in desflurane concentration. Costs are decreased with low gas flows and by decreasing MAC requirements by use of nitrous oxide or other adjunctive agents. Sevoflurane, now available all over the world also been shown to have quick wake-up times consistent with its low blood solubility. Sevoflurane has low airway irritability and can be used for inhalation inductions.

Regional anesthetics have applications in the ambulatory arena. Some anesthesiologists perform the retro-bulbar blocks for their patients undergoing ophthalmological procedures. Many single extremity procedures are amenable to intravenous regional anesthesia with or without concomitant intravenous sedation. Such patients are ready for discharge in a very short period of time after deflation of the tourniquet. Blocks of the arm or hand at the elbow or the wrist may be applicable to ambulatory procedures. Brachial plexus blocks are also used in ambulatory anesthesia. In the case of an arm or hand block, in which the arm will be protected by a sling after surgery, it is not usually required that complete recovery from the block takes place prior to discharge. This has the advantage of providing some post-operative pain relief, however, the patient and his accompanying adult must be advised how to protect the arm until full recovery from the block has taken place.

Spinal anesthesia, particularly with round-point needles and short acting agents, can be used for many of the typically one-hour ambulatory procedures. Epidural anesthesia can be used, however the advantages in other settings, such as slow-onset and multiple dosing, are not necessarily relevant in healthy ambulatory patients having short procedures. Epidural or intrathecal narcotics are not used in routine ambulatory patients because the resultant prolonged post-operative observation required to check for development of late sequelae is not practicable. Ankle blocks or other blocks of the nerves of the leg may be applicable, however, unlike the arm, blocks affecting the lower extremities that compromise ambulation are all required to be fully dissipated before discharge.

Postoperative pain management

Regional anesthesia can contribute to a successful plan for management of postoperative pain. Pediatric patients can also benefit from the application of regional techniques. A very frequently applied technique for young children is a caudal block with dilute concentrations of bupivacaine. In pediatric patients a caudal block is quick and simple to perform and provides excellent postoperative analgesia for approximately 6 hours. A caudal block may be appropriate to provide pain relief after lower abdominal, urological, or lower extremity procedures. The caudal block is most often places after the child is asleep with a general anesthetic. If the block is placed before skin incision, it will "set-up" during the procedure and provide relief immediately at the conclusion of surgery. When the block is placed at the end of the surgical procedure, it will not be immediately effective and the child may still require other means of pain relief initially. Parents are advised to supervise any ambulation for at least 6-8 hours postoperatively. Older children may not be suitable candidates for discharge with functional caudal blocks if there is a possibility of orthostatic changes or if the family is not able to limit ambulation.

Despite concerns of potential respiratory effects and/or nausea, opioids continue to play a role in ambulatory anesthesia. They are used to supplement maintenance anesthetic agents in order to minimize autonomic responses to surgery, as well as to provide post-operative pain relief. Neither propofol nor the

newer inhalation anesthetics can alone provide patients with good postoperative analgesia. Neither alfentanil, nor the newer remifentanil, have long enough half-lives to provide reasonable postoperative pain relief in the absence of a PCA-type device. The role of non-steroidal anti-inflammatory agents is currently being defined as a sole agent or to reduce the amount of narcotic required. Older NSAID's can be given orally or rectally before surgery while newer options, such as ketorolac, can be given parenterally to accomplish these goals.

Ultimately the patient must transition to oral analgesics for discharge. If the patient is awake and not nauseated, it is possible to give the first dose of oral analgesics while the acute pain is being controlled by parenteral analgesics in order to smooth the transition. In that manner, the oral medication is absorbed and pharmacodynamically active by the time that the effects of the parenteral drug are beginning to dissipate. Newer modes of analgesic delivery can be anticipated. Unfortunately early experience with fentanyl patches indicated a high incidence of nausea and its sequelae. Intractable pain requiring continued parenteral narcotics is a reason for post-operative hospital admission.

Antiemetics

While some procedures are associated with greater likelihood of post-operative nausea and emesis (i.e.- laparoscopy approximately 40% vs. other procedures 10%-15%), it is not known exactly which patients will develop nausea. Current antiemetics have undesirable pshychotropic side-effects, i.e.- dysphoria, somnolence, etc. Some anesthetic techniques are associated with greater incidence of nausea. Newly developed anti-emetics, while possessing reduced psychotropic side effects, are highly specific for certain etiologies of nausea and may not be effective with regard to all of the contributing factors to perioperative nausea. Furthermore, the newly developed agents are too expensive in the near future for routine use.

In general, routine prophylactic administration of anti-emetic agents to all ambulatory anesthesia patients is not warranted. However, for selected patients in whom, either because of their previous history or physical condition, or for whom a procedure is planned after which nausea and emesis is more likely, a judicious dose of an anti-emetic agent may be warranted in attempts to reduce the incidence of nausea or vomiting. In such patients it also may be possible to attempt to use anesthetic agents or techniques that have been reported to be less associated with postoperative nausea and emesis and perhaps to reduce the need for narcotics by efforts such as requesting instillation of local anesthetic at the incision site etc.

Discharge criteria

Most ambulatory centers use "home readiness" as an end-point for discharge, which implies that the patient is expected to be accompanied home be a responsible adult and is not expected to perform tasks requiring fine coordination or make fiscal or legally binding judgment decisions until the following day. He may need assistance with the tasks of daily living for several days. A responsible adult does not consist of a taxi driver, shared van driver, etc. The responsible adult must be someone with a sense of responsibility for that particular patient that extends beyond a pecuniary interest.

All patients must be counseled about this requirement so that they can make appropriate arrangements. Some centers require that the responsible adult be present before surgery commences.

Discharge criteria for "home readiness" are rather straightforward. They include stable vital signs, return to baseline mental status, adequate pain control, minimal nausea, minimal bleeding at the surgical site, absence of or control/treatment of surgical sequelae, absence of significant anesthetic sequelae, ambulation consistent with previous state and surgical effects, etc. Voiding is not always required during the course of the shorter recovery times now possible with short-acting anesthetic agents. Exceptions requiring demonstration of satisfactory urinary function pre-discharge would be patients receiving spinal or epidural anesthesia or those having surgery in the bladder/groin area. Examples of the latter would be: some gynecological procedures, urological procedures or inguinal herniorrhaphy.

Changes of opinion have occurred regarding oral intake post-operatively, as well. When awake, if a patient expresses thirst or if nausea is absent, clear liquids may be offered. If the clear liquids are tolerated, other intake is allowed if desired by the patient. On the other hand, in the presence of nausea, liquids are not forced in order not to provoke emesis or worsen nausea. If patients meet all other relevant discharge criteria and nausea is minimal, they may be discharged in the absence of significant post-operative oral fluid intake with clear instructions to the patient and responsible adult regarding where to obtain assistance if the patient is not able to tolerate oral liquids after a reasonable period of time.

Post-anesthesia care

A growing trend in the world today is that of extended recovery centers, short stay facilities, or 23 hour units, where patients can be observed beyond the time needed for acute recovery from anesthetic effects. After suitable patients are fully recovered per post-operative routine in the post-anesthesia care unit, they are transferred to the designated area for the remainder of their stay, with a reduced level of nursing care, comfortable surroundings and provision of meals, television, visiting hours and the like.

Such facilities meet the requirements of third party payers to avoid a full hospital admission, yet allow patients to have the equivalent of ward-level nursing care for the purpose of, for example: precautionary observance for late hemorrhage at the surgical site, intravenous pain management, and the like. There may not be a physician on the premises, rather only "on call", thus patients that need acute management of medical conditions are not suitable for those facilities. In free-standing recovery facilities, the reasons for a patient's extended stay will primarily be for surgical indication (pain control), whereas an extended recovery facility which is part of a full service hospital may also be able to include patients with medical indications for observation (e.g.- a patient with asthma). The availability of observation to 23 hours enlarges the scope of surgeries that could be provided at ambulatory centers. Some examples include additional types of laparoscopic surgery, some types of parotid or parathyroid surgery, some axillary or groin lymph node dissections, extensive plastic surgery procedures on the face, orthopedic procedures such as anterior cruciate ligament repair of the knee, etc.

Extended recovery facilities differ in their ability to provide laboratory tests or x-rays after hours, thus physiologically

stabile patients are most suited for man of these programs. Some centers exclude children under 13 years of age or exclude, for example, those with communicable diseases or morbid obesity in order to reduce risk and simplify staffing and facility issues.

Conclusion

Directors and practitioners in ambulatory surgical setting is the world are preparing to transition from Quality Assurance (QA) activities to the Continuous Quality Improvement (CQI) approach to quality management. The CQI approach has been embraced by the Joint Commission on Accreditation of Health Care Organization, which has gradually changed its accreditation requirements over the last few years from QA to CQI. Fortunately, most ambulatory surgical environments are dynamic, consumer-oriented locales which are particularly likely to be able to successfully embrace the CQI point of view with minimal adaptation. CQI strives to improve process design and execution, in order to prospectively reduce variability and improve all outcomes.

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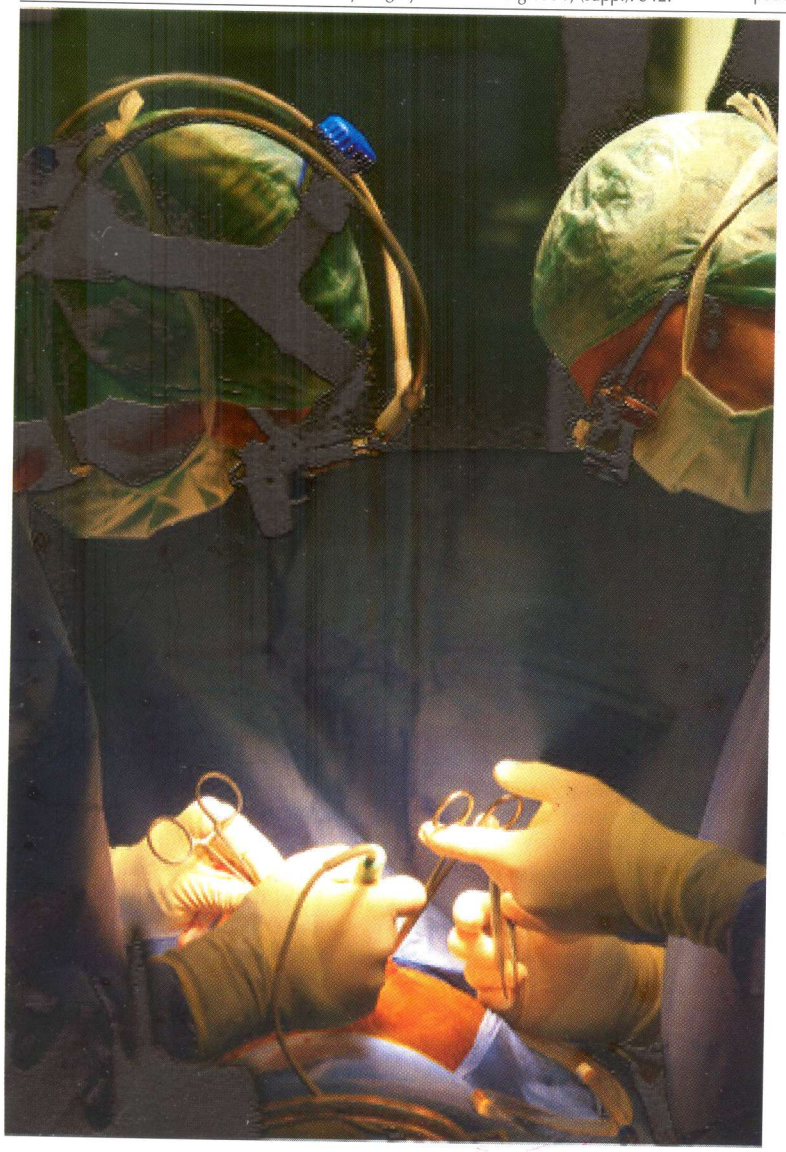

Neuroendoscopic approach to brain tumors

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Abstract

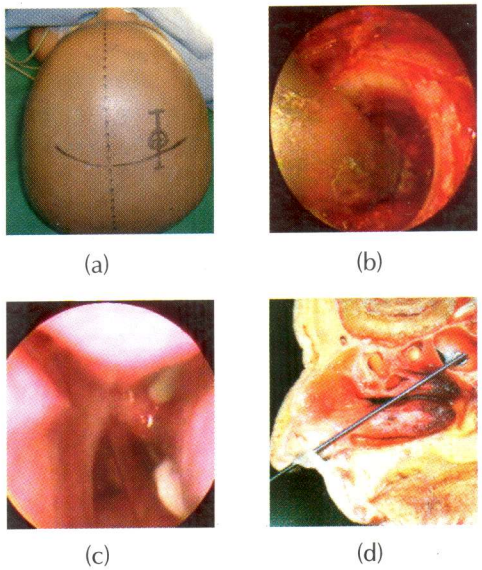
Objective: Although standard microsurgical approach is the established techniques to many brain tumor surgery, however, endoscopic brain tumor surgery is becoming the technique of choice to some skull base tumors and intraventricular tumors. The purpose of this study was to evaluate the efficacy of brain tumor surgery by endoscopic approach. In this paper, we like to share our experience regarding the management of patients with brain tumors by endoscopic approach. *Methods:* 12 cases of brain tumor patients were treated by endoscopic approach first time ever in Bangladesh. A total of 12 strictly endoscopic interventions were performed. Total tumor resections, partial resections, biopsies and endoscopic third ventriculostomies (ETV) were performed. *Results:* Endoscopically complete tumor resection was possible in five cases with eventless and quick postoperative recovery. Tumor biopsy or partial resection from the midbrain, thalamus, pineal region and intraventricular space through a single burr hole technique was possible without any postoperative neurological deficit. The hydrocephalus-related symptoms resolved in all of the 10 patients with cerebrospinal fluid pathway obstruction. One patient died on 5th postoperative day. *Conclusions:* In our preliminary experience, the endoscopic brain tumors surgery was found minimal invasive technique and superior to conventional microscopic surgery in terms of operative mortality and morbidity. Endoscopic third ventriculostomy (ETV) is the unique technique to manage tumor associated obstructive hydrocephalus rather than ventriculoperitoneal (VP) shunt.

Introduction

Surgical management of brain tumor is still a challenging issue to the neurosurgeons. Skull base tumors (e.g. pituitary tumors), thalamic, midbrain and pineal region tumors, tumors in the cerebellopontine angle and tumors in the ventricles of the brain present a challenging management scenario for the neurosurgeon. This is primarily because of the site of the lesions and critical neuroanatomic structures such as optic apparatus, hypothalamus, pituitary gland, fornices and midbrain, cranial nerves, vessels and other brainstem structure situated adjacent to the abnormality. Direct standard microsurgical approach (craniotomies) still not so appreciable to remove these tumors and sometimes fraught with severe complications. In the recent decades neuroendoscopy as a minimal invasive procedure is becoming the powerful tool to approach to many brain tumors - because of less invasiveness, magnification and illumination best offered by neuroendoscope in comparison to operating microscope. In this context, as we started neuroendoscopic brain tumor surgery for the first time ever in Bangladesh, we would like to present a few cases of brain tumor treated with purely neuroendoscopic approach. We will discuss how neuroendoscope have influenced our approach to the treatment of brain tumor involving critical neural structures.

Materials and methods

Between May 2006 and July 2007, 12 patients with brain tumor were selected for endoscopic approach. The selection criteria mainly depended on tumor location, and size of the tumor. Average age at presentation was 22 years of age (range: 12 years to 42 years) and the male-to-female ratio was 2:1 (eight male and four female). The lesions included two pituitary giant macroadenoma, two lateral ventricular tumor (astrocytoma), one case of the colloid cyst of the third ventricle, three cases of thalamic tumor (astrocytoma), one craniopharyngioma (primarily intra-axial with exophytic extension into the third ventricle), three midbrain lesions (astrocytoma) and one pontine glioma with exophytic extension into the prepontine cistern and third ventricle. Total tumor resections, partial resections, tumor biopsies and endoscopic third ventriculostomies were performed. A total of 12 strictly endoscopic interventions were performed. Each patient's presenting symptoms, radiographic findings, treatment, histopathology, adjuvant treatments, outcome, and complications were recorded. Particular attention was paid to the role of the endoscope in the patients' surgical treatment.



(a) (b) (c) (d)

Figure 1: (a) Site of single burr hole at right frontal region (b) Introduction of endoscope through the frontal burr hole to approach intraventricular lesions (c) Endoscopic view of the nasal cavity (d) demonstration of endonasal technique for removal of pituitary tumor and other skull base tumors

Tumors located within the ventricular system were approached through a single standard burr hole (14 mm size) at frontal region - 3 cm off the midline just anterior to the coronal suture.

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The endoscope is introduced via a right/left frontal burr hole, and navigated around the ventricles, looking for anatomy of the ventricular system, and pathologies within the ventricles. Ventriculoscopy is invaluable for exploration of the ventricular system and thus approach to intraventricular tumor, tumors in the midbrain, thalamus and pineal region. Tumors located in the skull base (e.g. pituitary tumor) were approached through nostrils (right or left or both) without any incision in the nasal mucosa (Figure 1).

Pure endoscopic tumor surgery, where the endoscope is the sole means of visualization and instruments are passed down a working channel, is used when the tumor is totally intraventricular, less than 2 cm in size and relatively avascular and cystic intraventricular lesions. The colloid cyst is the perfect example of the purely endoscopic application (Fig. 2). Endoscope controlled microsurgery, where the endoscope is the sole means of visualization but instruments are passed alongside the scope, not through working channels, is another technique that can be used to remove intraventricular tumors that are too large or too vascular for the purely endoscopic technique. Endoscope assisted open surgery is a technique whereby the endoscope simply allows the surgeon to visualize anatomic and pathological structures that cannot be seen well with the operating microscope (e.g. endoscopic endonasal pituitary tumor surgery, endoscopic assisted microvascular decompression).

Results

Endoscopically complete resection had been done in five cases (two pituitary macroadenoma, one thalamic tumor and one intraventricular tumor and one colloid cyst). The postoperative recovery was uneventful in all these cases. The extent of tumor removal was confirmed by postoperative magnetic resonance imaging (MRI) (Fig. 2 & 3, 4 & 5). Partial tumor resection was done in five cases and biopsy was taken from the two midbrain lesions. Complications observed in the series included infection in one case, transient CSF leakage through ventriculoscopy wound in one case and one perioperative death (patient with pontine lesion with exophytic extension into the prepontine cistern and third ventricle). Radiotherapy was given in appropriate cases. Two patients of midbrain glioma have had tumor progression.

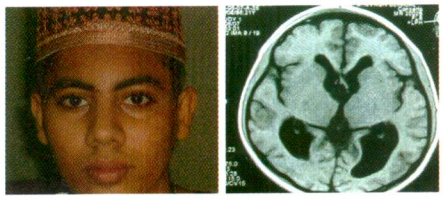
Discussion

Over the past several decades, articles have appeared discussing the merits of endoscopically assisted tumor biopsy and resection. In 1968 a surgeon wrote on using the endoscope during stereotactic tumor biopsy. In 1980 a series of articles was published discussing techniques for endoscopically resecting intraparenchymal tumors. A physician has reported on successfully biopsying 50 brain tumors using a stereotactically guided endoscope with a 0% mortality or morbidity. It is his feeling that the endoscope enables him to better control post biopsy bleeding and to insure a complete evacuation of any associated cyst.

The endoscopic approaches to the tumors within the cerebral ventricles and in the structures surrounding the ventricles are advantageous in terms of patient morbidity and mortality. Although very few comparative conclusions can be drawn regarding the advantages of endoscopy over standard microsurgical techniques, there are several scenarios in which endoscopy is clearly invaluable. Examples are ventriculoscopic identification of tumor dissemination, endoscopic third ventriculostomy for secondary noncommunicating hydrocephalus and purely endoscopic removal of colloid cysts and other suitable intraventricular tumors.

Colloid cysts of the third ventricle are the lesions most amenable to purely endoscopic removal. Lewis et al. presented a series of 15 patients harboring colloid cysts; with shorter operative times and hospital stays and faster returns to work in those patients treated endoscopically versus those who underwent transcallosal resection[1]. The series published by Abdou and Choen, King et al. and Rodziewicz et al. also demonstrated effective resections with low morbidity[2-4]. In a series from Decq et al., with upto 28 months of follow-up, 1 of 15 patients had a cyst recurrence at 1 year[5]. We had a single case of colloid cyst removed by endoscopic technique through a single burr hole. Patient did not need any postoperative ICU support and became ambulant after 24 hours of surgery and discharged from hospital after 48 hours of operation (Figure 2). Postoperative follow up MRI shows complete disappearance of the tumor.

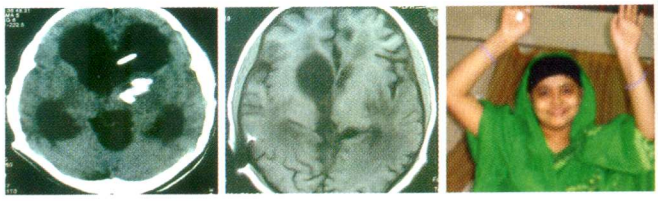
(a) (b) (c)



(d) (e)

Figure 2: (a & b) MRI shows Colloid cyst of the third ventricle of brain (c) Endoscope entry point (single burr hole technique) to reach the tumor (d) Patient after 3 days of operation (e) Postoperative MRI showing complete removal of the cystic tumor

Surgical approach to the solid intraventricular tumors, tumors of the midbrain, thalamus and pineal region with exophytic extension into the ventricles also a great challenge to the



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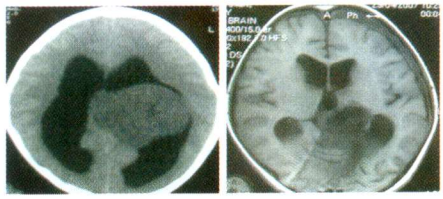


(d) (e)

Figure 3: (a) CT scan shows intraventricular tumor and VP shunt tip with in the ventricular system (b) Postoperative MRI after complete removal of the tumor endoscopically (c) Patient after a month operation (d) Another patient of huge intraventricular tumor (e) Postoperative MRI after ETV and tumor removal

neurosurgeons. Open microsurgical approaches to these lesions were not encouraging - because of more invasiveness of the procedure which is related to the higher morbidity and unacceptable mortality. Endoscopic approach to the lesions of these critical structures approach appears to be more safe and patients friendly as it is minimally invasive procedure and provide very quick recovery without any significant postoperative complications. In our study, we completely removed two intraventricular solid tumors very successfully- without any perioperative complications (Figure 3). Subtotal tumor resection and biopsy from midbrain tumors was also uneventful.

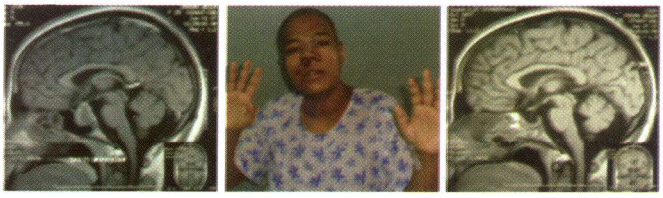
Most of the patient with intraventricular tumor have associated obstructive hydrocephalus which may need additional CSF diversion surgery. Previously all such cases were managed by ventriculoperitoneal (VP) shunt prior to definitive microsurgery. However, recent trend is different - because with endoscopic approach both the intraventricular tumor and associated hydrocephalus can be managed in a single sitting with a standard burr hole. In this series we performed 10 endoscopic third ventriculostomy (ETV) procedures simultaneously while performing tumor resection, or tumor biopsy. This is particularly very convenient to the patients - because they do not need any VP shunt surgery prior to tumor surgery.

The use of endoscopes for inspection of the ventricular system (ventriculoscopy), tumor resection, tumor biopsy and endoscopic third ventriculostomy (ETV) is well documented in the literature. In the case of ventriculoscopy, diagnosis and treatment may change with the additional information provided as compared with imaging studies alone[10,11]. Likewise, for masses with an intraventricular component, endoscopic biopsy is a straightforward procedure to obtain a tissue diagnosis[12-16]. Endoscopic third ventriculostomy, depending on the underlying cause of hydrocephalus, has obvious allure, as opposed to shunting, with the inherent complications of shunting[17-19]. With the improved illumination, magnification and field of view offered by the endoscope[20,21]. The progression of endoscopic techniques to intraventricular tumor removal and endoscopically assisted microsurgical resection was predictable[22]. While operating via endoscope we experienced - very clear anatomical details within the ventricular system and also details about pathology and structure involved by the lesion with the panoramic view of endoscope.

Pituitary adenomas are slow growing tumors that constitute about 10-15% of all intracranial neoplasms. They can produce compression symptoms when enlarged or give rise to hormonal disturbances. These tumors are often diagnosed late or remain undiagnosed. Radiology (MRI) is the best tool for diagnosis along with hormonal assays. These tumors can be treated medically, surgically or with radiotherapy. In 1912, Cushing[6] was the first to describe the transseptal transsphenoidal approach to the pituitary tumors. Since the late 1970, the transsphenoid approach has been the preferred procedure for removal of these tumors[7]. With the advent of endoscopic surgery the endoscopes have now been applied to access these tumors with favorable result. The better magnification and illumination provided by the endoscopes has helped in precise delineation of the tumor and has ensured completeness of tumor removal[8]. It has also greatly reduced the postoperative morbidity.

The conventional surgical methods (open craniotomy or transspenoidal approach) for removal of pituitary adenomas involves incisions on the scalp or incisions under the upper lip (sublabial approach) or in the nostril respectively. Transsphenoidal approach requires the use of postoperative nasal packing. Endoscopic endonasal approach not only eliminates the need for incision or nasal packing but heightens the surgeon's visualization of pituitary tumors. Replacing the operating microscope, the endoscope provides the surgeon with a panoramic view of the pituitary gland and surrounding structures. It can also provide a very close view of the pituitary gland and tumor interface. Patients are generally sent home the day after surgery. De Divitiis E. described that the increased exposure, magnification and flexibility of the endoscope combined with the absence of skin incisions, brain retraction and cranial nerve dissection is an advantage of the endoscopic endonasal transsphenoid approach that cannot be denied[9].

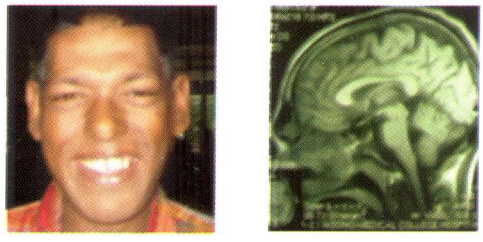
In this series we performed complete resection of two pituitary tumors endoscopically (fig. 4 & 5). We experienced very quick and uneventful postoperative recovery in both the cases. Endoscopic approaches to these skull base lesion is simply straightforward and superior to standard microsurgical approach in respect to postoperative morbidity and mortality.



(a) (b) (c)

Figure 4: (a) Pituitary macroadenoma (b) Tumor is removed by Endonasal endoscopic approach. Patient on the following day of surgery (c) Postoperative MRI showing complete removal of tumor

(a) (b)



(c) (d)

Figure 5: (a) Functioning pituitary macroadenoma (b) Acromegalic patient (c) Tumor is removed by Endonasal endoscopic approach. Patient on the following days of surgery (d) Postoperative MRI

Conclusions

Now-a-days neuroendoscopy is becoming the essential tools for management of many intracranial space occupying lesions (ICSOLs). It may help in the re-establishment of cerebrospinal fluid pathways, enhance tumor removal, assess the extent of tumor removal and totally replace the microscope in some

cases. Factors that influence the ability of a surgeon to perform a complete endoscopic resection include tumor size, composition and vascularity. Based on our results, we believe that endoscopic techniques should be considered in the treatment of selected pituitary tumors and selected intraventricular lesions and some other selected intracranial space occupying lesions like arachnoid cysts. The procedure requires careful patient selection, the use of refined endoscopic instrumentation and a disciplined surgical technique.

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Awake coronary artery bypass

Ahsan NAK[1]

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Introduction

Are you nuts? This physician probably had gone crazy! This was the initial reaction of physician community 1998 when ACAB (Awake Coronary Artery Bypass) first introduced by Karagoz. Now this has emerged as important tool in various cardiac centers.

Rationale

Performing OPCAB (Off pump Coronary Artery Bypass) under epidural anesthesia obviously decreasing invasiveness. High epidural anesthesia at T3-T4 achieves somatosensory and motor block in the chest. Need of perioperative monitoring a direct consequence of GA rather underlying disease. Elimination of GA (General Anesthesia) in CABG enables early recovery & mobilization without imposing health risk. Some patient of ACAB could be discharged from hospital on the afternoon of operation & this may ultimately lead the way towards `Ambulatory CABG' - a dream of todays surgeons.

Benefits: Intra/postoperative

- Intraoperative benefit largely - Sympatholysis (neuroaxial blockade)
- Postoperative - Profound analgesia
- Several reports - Reduced stress response /sympathoamines
- 4 decades research failed to find anesthetic technique to attenuates stress & resultant surgical sequel
- Epidural anesthesia prevents surges of stress hormones
- Sympathetic fibres T1-T5 innervates myocardium & coronary- have role in flow
- Decreased prevalence arrythmias / HR observed in TEA during manipulation
- Cannulating T2-T3 continous infusion of ropivocaine(0.5%)+sufentanil(1.66 g/ml)
- Ensures sensory block from neck to abdomen with arms
- Excellent postoperative recovery
- TEA reduces hemodynamic compromise, as a result of narcotic medication before intubation in some patients

Technics developed

- To avoid extracorporeal blood contact
- To avoid mechanical ventilation / paralyzing agents
- To reduces intraoperative stress and postoperative pain (TEA)
- This allows Awake Coronary Artery Bypass graft surgery (ACAB) avoiding the drawbacks of mechanical ventilation and general anesthesia particularly in high-risk patients
- As an addition to MIDCAB (Minimally Invasive Direct Coronary Artery Bypass)/OPCAB patients with certain risk profiles, including chronic obstructive pulmonary disease, coagulation disorders and aberrant neurological conditions, get benefit from operations without cardiopulmonary bypass

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Method

ACAB was introduced in January 2006, at National Institute of Cardiovascular Diseases (NICVD), Dhaka & 37 cases upto December 2007 were recorded from the registry of patients, include were:

- Significant (>70%) lesion of LAD, diagonal, Cx branches or the right coronary artery (RCA) with good patients compliance & good target vessels
- Absence of recent antithrombolytic/fibronolytic therapy
- Presence of co-morbidity did not affect patient selection

Demographic data

In the study the number of patients was 37. Their average age was 55.3 ± 26. The gender ratio (M: F) was 12:1. Average body surface area & LVEF were 1.5 ± 0.3 & 40 ± 26.6. Number of patients with previous MI was 09 (24%), COPD was 00, Renal Disease was 06 (16.2%), Dialysis was 00, Peripheral Vascular Disease was 08 (21.6%), Diabetes mellitus was 10 (27.2%) and high risk patients were 13 (35%). All data were reviewed prospectively.

Operative techniques for ACAB

Complete median sternotomy : The chest was opened with an standard pneumatic saw and particularly careful LIMA (Left Internal Mammery Artery) dissection was necessary to avoid pneumothorax in the spontaneously breathing patient. After dissection of the LIMA in conventional technique without opening the pleural cavity, the pericardium was opened. With the aid of mechanical stabilization anastomoses were performed by standard beating-heart bypass technique (OPCAB). A wide, pledged-armed, U-shaped suture, which was placed at the acute margin of the heart and pulled toward the patient's left shoulder to expose the inferior surface of the heart.

Figure 1: During operation

Figure 2: Immidiately after operation

Left anterior mini-thoracotomy/antro-lateral thoracotomy: Left thoracotomy was made through a incision in left 4th intercostal space. LIMA was harvested. Pericardiotomy was done vertically and parallel to the phrenic nerve. This procedure was used when only the left sided grafts were implanted.

Anesthesia for ACAB: High TEA was used. The maximum permissible block level was C6, which was monitored by a possible development of Horner syndrome. Antiplatelet therapy was stopped 5 days before surgery in all cases. In the operating room an infusion of 0.5% bupivacaine, with 2% lignocaine

and fentanyl into the epidural space was started. Thus sensory block was achieved between the neck and the abdomen, including both arms. Thoracic epidural catheter was used for not only intraoperative but also postoperative pain management for 3 days. Depending on pain perception additional analgesics were used.

Figure 3: Three months after operation

Figure 4: One year after operation

Operative data

Total number of cases (n=) was 37. Among them 12 cases were MIDCAB & 25 cases were OPCAB. Average procedure time (hr) was 04.46 ± 0.06. Single vessel anastomoses was 05 (13.6%), 2 vessels was 13 (35.1%), 3 vessels was 17 (45.9%), 4 vessels anastomoses was 02 (5.4%). Conversion done in 02 (5%) and Extubation in OT was 01(2.7%). Amount of chest tube drainage was 200 ± 70. Average ICU stay (d) was 1.5 ± 0.5 & hospital stay (d) was 6.5 ± 02. Need for analgesia in 3d was 02 (5%). Post-operative complication (Soft tissue infection) was 03 (8.1%). Number of anastomosis done 2.43 per patient, IMA 37 (100%), RSVG 53 (58%), Total Graft 90.

Results

5 (five) patients underwent single-vessel CABG, 13 patients underwent double-vessels CABG and 17 triple & 2 patient underwent 4 vessels CABG. 2 patients in this series required secondary intubation one after completion of internal thoracic artery harvesting because of arrythmia (n= 1) and another for uncontrolled pneumothorax (n= 1), which was extubated in OT room after operation. Mortality of this early report is nil. No important post operative complications except soft tissue wound infection (3) were noted. Horner syndrome was observed in no patient.

Discussion

TEA provides excellent conditions for off-pump/MIDCAB coronary artery bypass surgery by dilating the coronary arteries and the internal thoracic artery and by reducing heart rate and arrhythmias during manipulation of the heart. The threshold level of blood pressure remains unknown (usually a BP>70 mm Hg we considered mandatory). The operative time also seems to be shorter and this is an important factor for the awake technique. Most relevant possible disadvantage for harvesting a second conduit & a second anastomosis for the attachment of free graft to LIMA is the potential for diversion of significant LIMA flow to noncoronary/coronary vascular beds, representing some variant of a steal syndrome. We used this technique in 6 cases. In others (6) we used descending aorta for proximal anastomoses in MIDCAB revascularization of the circumflex territory in mid sternotomy (OPCAB) is in most cases difficult because of hemodynamic impairment associated with exposing the vessel. We found use of Starfish/Urchin stabilization along with verticalization of the apex provides an excellent hemodynamic toleranance. We recommend in single vessel bad proximal disease the H-graft technique for the elderly and high risk patients because it is a fast procedure that avoids intercostal retraction. In younger patients for single graft partial lower sternotomy or the rib cage-lifting technique should be used to provide patients the benefits of the internal thoracic artery graft without an ugly scar. ACAB although initially used in highly selected, compliant & mentally stable patients, it can also safely be used in all cases who are compliant to the procedure. This first report of our study demonstrate the feasibility & safety of ACAB as other workers reported. In our patients ACAB achieved excellent acceptance, even some patients persued our team for the procedure to avoid general anesthesia and early postoperative recovery. Combination of benefits of OPCAB, a small incission, avoidance of GA, positive pressure ventilation & effective pain management may allow ACAB to compete PCI techniques. With futher work & refinement of the procedure, out-patient CABG may become feasible.

Initial impression

- ACAB a promising adjunct to minimally invasive CABG
- May be potential use in hybrid setting
- With times AMBULATORY BYPASS not impossible at all.

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Abdominal Aortic Aneurysm : Management at NICVD, Dhaka

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Summary

One of the most common and dangerous of arterial aneurysms is that encountered in the abdominal aorta. During the 1995-2004 period total number of 17 patients with abdominal aortic aneurysm (AAA) undergone surgery at the National Institute of Cardiovascular Disease (NICVD). Diagnosis was made clinically and with the aid of duplex ultrasonography, abdominal aortography or angio-computed tomography (Angio CT). The aneurysm size (widths) ranged from 6.5 to 10 cm. All were infrarenal variety and one was leaking in type. AAAs were replaced by Dacron "Y" graft in 5 cases and PTFE "Y" graft in 7 cases. Dacron tube grafts in 2 cases and polytetrafluroethylene (PTFE) tube graft in 3 patients, replaced aneurysms. Five patients were given aorto-bifemoral "Y" grafts, 7 had aorto-iliac "Y" grafts and rest 5 undergone tube graft replacement of the AAA. There was no postoperative mortality. Postoperative period of 14 patients were uneventful. One patient needed embolectomy from right femoral artery in the early postoperative period. One patient developed postoperative psychosis and needed neurological care for the next one month. One patient developed subacute intestinal obstruction due to bands and needed relaparotomy on the 6th postoperative day. This patient had a delayed recovery but without residual complications. Postoperative long term follow up upto 3 years of only 8 patients could be done - all were having satisfactory functioning grafts and without distal ischaemic limbs. Patients with AAAs are high risk group of aged patients due to associated coronary artery disease and other risk factors. Timely and proper intervention not only avert lethal complications but can improve the quality of life of these group of patients.

Introduction

Aneurysm is defined as a focal dilatation, at least 50% larger than the expected normal diameter[1]. Thus, a practical working definition of an infrarenal AAA is a transverse diameter of at least 3 cm, considering normal average diameter is 2 cm. Most of the AAAs involve the infrarenal aorta and are spindle shaped. However considerable variation exists. Aneurysm can be caused by a variety of agents that weaken the arterial wall. In contrast to the past when syphilis played a major eitogenic role, today most, if not all, aneurysm are caused by degenerative process, atherosclerosis. As AAAs enlarge, thrombus is laminated along the aneurysm wall, often preserving a relatively normal arterial lumen despite considerable aneurysmal dilatation.

The natural course of an untreated AAA has been fairly well documented in recent years. The studies based on necropsy findings, 80% of patients died within 6-12 months after onset of symptoms as a result of rupture of aneurysm. Studies based on it's clinical course have disclosed equally high mortality rates due to rupture[2]. Based on the clinical and necropsy data, it was concluded that[2]-

1. The survival rate of patients with AAAs is much lower than that of normal population, especially after age 65 years.
2. There is no absolute criteria for predicting which case will rupture, since a substantial number of the so-called asymptomatic type eventually do rupture.
3. Rupture of the aneurysm is the greatest hazard in all cases, irrespective of whether symptomatic or asymptomatic.
4. Although the larger the aneurysm the greater the hazard of rupture, it is also true that smaller aneurysms may rupture as well.

AAA have been encountered with greater frequency in the past 3 decades. Two factors seem to account for this fact-

1. Increase in lifespan with parallel increase in atherosclerosis.
2. Greater awarness of the diagnosis of AAA.

As the longevity of the general population is increased, it seems reasonable to expect a further increase in the incidence of this condition[3]. The present day method and treatment of an AAA dates back to 1951, when Dubost and coworkers reported the first successful resection and grafting operation[2]. With wide acceptance of the method of aortic reconstruction new problems became evident in the management of these lesion. While prognosis of unruptured aneurysms improved immeasurably, rupture still remained the most serious complication. It became obvious that the best prophylaxis for high morbidity and mortality is removal of the aneurysm before any complication.

Materials and methods

During the last 10 years (1995-2004), a total number of 17 patients underwent vascular reconstruction for infrarenal AAAs at NICVD, Dhaka, Bangladesh. All are included in this study.

Presenting complains in all patients were pulsatile abdominal mass and pain. Six were incidental findings during routine ultrasonographic abdominal scanning. One patient presented with features of hypovolemic shock after feeling of tearing pain in the abdomen. On physical examination, central abdominal pulsatile mass of different sizes were palpable. We tried to estimate their extension and sizes. Auscultation of the mass

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revealed continuous flow murmur in all patients. After initial diagnosis all patients underwent duplex ultrasonography for the AAA and lower limb vessels. Seven patients underwent CT Angio and 10 had abdominal aortography with coronary angiography. In addition, all patients underwent thorough cardiac, renal, cerebral, hepatic, gastrointestinal and pulmonary evaluation. Laboratory parameters (lipid profile, creatinine, blood sugar and hamatocrit) were determined using established standard methods.

After proper evaluation, all patients underwent surgery. Protocol of surgery was as follows :
Twelve patients underwent AAA surgery under general endotracheal intubation anesthesia and 5 were subjected to combined general and epidural anesthesia.

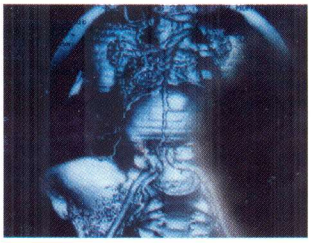

Figure 1: Preoperative angio CT with reconstruction

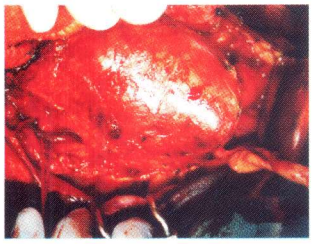

Figure 2: Peroperative AAA

After the abdomen was entered through transperitoneal incision, it was thoroughly explored to exclude other pathology and to assess the extent of the aneurysm. The transverse colon was then retracted superiorly and the ligament of Treitz was divided to allow retraction of the small bowel to the right. A longitudinal incision was made in the posterior peritoneum to expose the aneurysm. After adequate aortoiliac exposure was obtained, the normal aorta and iliac arteries were mobilized sufficiently to place vascular clamps, proximal and distal to the aneurysm. In 5 patients common femoral arteries below inguinal ligament were exposed and mobilized due to gross and diffusely diseased iliac arteries. Prior to application of aortic cross clamp, 100-150 ml of manitol was infused in 10 patients and injection Dopamin (3-5 mics/kg) in 7 patietns. Before systemic heparinization (100 units/kg) about 50 ml blood was drawn for preclotting of Dacron grafts in 7 patients. Least atherosclerotic areas of the aorta and iliac or common femoral arteries were selected for the application of cross clamps. Then the aneurysm was opened longitudinally along its anterior surface. The proximal aorta was then incised horizontally at the level selected for proximal anastomosis. Then intraluminal thrombotic material and atherosclerotic debris were extracted from the aneurysm. After this, 2-3 pairs of bleeding lumbar artery orifices were closed using 6/0 polypropylene mattress sutures. Once haemostasis was achieved, proximal anastomosis was performed by using 4/0 continuous polypropylene sutures. After the completion of proximal anastomosis, graft was clamped and proximal aortic clamp was released briefly to check for and correct any suture line bleeding. In 5 patients, distal anastomosis to the aorta, just above the bifurcation was done in similar manner using 18 mm diameter Dacron tube grafts in 2 and PTFE in 3 patients. Limbs of the bifurcated ("Y") grafts (5 dacron and 7 PTFE) were anastomosed to the normal common iliac arteries in 3 patients and external iliac arteries in 2 patients using 5/0 polypropylene sutures. Five patients had distal anastomoses of the grafts to the common femoral artery in an end to side fashion using 6/0 polypropylene sutures.

It should be mentioned here that after completion of one distal anastomosis flow into that extremity was restored, releasing the clamp slowly to minimize "declamping" hypotension. After restoration of lower extremity and pelvic blood flow, the inferior mesenteric artery (IMA) and sigmoid colon were inspected. Out of 17 patients, 13 were having occluded IMA and rest 4 IMA underwent ligation with transfixing sutures. In all these cases the superior mesenteric artery were free from disease and there was no sign of gut ischaemia. After restoration of satisfactory distal flow, haemostesis was ensured. Then the aneurysm wall and posterior peritoneum were sutured over the graft to provide a tissue barrier between the prosthesis and the adjacent intestine. The small gut was inspected carefully, replaced in normal position and abdomen closed in layers leaving tube drains in flanks. One of the aneurysm sacs was found having a small tear in its infero-lateral wall but scaled with some old and fresh clots outside the sac. It was a case of leaking aneurysm and patient underwent surgery on the 2nd day of admission.

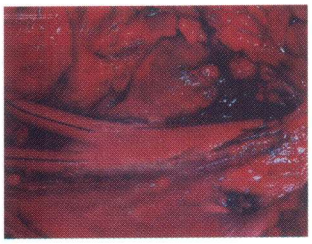

Figure 3: `Y' graft after aneurysmectomy

One patient developed features of acute right lower limbs ischaemia about 10 hours after surgery. For this he underwent femoro-popliteal thromboembolectomy using 5F Fogarty embolectomy catheter.

Results

Total 17 patients of infrarenal abdominal aortic aneurysm are included in this study. Most of the patients were in the age group 66-75 years. Patients were risk stratified according to the society for vascular surgery/international society for cardiovascular surgery (SVS/ISCVS) classification guidelines[6] (Table 1). Among the patients only one was female (Table 2).

Table 1: Demographics of the study patients

No.	Characteristics	Low risk	High risk	Total No
1.	No. of patients	4	13	17
2.	Coronary artery disease	2	7	9
	a. Prior myocardial infarction	2	6	8
	b. Prior coronary revascularization	2	4	6
3.	Hypertension	4	13	17
4.	Chronic obstructive lung disease	3	5	8
5.	Chronic renal failure	0	3	3
6.	Peripheral vascular disease	2	10	12
7.	Smoking/Tobacco chewing	4	13	17
8.	Diabetes mellitus	3	7	10

Table 2: Age group and sex

Age group in years	Sex		Total
	Male	Female	
55-65	6	1	7
66-75	10	0	10
Total	16	1	17

In addition to clinical examination, all patients underwent duplex ultrasonographic evaluation of the abdominal aortic aneurysms and lower limb vessels. In addition, 7 patients were evaluated by CT Angio with reconstruction and 10 underwent angiographic evaluation along with coronary angiography. Approximate measurements of aneurysm, their extensions and associated vascular involvement were assessed from these non-invasive and invasive investigations. The width of AAA varied from 6.5 - 10 cm. and length 8-18 cm. In 4 patients AAA size ranged from 6.5-7.5 X 8-10 cm. and in 7, those were 7.6 - 9 X 8-15 cm. Out of 17 patients 6 were in the range of 9-10 X 10-18 cm. (Table 3).

Table 3: Size of the aneurysm (width x length)

No.	Size (in cm.)	No. of patients
1.	6.5 – 7.5 x 8.0 – 10.0	4
2.	7.6 – 9.0 x 8.0 – 15.0	7
3.	9.0 – 10.0 x 10.0 – 18.0	6
Total		17

Straight Dacron tube grafts (18 mm in diameter) replaced AAA in 2 patients and PTFE tube graft in 3, `Y' grafts (5 dacron and 7 PTFE) replaced rest 12 AAA. Among those 12 patients, 5 were aorto-iliac and 7 were aorto- bifemoral grafting (Table 4).

Table 4: Surgical procedures performed

No.	Surgical procedure	No. of patients
1.	Tube graft replacements	5
2.	Y-graft to aorto-iliac segments	5
3.	Y-graft to aorto-bifemoral segments	7
Total		17

Immediate postoperative period was smooth and without complications in all except 3 patients (Table 5).

Table 5: Post operative complications and outcome

No.	Complication	Outcome	No. of patients
1.	Thromboembolism in lower limb	Good (after embolectomy)	1
2.	Subacute intestinal obstruction due to band	Good (after laparotomy and excision of band)	1
3.	Psychosis	Satisfactory (after one months of conservative measures)	1
Total			3

One patient developed thromboembolism in right lower limb, 10 hours after surgery. Early embolectomy resulted in satisfactory limb circulation and palpable pedal pulse.

Second patient developed subacute intestinal obstruction and underwent laparotomy on the 6th postoperative day. A band was found adherent with a small irregular shaped mass near the 2nd part of duodenum. The band was excised with the mass and sent for histopathology. The biopsy report showed mesothelioma.

The recovery of this patient was smooth without further complication. Third patient developed postoperative psychosis and had complete recovery within one month with specific care.

Discussion

The term `aneurysm' refers to a permanent focal dilatation of a blood vessel with respect to the original or adjacent artery. The infrarenal abdominal aorta is the most common site of arterial aneurysm. For abdominal aorta, a localized enlargement of the aorta greater than or equal to twice the normal diameter is aneurysmal. It is also reported that the risk of rupture and the long term survival of patients are directly related to the size of the aneurysm[1,4]. In the Mayo clinic's population based study it was observed that if the AAA diameter is less than 4 cm, the estimated risk of rupture was 0% per year, with increases to 1% per year for diameters of 4.0-4.9 cm, 11% per year for diameters of 5.0-5.9 cm and 25% per year of diameters greater than 6 cm[5]. Exact incidence of AAA in Bangladesh is not available. Only 17 patients in 10 years does not reflect the natural history and incidence of this disease, though NICVD was the only center where they were taken care. Probably lower incidence of this degenerative disease process and poor health consciousness of people in this region of south east Asia are the causes of minimum number of patients in this series.

Since the introduction of open surgical AAA repair in 1951, surgery has become the standard treatment of AAA. We have been using both transperitoneal midline and extraperitoneal antero-lateral approaches for surgical interventions of AAA.

The later one has proved to be well accepted with smooth convalescence period in cases of smaller AAAs. Open repair of AAA is associated with a 0-5% mortality. It is even higher in patients of high risk group[6]. In our series there was no mortality though morbidity was there in 3 of our high risk group patients. In advanced centers of USA and Europe endovascular stent graft (EVG) repair of AAA, become a routine practice. High cost of whole procedure, nonavailability of technology and skilled personnel are the causes behind our late entry into this high-tech arena.

It is estimated that 30-50% of patient with ruptured AAA, die before they reach a hospital. In addition, 30-40% die after hospitalization without operation. When combined with an operative mortality of 3-10%. These data indicate overall mortality rate of 80-90% for AAA rupture[4]. Unfortunately, this high mortality rate has not changed over the past 20 years despite improvement in operative techniques and perioperative management that have reduced elective surgical mortality to less than 5% in most cases[1]. For this reason, it has become a general rule to pay utmost attention to patients with AAA and interfere as soon as possible to avert morbidity and mortality.

Most of our patients were either almost ignorant about their disease or not motivated enough for surgery. Almost constant pain and pulsatile abdominal mass bound them to seek medical care. This is why most of the patients were having huge AAAs and even one with a leaking sac. Leaking aneurysms are rarely reported as such. They are the result of a small tear of the sac followed by a self sealing orifice. Often such cases may be only a prelude to a final massive rupture[4]. These patients should be treated as urgent cases until proven otherwise. Any delay in carrying out surgery may be fatal[2,7]. Keeping all these in mind we performed surgery in one case of leaking AAA with excellent outcome.

Endovascular (EVG) transfemoral placement of aortic stent graft is a promising technique for AAA repair. Long term data are now beginning to be available to compare results of this method with those of conventional aneurysm repair[7,8]. It is definitely a better option in high risk group of patients.

Conclusion

Abdominal aortic aneurysms are a growing problem in the aging population. EVG repair, though a less invasive alternative to open surgical method is a costly procedure yet to be introduced in a poor country like us. The invasive procedure, surgery happens to be the only option offered to our patients. With time, advancement in technical knowhow has enabled us to become more optimum, standardized and technically sound in performing these surgeries with excellent outcome. The diffuse nature and increasing number of cardiovascular degenerative diseases currently calls for all out efforts of concerned medical professionals. Proper screening, evaluation and follow-up with timely referral for intervention are the hallmarks of success in caring patients of this notorious pathology.

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Factors of weaning practices by mothers on children : A hospital based study

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Abstract

Background: Early weaning practices is one of the most important cause of malnutrition of children which ultimately enhance infant morbidity and mortality in the worldwide including Bangladesh. *Aims:* To determine the causal factors of early weaning practices of children. *Materials and methods:* Data were collected from 200 mothers who attended with their children during March 2005 to May 2006 in the out patient department of pediatrics in Moulana Bhasani Medical College and Hospital, Uttara, Dhaka. *Results:* Majority (44.00%) patient was found in early weaning practice followed by late (33.00%) and normal (23.00%) weaning practice category. Nutritional status of patient, type of weaning food of patient and economic status of the patient's family were significant and positively related with the use of weaning practices but in education level of mother, negative and significant relationship was observed. *Conclusion:* Use of proper weaning practices among the mother was improper among the majority cases. For the betterment of children health, existing motivational and awareness programme need to be strengthened and widen by the relevant authorities.

Key words

Factors, early weaning practice and children.

Introduction

Bangladesh is a developing country having 2.1% growth rate with the infant and under 5 children mortality of 56 and 77 respectively[1]. Out of 130 million population in the country 41% are children under the age of 15 years[2-7] of whom 12% is between 0-5 years of age[8]. Approximately 50% of the 10 million deaths each year in developing countries occurs because of malnutrition in children younger than 5 years[9]. Almost 40% population is below poverty line and in addition 25% barely manage to meet in basic minimum needs[10]. According to BBS 2004, 87.90% children are suffering from various degree of malnutrition[11]. Malnutrition widely recognized as a major health problem in the developing countries like Bangladesh[12,13]. It is one of the most common causes of morbidity and mortality in under 5 children of Bangladesh[10]. Breast milk is the sufficient and soul source of energy and nutrients for the first 6 months of life[14]. But breast milk provided by the best nourished mother is insufficient to support the growing infant at the middle of the first year[15]. Human breast milk is the best food for babies and contains all the energy and nutrients needed for the first 6 months of life[16]. Current World Health Organization (WHO) recommendations are that term infants should be exclusively breast fed from birth until about 6 months[17,18]. Proper feeding practice is the cornerstones of the care for infants and young children[16]. Most of the babies in developing countries are given breast milk[19]. However, the time of initiation, duration and supplementation varied widely. The time of supplementation also affects the duration of the breast-feeding practice[20]. The primary reasons for weaning babies earlier were wrong perception of insufficient of milk or refusal babies suckle[21]. The mothers start early weaning practice with traditional gruels; those less nutritious than breast milk[22]. Subsequently the child may suffer from diarrhoea and other infectious diseases. Ultimately the child develops under nutrition. Complementary (non milk, weaning) foods should be introduced at around this time to fill the gap between the energy and nutrient needs provided by milk and those foods that infant requires to maintain normal growth and development[22].

Children are precious resources. A nation, which neglects them, would do so at its own peril. The investment in child health is a direct entry point to the social development, productivity and better quality of life[23]. It is necessary to reduce causal factors of malnutrition for the improvement of the health status of children. Therefore this study was designed to determine the causal factors of inappropriate weaning practices of mother on children.

Materials and methods

Data were collected from 200 mothers who attended with their children during March 2005 to May 2006 in the out patient department of pediatrics in Moulana Bhasani Medical College and Hospital, Uttara, Dhaka. This tertiary hospital is situated at the periphery of capital city that consist of rural and urban slum areas. Most of health care seekers of this hospital are the inhabitants to these areas. The mothers of children were the respondent of the study. Handicapped children or children having surgical problems were excluded from the study. Malnutrition is most easily diagnosed and classified using anthropometry; by measuring the child's dimension and weight[22]. The most recent WHO manual on malnutrition uses a new classification, defined it as the presence of significant wasting (Weight <-2SD of reference weight for age) equivalent to approximately 80% weight for age[24-25]. A value of-2SD was taken as the cut-off point for the detection of malnutrition[26-29].

Other relevant data namely age, sex, nutritional status, type of weaning food, economic status of family and mother's education were collected from mothers by face to face interview procedure.

Definitions and measurement of variables

- Weaning- After the baby is 6 months old, breast milk is by itself no longer sufficient. The baby needs nutrients from added food as well as the breast milk to able to grow properly. This is called weaning[19,30].

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- Early weaning practices - Means that start of weaning food before age of 6 months of child.
- Normal weaning practice - Start of weaning food at the completion of 5 months and beginning of age of 6 months[31].
- Late weaning practice - Start of weaning food after age of 8-9 months.

Variable	Meaning	Type of measure ment	Type of response
Age of patient	Age of patient	Months	1. 6 – 15 months 2. 16 – 36 months 3. 37 – 60 months
Education of mother	Average schooling years of mother	Catego-ries	1. Illiterate 2. Primary 3. Secondary 4. Above
Economic staus of family	Monthly total earning by mother or father or other member of the family	Catego-ries	1. Low < 4000 taka 2. Middle 4000-7000 3. High > 7000
Nutritional status of patient	State of nourishment of patient as determined by Z-score for weight for age.	Z-scores for weight for age	1. Normal= -2 to +1 2. Moderate= -3 to <-2 3. Severe= <-3 to-6

Data management

Socio-demographic data namely, patient's age, sex, nutritional status, type of weaning food, economic status of family and mother's education were collected through semi- structured interview schedule having close and open ended questions and were coded. Number and percentage were used for presentation of data. Chi-square test was used to examine relationships among the variable due to nominal and ordinal types of data and their nature of distribution[32-34]. Data were analyzed by using SPSS version 11.0 and $p < 0.05$ was considered significant.

Results

Highest number of patients (44.00 percent) was found in early weaning practices followed by late (33.00 percent) and normal (23.00 percent) weaning practices (Table 1).

Table 1: Distribution of patients according to use of weaning practices

Weaning practices category	Number	Percentage
Early	88	44.00
Late	66	33.00
Normal	46	23.00
Total	**200**	**100.00**

Patients were categorized into three groups based on age i.e. i) 6-15 months, ii) 16-36 months and iii) 37-60 months[13,26] and presented in Table 2. In early weaning practice, highest (36.36%) proportion of patients was in 16 -36 months of age group patients followed by 37- 60 months (34.09%) and 6-15 months (29.55%). On the other hand, in late weaning practice, highest (42.43%) patients were found in 16-36 age group followed by 37-60 months (39.39%) and 6-12 months (18.18%) age group. In normal weaning practice, highest number of patients were found in 37-60 months (39.13%) followed by 16-36 months (34.78%) and 6-12 months (26.04%) age group. However, relationship between age and weaning practice was not statically significant.

Table 2: Distribution of patient according to age category and weaning

Age Category	Weaning practice			Total
	Early	Late	Normal	
6-15 months	24 (27.27%)	12 (18.18%)	10 (26.04)	50 (25.00%)
16-36 months	32 (36.36%)	28 (42.43%)	16 (34.78)	76 (38.00%)
37-60 months	30 (34.09%)	26 (39.39%)	18 (39.13%)	74 (37.00)
	88	66	46	200

$x^2 = 2.864$, DF = 4, P = 0.581

Data presented in Table 3 shows that comparatively higher weaning practices were observed in case of girls than boys in all weaning categories. But the difference was a bit greater in case of early weaning practices than late and normal weaning practices. The relationship between sex and early weaning practice was not statistically significant.

Table 3: Distribution of sex of patients and weaning practices

Sex category	Weaning practice			Total
	Early	Late	Normal	
Boys	34 (38.64%)	26(39.39%)	18 (39.13%)	78 (39.00%)
Girls	54 (61.36%)	40 (60.61%)	28 (60.87)	122(61.00%)
	88	66	46	200

$x^2 = .010$, DF = 2, P = 0.995

It was observed in Table 4 that highest severe malnourished children were found in early weaning practices followed by late and normal weaning category. But in case of early weaning practices, highest proportion (56.84%) was observed in severe malnourished category followed by normal (22.73%) and moderate (20.45%) malnourished category patient. Almost similar trend was found in case late weaning practices. But in case of normal weaning practices, the trend was opposite i.e. highest proportion was found in normal category followed by moderate and severe malnourished children category. Relationship between malnutrition and weaning practice was positive and significant (P = 0.0001).

Table 4: Distribution of patients according their nutritional status with their weaning practices

Nutritional category	Weaning Practice			Total
	Early	Late	Normal	
Severe	50 (56.84)	24 (36.40%)	4 (8.70%)	78 (39.00%)
Moderate	18 (20.45%)	20 (30.30%)	12 (26.10%)	50 (25.00%)
Normal	20 (22.73%)	22 (33.30%)	30 (65.20%)	72 (36.00%)
	88	66	46	200

$x^2 = 34.013$, DF = 4, P = 0.0001

Data contained in Table 5 shows that highest number of patients (52.27%) was found in diluted milk or cow's milk followed by starchy (40.90%) and infant formula milk (6.82%) in case of early weaning practice. Incase of late weaning practices, highest proportion of patient were found in starchy food followed by diluted formula milk and infant formula milk. But incase of normal weaning practices, highest proportion of patient were found under infant formula milk followed by starchy food. Positive and significant relationship was found between type of weaning food and weaning practice (P= 0.000).

Table 5: Distribution of type of weaning of food of children according to their weaning practices

Weaning food category	Weaning Practice			
	Early	Late	Normal	Total
Starchy food	36 (40.9%)	38 (57.58%)	12 (26.09%)	86 (43.00%)
Infant formula milk	6 (6.82%)	6 (9.09%)	34 (73.91%)	46 (23.00%)
Diluted milk/ cow's milk	46 (52.27%)	22 (33.33%)	0 (0.00%)	68 (34.00%)
	88	66	46	200

$x^2 = 98.114$, DF = 4, P = 0.000

Highest proportions of children (79.55%) under early weaning practices were found in low economic status family followed by medium economic status family (20.45%). Almost similar trend was observed incase of late weaning practices (Table 6). But incase of normal weaning practice category, highest percent of children were found in medium economic status family followed by low and high economic status family. Positive and significant relation was found between economic status and early weaning practice (P = 0.000).

Table 6 : Distribution of economic status of family of patient and weaning practices

Economic Status	Weaning practice			
	Early	Late	Normal	Total
Low	70 (79.55%)	44 (66.67%)	10 (21.74%)	124 (62.00%)
Medium	18 (20.45%)	22 (33.33%)	34 (93.91%)	74 (37.00%)
High	0 (0.00%)	0 (0.00%)	2 (4.35%)	2 (1.00%)
Total	88	66	46	200

$x^2 = 47.014$, DF= 4, P = 0.000

Highest proportion of children (54.55%) was found in illiterate mother category succeeded by primary (31.82%), secondary (9.09%) and above secondary (4.54%) literate mother category in early weaning practice (Table 7). Almost similar trend was observed incase of late weaning practices. But in normal weaning practices, highest proportion of children (34.78%) was found incase of secondary level literate mother followed by an equal proportion of children (30.43%) of illiterate and above secondary level literate mother. Relationship between education of mothers of children and weaning practice was negative and significant. (P = 0.000)

Table 7: Distribution of the mothers according to their education level and weaning practices

Educational categories of mothers	Weaning practice			Total
	Early	Late	Normal	
Illiterate	48 (54.55%)	38 (57.58%)	14 (30.43%)	100 (50.00)
Primary	28 (31.82%)	18 (27.27%)	2 (4.30%)	48 (24.00%)
Secondary	8 (9.09%)	4 (6.06%)	16 (34.78%)	28 (14.00%)
Above secondary	4 (4.54%)	6 (9.09%)	14 (30.43%)	24 (12.00%)
	88	66	46	200

$x^2 = -50.827$, DF = 6, P = 0.000

Discussion

Table 1 indicated that highest proportion patients was in early weaning practices followed by late and normal weaning practices. A study conducted in four countries reported that above 50% mothers supplemented feed their babies at age of two months old[19]. Result in Table 2 revealed that early weaning practice was highest among the 16-36 months age of children compared 37-60 months and 6-15 months age group. Similar finding was reported by an earlier study[13] and indicated that acute malnutrition usually manifests at younger age when inadequate weaning practices compromise the nutritional status of child. Breast milk is superior to any known substitutes in respective of nutrition and immunology[35]. Table 3 showed higher early weaning practice incase of girls compared to boys. Early weaning practice is one of the dominant cause of malnutrition of children. Hence, there are more chances to develop malnutrition in case of girls than boys. Female children were more malnourished than the male children in low and medium socio economic group[35].

Table 4 indicated that highest (56.84%) patients were found in severe malnutrition category followed by moderate malnutrition in case of early weaning practice. This malnutrition might be due to early weaning practices i.e. early supplementation of food that ultimately develops malnutrition of children[22]. Some studies support this finding indicating that traditional weaning practice as important cause for malnutrition[36-39].

Table 5 indicated that highest number of patients (52.27%) was found in diluted formulated milk followed starchy food in early weaning practice. These types of foods are characterized by high water content along with low energy and nutrient density[40]. Another study revealed that perception of mothers on correct breast feeding practices were very inaccurate[35]. Lack of proper perceptions of weaning food also may enhance malnutrition of children. Similar finding was reported in Peru, Malaysia and Caribbean region[21].

Majority children were found in low economic status family followed by medium economic status family under early and late weaning practices (Table 6). A study reported that low purchasing ability of low socio-economic status mothers was a cause of early weaning[35]. Positive and significant relation was found between economic status and weaning practice.

Highest proportion of children was found in illiterate mother category succeeded by primary, secondary and above secondary literate mother category under early and late weaning category. Another study showed significantly more illiterate mother exclusively breastfed their babies up to five months of age[41]. A study in Philippines reported that lower level of education and rejection of infant food, prolonged breast-feeding[42]. Relationship between education of mothers of children and weaning practice was negative and significant (P = 0.000). A study conducted in 42 developing countries indicated strong association of maternal education with child health[43]. Maternal education appears to be more protective for children in wealthy than for children in poor familes[44].

Conclusion

The findings of this study indicate that proper use of weaning practices was not up to the mark incase of majority cases (56.00 %). Nutritional status of patient, weaning food of patient, economic status of the patient's family, education level

of mother were significantly related with the use of proper weaning practices. Hence, there is an urgent need to expedite the use proper weaning food practices among the poor economic status and illiterate mother for the improvement of child through various information media.

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Recurrent posterior fossa meningioma in a young child : A case report

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The ORION 2008; 30: 565-567

Abstract

16 years old boy - Mizanur Rahman presented with recurrent posterior fossa meningioma within 2 years of initial surgery. Meningiomas are generally benign slowly growing, circumscribed neoplasm arising from arachonoid cap cells with secondary attachment to dura. Meningioma constitute about 15-20% of all intracranial tumours. It commonly occurs in the forth to sixth decades of life. Females have meningiomas more often then males, having a ratio of 3:2. Posterior fossa meningiomas are uncommon in adult and very rare in chidhood. Only 1.5% of meningioma occur in children. Microscopic total removal is the goal of surgery to avoid recurrence free survival. However recurrent meningiomas are common following subtotal or partial removal of tumour and usually from primary site. Here author presents the case that had recurred not from the primary site but from a regional area within short period of time interval. Both the primary and recurrent tumour were successfully managed by microsurgical approaches.

Key words

Meningioma, recurrent meningioma, posterior fossa.

Introduction

The meningioma is the neurosurgeon's "friend" and often his most enduring challenge[2,3]. Meningioma is the second most common intracranial neoplasm following glioma[4]. It is arachoinoidal cap cell origin but attached with dura. Commonest locations are in the vicinity of arachonoidal granulation tissue and arachoinoidal villi such as convexity and parasagittal and sphenoidal ridge location[2]. Female are more commonly affected then male because of hormonal influence[1,4]. Childhood meningioma are associated with neurofibromatosis or previous irradiation. The more age more chance of development of meningioma.

It also carries the possibility of "cure" in approximately 80% of cases. The posterior cranial fossa, the largest and deepest of the three cranial fossa containing the 10 pairs of cranial nerves, brain stem, cerebellum, vertebral and basilar artery and major cerebellar arteries. It is bounded infront by dorsum selle and clivus, behind by the squamous part of occipital bone and on each side petrous and mastoid part of temporal bone[1]. Posterior fossa is penetrated by jugular foramen, internal acoustic meatus, hypoglossal canal. It is bounded above by tentorial cerebelli.

It communicates above by tentorial hiatus and below with spinal canal by foramen magnum. In the posterior fossa, meningioma can be arise from tentorial surface, suboccipital surface of cerebellum, cerebellopontine angle, pertoclivcal junction, lateral petrosal bone, jugular foramen, foramen magnum, and fourth ventricle[1]. Meningioma are well demarcated round or oval and frequently multiloculated. They are firm and pink and vary in consistency from soft to rock hard. Although the etiology of meningioma is still unknown, however tumour has arisen from repeated trauma, radiation and viral infection[2]. The role of female hormone- progesterone, play a role in the genesis of meningioma, thus explaining the higher incidence of meningioma in women, that accelerated growth during pregnancy[3]. Chromosomal abberetions are regularly seen in meningiomas, meningioma cells often lose one copy of chromose 22. Neurofibromatosis 1 and 2 (NF-1 & NF-2) may be associated with meningioma[1,3,4].

Posterior fossa meningioma is usually associated with obstructive hydrocephalus. Clinical symptoms most often related to hydrocephalus, long tract sign from brain stem compression, cerebellar syndrome and lower cranial neuropathy due to stretching and or ischemia of nerves[1,4].

Approach to the posterior fossa depends upon the site of pathology. Common approaches are:

1. Midline suboccipital craniectomy/craniotomy.
2. Lateral retrosigmoid suboccipital craniectomy.
3. Far lateral transcondylar approach[1,4].

When surgical resection is incomplete, meningioma will continuously grow unless it stop spontaneously or by any kind of therapautics. The term recurrence should be reserved for those meningioma in which macroscopic total removal were achieved[1-3].

Several factors are responsible for the recurrence: Incomplete surgical removal, stimulation of tumour growth by successive operation and modification of histological aspects with dedifferentiation. CT scan detactable recurrence would take 6 months for very rapidly growing meningioma, 6 years of moderately growing meningioma and 11 years in very slowly growing meningioma[4].

Case report

16 years old Mizanur Rahman presented to us with history of posterior fossa surgery 2 years back. Before his first surgery he had headache, vomiting, visual blurring. At that time MRI of brain revealed midline tentorial meningioma with obstructive hydrocephalus.

External ventricular drain(EVD): External ventricular drainage(EVD) was applied for management of HCP and Midline suboccipital craniotomy and microscopic gross total removal of meningioma was done in same sitting. Peroperative tumour found hard, gritty, nonsuckable, difficult to remove enmass and attached with undersurface of tent. Hence it was removed in piece meal following detached from the undersurface of tent.

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Figure 1 : T2WI shows hypointense midline lesion, no evidence of C P angle lesion in initial MRI

Figure 2 : Sagittal view following contrast shows brilient enhance and dural tail sign along the tent

Postoperatively patient recovers well and EVD was removed on 5th postoperative day.

Histopathology revealed transitional variety of meningioma. After surgery his symptoms resolved within short time.

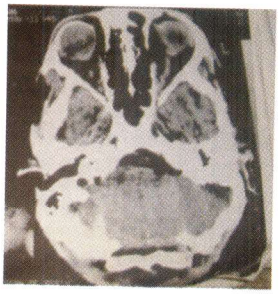

Figure 3 : Postoperative CT scan shows evidence of posterior fossa craniotomy and total tumour removal

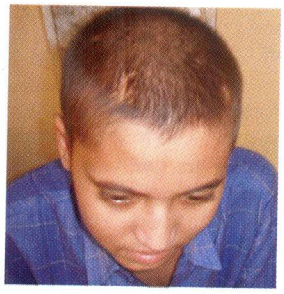

Figure 4 : Frontal scar for EVD

The patient had only one follow up in early postoperative period where he was found quiet normal except some visual blurring.

For last 6 months his visual blurring progressively increased and leaded to bilateral blindness. He also developed left cerebellar syndrome in the form of left sided ataxia, intension tremor, nystygmus, dysarthria and dysphagia. He had left sided deafness but no facial weakness.

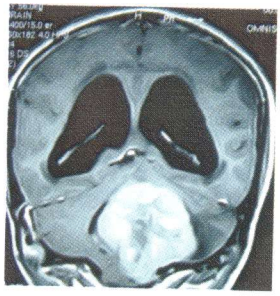

Figure 5 : Contrast enhancing mass in left CP angle region

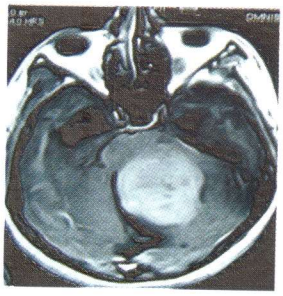

Figure 6 : Axial view of recurrent meningioma

Repeat MRI of brain was done and found huge cerebellopontine angle meningioma with obstructive hydrocephalus.

This time he underwent lateral retrosigmoid suboccipital craniectomy and microsurgical gross total removal was done. Peroperative tumour found attached with petrosal dura beneath the internal acoustic meatal opening. It was tough, gritty, hard, less vascular, difficult to remove by microseissor. Hence it was removed by metzenbaum and BP blade number 11.

Postoperatively he had no facial weakness. His dysphagia, dysarthria, headache, ataxia reduced. He developed meningitis on 5th postoperative day which was successfully managed by intravenous vancomycin. His vision did not improved significantly because of secondary optic atrophy. His postoperative CT scan of brain revealed no evidence of residual tumour, little heamorrhagic contusion of middle cerebellar peduncle and resolving HCP.

Histopathology reported transitional variety of meningioma again.

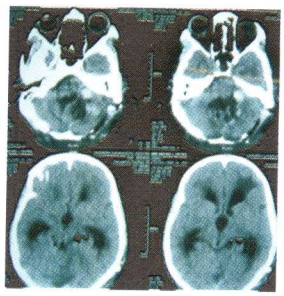

Figure 7 : CT scan following complete removal of meningioma

Figure 8 : Sagittal view shows reestablishemnt of CSF pathway from acuduct to 4th ventricle

Discussion

Meningioma is the 2nd intracranial neoplasm. Posterior fossa meniongioma although rare, but the recurrence is very rare. Clinically it present with headache, vomiting, ataxia and visual blurring. As meningioma is slow growing so it causes compression and distortion of 4th ventricle, hence patient develops obstructive hydrocephalus. Clinically it is manifested by headache, vomiting and vsual blurring. On funduscopic examination papilloedema is the commonest findings of raised I.C.P. Here we got secondary optic atrophy which was the consequence of severe papilloedema. Brainstem feature and cerebellar syndrome was due to compression of brain stem and cerebellum by the meningioma[4].

Before going to manage the posterior fossa meningioma there are obvious role of management of HCP. Hydrocephalus can be managed by various way-such as VP shunt, Endoscopic 3rd ventriculostomy, External ventricular drainage (EVD). Commonly we are doing VP shunt and EVD. However endoscopic 3rd ventriculostomy is a new and advanced technique in our country. We did this procedure in some of our patient with good results. We couldnot do endoscopic 3rd ventriculostomy in this patient because at that time it was not available in 2004. Hence we managed him by EVD.

Posterior fossa meningioma can arise from cerebellar convexity dura, tentorial dura, petrosal dura, clival dura and tela choroidae of 4th ventricle. In the C.P angle meningioma it can arise either infront of IAM opening or suprameatal or inframeatal or postmeatal origin. It clinically presents with hearing problem, facial weakness, facial numbness, dysphagia, dyarthria, dysphonia due to lower cranial nerve palsy[1].

Management of this C.P angle meningioma is same as traditional retrosigmoid suboccipital craniectomy and tumour removal by microsurgical technique. Commonest problem encounter was bleeding and potential injury to lower cranial and facial nerves.

Simpson classify the extent of meningioma removal into 5 grades:-

- Grade 1 : Complete removal with resection of dura and abnormal bone.
- Grade 2 : Complete removal with coagulation of dural attachment.
- Grade 3 : Complete removal without coagulation of dural attachment .
- Grade 4 : Partial removal (>10% preserved).
- Grade 5 : Biopsy.

Figure 9 : Shows the 2 separate scar mark first in the midline later in the retroauricular region

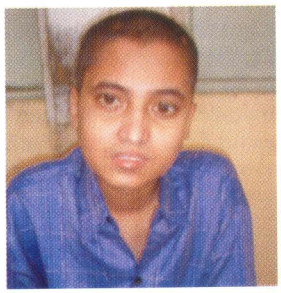

Figure 10 : Final appearance of patient having no facial deformity and ocular dysmetry

The rate of meningioma recurrence depends upon extent of tumour resection and tumour histopathological grading[3]. The more radical the operation less chance of recurrence. In Simpson's analysis the recurrence rate following Grade 1 surgery was 9% compared to 19% in Grade 2, 29% for Grade 3 and 44% for Grade 4[2].

Mushrooming, lobulated meningioma more likely to recur then round ones. The mean average doubling time is 205 days (50 days to 500 days) as noted by Jaaskelainen et al, hence it is not surprising to have high rate of recurrence[2]. Multivariate analysis showed that risk factors of recurrence included coagulation of dural insertion, invasion of bone and soft consistency of tumour[2,3].

Conclusion

Rate of growth is fundamental factor for development of recurrence. Benign meningioma recur locally after 5 to 10 years. If a meningioma doubles in 1000 days it would take 11 years to be visible on CT scan. Here we have discussed the recurrent posterior fossa meningioma in an unusal age. Recurrent developed not from the primary site but from regional area of posterior fossa called CP angle. We could managed successfully both the tumour by microsurgically which was documented by postoperative CT scan following each surgery where gross total tumour removal was evident in the scan. As patient presented with secondary optic atrophy before 2nd operation hence his vision did not improved following surgery but his other neurological feature did improved significantly without facial weakness and other sensory-motor deficit.

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Takayasu's disease : A case report

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Summary
Takayasu's disease is an idiopathic inflammatory arteriopathy involving the aorta and its main branches. Symptoms are related to vascular insufficiency of affected organs, especially the brain, eye, heart and kidneys. Major ocular complications consist of ischaemic retinopathy, complicated cataract and neovascular glaucoma. The definite diagnosis can be established by carotid doppler study or aortic angiography. We herein reported a Bangladeshi old male patient with ocular ischaemia due to this disease.

Key words
Takayasu's disease, pulseless arteritis, color fundus photography, carotid doppler study.

Introduction

Takayasu's disease is an inflammatory disease of the aorta & its branches in aortic arch[1]. This decreases the flow of blood to the areas supplied by these branches, which in turn lead to a lack of pulse in those areas- arms, legs, neck and head-producing symptoms. Symptoms consist of aphasia, transient hemiparasis, unilateral transient amblyopia or persistent blindness, headache, vertigo, syncopal attack and muscle wasting. Takayasu noted lack of pulse in the arteries of the eye, thus the name pulseless disease[2]. Most common in the orient and showing predilection for young women, but also occurring in males throughout the world. It is a chronic relapsing disorder which may extend from childhood to late adult life and seldom occurs in persons over 40 years of age. The condition is progressive and the prognosis is poor, mostly in untreated cases. Death usually occurs after a few years, although survival for 20 years after onset of symptoms has been reported. It is probably of auto-immune origin[3].

This vascular disturbance was first described by Mikito Takayasu, a Japanese ophthalmologist at the 12th Annual meeting of the Japan Ophthalmology Society in 1908. His patient was a 28 years old Japanese girl with retinal neovascularization and absence of pulses in superior extremities[4]. Subsequently 57 cases have been reported. It has been observed most frequently in young women. Major complications attributed to the disease are Takayasu's retinopathy, secondary hypertension, aortic regurgitation, aortic or arterial aneurysm etc. There are geographical variations in the clinical aspects of this disease[5].

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Case report

A 55 years old man hailing from Faridgonj, Chandpur gradually developed pain and claudication in both hands and feet with visual disturbances on both eyes. He also gave the history of fatigue, weight loss, headache, dizziness, syncope, chest pain etc. Cardiovascular evaluation showed loss of pulses in upper limb. The lower limb pulses were normal. BP 90/62 mm of Hg in lower limb. Both carotid pulses were palpable with loud bruit. Ocular examination showed features of ischaemic retinopathy with early cataract. Neurological examinations were otherwise normal.

Haematological examination reveals normochromic, normocytic anemia, mild leukocytosis with raised ESR (80mm in 1st hour). Chest Radiography showed cardiomegaly with widening of aorta. ECG reveals features of anterior wall ischaemia. Carotid doppler study showed narrowing with atheromatous plaque at and near carotid bifurcation and its major two- external and internal carotid arteries.

Magnetic resonance imaging revealed thickening of the aortic arch extending into both carotid and subclavian arteries.

Arch aortography shows moderate stenosis in aortic arch and in its branches. It was diagnosed as a case of Takayasu's arteritis. Initially he was treated medically by high dose prednisolone (2mg/kg/day), methotrexate, cyclosporin, aspirin (150mg/daily) and then managed by surgical treatment-reconstructive vascular surgery & some carotid interventions. His symptoms were improved, the ESR returned to normal (5mm/hr). After proper counselling the patient was satisfied and remain asymptomatic with low dose prednisolone (5mg/daily).

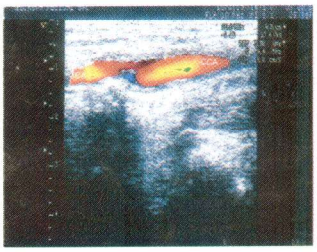

Figure 1: Carotid doppler study shows narrowing in common carotid artery

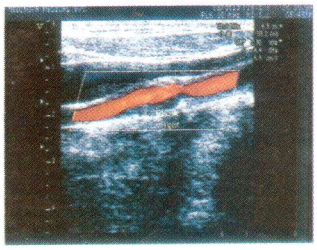

Figure 2: Carotid doppler study showing narrowing in right common carotid artery

Discussion

Takayasu's disease is a multisystem involvement disorder. Various categories are observed here:-

Group-I : Uncomplicated Takayasu's disease, with or without involvement of the pulmonary artery.
Group-II : TD with a single complication- ocular or cardiac.
Group-III : TD with two or more complications[6].

There has been extensive research on this granulomatous vascular disorder throughout the whole world. There is often a long interval between the onset of symptoms, which usually begins at a young age and the establishment of the diagnosis, which is done at later age i.e. 35-60 years. We have diagnosed the case at the age of 55 years[7].

Most of the patients have general symptoms of malaise, headache, fever, fatiguability, dizziness, transient visual disturbances, neck pain, palpitation, dyspnoea, arthralgia, stiffness of shoulders and nausea. Syncopal attacks are not uncommon. Haemoptysis occurs rarely[8].

Our patient also presented with low grade fever, fatigue, weakness, headache, syncope, chest pain etc. Major symptomatology of Takayasu's disease was consistent with other Japanese and Scandanavian co-workers[9].

Though the aetiology of TD remains unknown, an autoimmune mechanism may attribute to the disease process. Attempts to demonstrate circulating antibodies against antigens of the arterial wall, group-A streptococcal infection, association with tuberculosis, hormonal imbalance, ethnic susceptibility and genetic predispositon may be pathogenetic factor[10].

Figure 3: Doppler study- narrowing in left subclavian artery

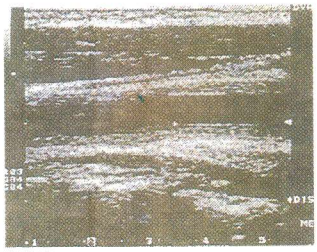

Figure 4: Ultrasound scan of the internal carotid artery demonstrating marked thickening of the arterial walls

The lesions in Takayasu's disease show a panarteritis of the aorta and its main branches and of the pulmonary artery. The lesions of the arterial wall begin with a mesoperiarteritis with subsequent fibrosis and are followed by fibrotic thickening of the adventitia and the vasa vasorum. These lesions lead to an intimal fibrosis, which progresses usually in marked thickening often with thrombi. The destruction of the arterial wall leads to both stenotic and ectatic changes of the lumen, especially occlusion. These affected portions are clearly demarcated from the adjacent normal sites & segmental `skipped' lesions are observed. In our patient carotid doppler study showed gross thickening of the arterial walls with irregular narrowing in the carotid arteries[11].

Shimatsuku & co-workers found irregular narrowing with gross thickening of arterial walls in 71.81% cases[12].

Figure 5: Magnetic resonance imaging of the aorta and its major proximal branches. There is thickening of the aortic arch that extends into both common carotid arteries

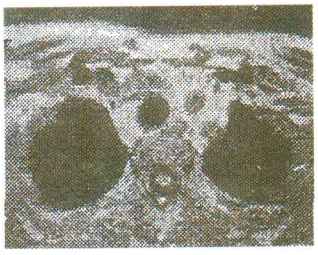

Figure 6: Almost complete obliteration of the right carotid artery and both subclavian arteries

Cardiac complications are common associations of Takayasu's disease. It is due to involvement of coronary artery and its branches. Patients usually present with varying degree of angina with or without arrythmias and heart failure. Our patient also has got chest pain where ECG revealed anterior wall ischaemia. This cardiac event was supported by Yokatima & co-workers in 2004[13].

In a large series of 161 patients, the 20 years overall survival rate after the diagnosis was established in nearly 83 percent. Recently the prognosis of patients with Takayasu's disease has improved among the major factors causing death or severe disability are congestive heart failure, cerebro-vascular accidents and blindness[14].

Conclusion

Takayasu's disease is not uncommon in Bangladesh. Due to its varying symptomatology and multi-system involvement nature, it may be diagnosed incidentally. Proper cardiovascular evaluation is mandatory for each & every patient, and must be taken as a routine clinical evaluation tool. Simply examination of pulse can draw the attention of the attending physician to the diagnostic clue of Takayasu's disease.

So, our message to relevant doctors i.e. general practitioners, cardiologists, cardiac surgeons, ophthalmologists & other specialists is: "when you feel the pulse of a Bangladeshi patient please do not forget the name of a Japanese disease- Takayasu's arteritis".

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Quadruplet pregnancy : A rare occurrence

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The ORION 2008; 30: 570-571

Summary

Multiple pregnancy i.e Quadruplet pregnancy, a rare event occurred in different part of the world. A Quadruplet pregnancy (Without taking ovulation induciug drugs) and delivery of four (4) healthy babies are found in Bongabandhu Sheikh Mujib Medical University (BSMMU) in last year (2006) and is described here in details.

Introduction

Though Quadruplet pregnancy is uncommon but it is not rare because, there is history of delivery of five babies in Bangladesh. In July, 2003 a women from Manikganj is being pregnant without taking any ovulation inducing drugs. Still quadruplet pregnancy is rare and up to 1999 there are only 128 sets of Quadruplet pregnancy recorded throughout the world.

Different references show that in 1971, an Italian woman gave birth of 15 babies. This is world record (but the babies expired soon after) 10 siblings were born in Brazil in 1946, this is again world record of 10 alive babies. In 1971, 9 babies were born in Australia, 7 babies were born in 1997 in USA and in 1998 in KSA. There are other records of alive babies. In 1915, 4 babies live longer than others in USA. In 1934, 5 babies named as "Dianoquintoplates" lived up to their childhood in Canada and in 1974, 6 babies (six to plates) Named as "Rozen Quintos" also lived longer is Montogomary[1].

Incidence of multiple pregnancy[5]

- 1 in 80 is more or less natural
- Triplets 1 in 800
- Quadruplets 1 in 8000

So, more than twin births always create curiosity throughout the world. Recently multiple births are in front line news but unfortunately there are no official records in Bangladesh. The brief information that we get from daily newspapers are:

A women from Jatrabari, 2001 first gave birth to 4 alive babies in local hospital by caesarean section and interestingly they are all alive and she has taken ovulation-inducing drugs. In May 2001, another women from Savar gave birth to 3 female babies. They are first test tube triplets in Bangladesh under care and supervision of renowned obstetrician in Dhaka. In December 2002, 4 babies were born in Mitford Hospital. In May 2003, 4 testtube babies were born but because of prematuirty and low birth weight they expired within a short time. In October 2003 and in August 2004, Quadruplets were born in local hospital without taking any fertility drugs[2].

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Former Chairman of Gynae Department, BSMMU
President, OGSB

Case report

A 34 year old woman was admitted in obstetrics and gynecology department of BSMMU on 15th July, 2006 at 5 AM with the complaints of pregnancy for 31+ weeks and history of premature rupture of membranes (PROM) with known case of Quadruplets pregnancy. She had four daughters, all alive and had vaginal deliveries. So, they were very eager to have a male baby. It was her 5th pregnancy and naturally she was not on ovulation inducing drugs. Her first day of last menstruation was 8 December 2005; accordingly her expected date of delivery was on 15 September 2006. She was regular antenatal check up, because of unusual enlargement of abdomen and exaggerated signs symptoms of pregnancy, an ultrasonography done on 17 May 2006, which for the first time showed that she had Quadruplets pregnancy in local clinic. So for better management before, during and after delivery and to prevent probable complications, she was referred to Dhaka where she was under regular check up, duly immunized. Repeated scan confirmed Quadruplets pregnancy and polyhydramnios. Then she developed respiratory distress and lower abdominal pain and was admitted to local hospital on July 12, 2006 for having extra bed rest and subsequent management. Here besides other management, a 4D Scan on 13th July showed two babies are in transverse and 2 babies are in breech and approximate weight of the babies are 1.18 kg, 1.2 kg, 1.46 kg, 1.3 kg respectively and there was no gross congenital anomaly. When she developed PROM even after rest and tocolytics, she was referred to BSMMU for extra care and management of premature low birth weight babies.

Figure: 4D scan ultrasonograph

In BSMMU, when she developed preterm labour, gentle per vaginal examination done and found cord and hand prolapsed with good cord pulsation. Emergency caesarean section was arranged with joint collaboration with expert anesthetists and pediatricians. The following sequence happened:-

1st baby ⟶ Transverse lie, separate sac, male, 1.4 kg membrane ruptured
2nd baby ⟶ Breech, separate sac, female 1.2 kg
3rd baby ⟶ Breech, separate sac, female 1.28 kg
4th baby ⟶ Transverse lie, separate sac, male 1.3 kg

There was 2 placenta, 1 big placenta with 3 fused placental portion and a separate placenta like succenturiate lobe of placenta.

Figure: Quadruplet babies

Extra precaution was taken to prevent post partum hemorrhage (PPH) and infection. Babies were received by pediatrician and managed accordingly.

Discussion

With the advantage of Assisted Reproductive Technique (ART), ovulation induction and its consequence, in-vitro fertilization and embryo transfer (IVF & ET), Gamete and Zygate Intra Fallopian Transfer (GIFT & ZIFT) multiple pregnancy is a common sequence. It is done to increase the chances of pregnancy[10]. So triplets, quadruplets, quintoplets, sextuplets are common and sometimes selective fetocide are done to increase the chances of survival of rest of the embryos[9]. Intra Cytoplasmic Sperm Injection (ICSI) and laser assisted zona drilling are the most modern method of ART. But without involving ART, spontaneous pregnancy and its sequence to multiple pregnancy (3,4,5,6,.....) babies are no doubt a rare occurrence[8]. Usually this happens when simultaneous shedding of two or more oocytes and fertilization by different spermatozoas since zygotes have totally different genetic constitutions. So, they have no more resemblance to one another. They may or may not be of different sex. They implant individually in uterus and usually each have its own placenta, amnion and chorionic sac. Sometimes, two or more placentas may fuse together and walls of the chorionic sac may also come into close apposition and fuse. Occasionally, each have their different blood groups (Erythrocyte Mosaicism)[6].

Another type of multiple pregnancy develops from a single fertilized ovum and results from splitting of zygote at various stages of development as:-

i) At two cell stage-each embryo has its own placenta, amnion, chorionic cavity.

ii) Splitting of inner cell mass into completely separated groups. Here each embryo have common placenta and a common chorionic sac but separate amniotic cavities.

iii) Splitting of inner cell mass in rare cases at bilaminar germ disc stage. Here embryos have a common placenta, common amniotic cavity and a common chorionic cavity. They are reorganized by their strong resemblance in blood groups, same sex finger prints and external appearances such as eye, hair color etc.[5,6,7]

For early diagnosis of multiple pregnancies, exaggerated signs symptoms of pregnancy plus maternal serum α fetoprotein if possible and ultrasonography all that is needed[8].

Conclusion

Each multiple pregnancy is a high risk pregnancy so they should get due attention, special care by trained doctors in high risk care center. They should be properly monitored, should get proper extra diet and nutrition, early diagnosis of probable complications and to take special precaution to prevent the complications. Delivery should be conducted and monitored (either normal or operative) by properly trained person in specially equipped centre where due attention and strict vigilance can be paid to manage post partum haemorrhage (PPH). Babies should be cared by expert pediatricians.

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Launching of New Products

Axet 70 ml
Taste masked suspension

Cefuroxime Axetil 125 mg/ 5 ml

A brand new formulation of excellence

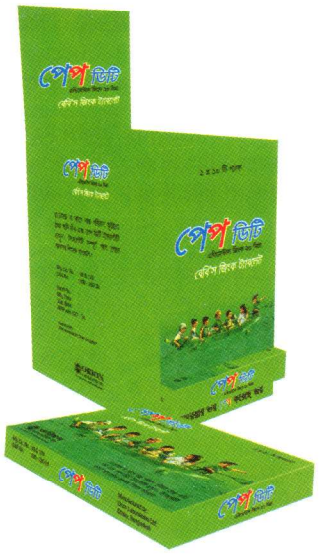
Orion has launched Axet 70 ml suspension; a new pack size of Cefuroxime Axetil and it is a innovative formulation towards improved palatability & optimum dissolution. Axet suspension has been made most palatable by masking the taste of Cefuroxime Axetil with the use of optimum level of micro-coating incorporated with FDA approved new type of sweetening ingredient & specially blended banana flavor. Axet is indicated for the treatment of the infections like- 1. Upper and lower respiratory tract infection, such as acute and chronic bronchitits, pneumonia, sinusitis, otitis media, tonsillitis & pharyngitis. 2. Skin & soft tissue infections such as peritonitis, wound infections and impetigo. 3. Urinary tract infections such as pyelonephritis and cystitis. 4. Gonorrhoea. 5. Septicemia. 6. Meningitis. 7. Prophylaxis against infections in abdominal, pelvic, orthopedic, cardiac, pulmonary, oesophageal & vascular surgery. Recommended dose of Axet suspension for children from 3 months to 12 years is for pharyngitis/ tonsillitis is 10 mg/kg/day bid for 10 days and for acute otitis media, acute bacterial maxillary sinusitis and impetigo is 15 mg/kg/day bid for 10 days. Axet 70 ml powder for suspension is presented in a bottle containing dry powder to prepare 70 ml suspension. MRP for 70 ml Tk. 215.00.

Pep DT

Elemental Zinc 20 mg

Baby's Zinc tablet

Orion introduced Pep DT, a new formulation of elemental Zinc. Each dispersible tablet contains Zinc Sulphate monohydrate USP equivalent to 20 mg elemental Zinc. Pep DT offers a formulation of excellence and versatile approach for the management of childhood diarrhea. Pep DT ensures convenient mode of administration. Pep DT is indicated for the treatment of diarrhea, especially for the children below 5 years of age in connection with oral rehydration solution (ORS). Recommended dose of Pep DT for children under 6 months is half of a tablet daily for 10-14 days and for children from 6 months to 5 years is 1 tablet daily for 10-14 days. Pep DT is presented in a box containing 10 packs (each individual pack contains 10 tablets in blister). MRP of Pep DT is Tk. 200.00/box.



Zoana

Nitazoxanide INN 500 mg tablet

Orion has launched Zoana tablet a new FDA approved tablet dosage form of Nitazoxanide. Zoana tablet facilitates the effective treatment of protozoal infections and helminth infestations in adults. Zoana is indicated in various protozoal infections 1. Giardiasis caused by Giardia lamblia 2. Cryptosporidiosis caused by Cryptosporidium parvum 3. Amoebiasis caused by Entamoeba histolytica and in various helminth infestations. Zoana is drug of pregnancy category B, therefore, it should be used during pregnancy only if clearly needed. Caution should be exercised when Nitazoxanide is administered to a nursing woman. Zoana tablet is supplied in a box containing 3X4's tablets in Alu-Alu blister pack. MRP of Zoana tablet is Tk. 120.00/box.

MSD NEWS

Moulvibazar

Camellia Duncun Foundation Hospital, Shamshernagar: On 29th December 2007 a round table meeting was arranged by Camellia Duncun Foundation Hospital, Shamshernagar, Moulvibazar on "Review on Cephalosporin" at the conference room. Dr. A. B. M. Anwarul Haque, Hospital Incharge chaired the meeting. About 20 doctors attended the meeting.

Beanibazar Sadar: On 19th March, 2008 a round table meeting was arranged by the doctors of Beanibazar Sadar on "Comparative Review on Cephalosporin" at City Gate Chinese Restaurent. Dr. M Faiz Ahmed, UH & FPO chaired the meeting. About 25 doctors attended the meeting.

Chunarughat Upazila Health Complex: Chunarughat Upazila Health Complex arranged a round table meeting on March 23, 2008 on "Comparative Review on Cephalosporin" at the conference room. Dr. Abdul Momen, UH & FPO was present as the chairperson. About 15 doctors attended the meeting.

Mymensingh

Valuka UHC: A round table meeting was arranged by Valuka UHC, Mymensingh on 25th March 2008 on "Comparative review on Cephalosporin" at the room of UH & FPO. Dr. Md. Asrafuddin, UH & FPO was present as the chairperson. About 20 doctors attended the session.

Rajshahi

Durgapur UHC: Durgapur UHC arranged a round table meeting on 21st January 2008 on "Role of Ceftriaxone to treat various infections" at the conference room. Dr. Md. Aftab Uddin Ahmed, RMO was present as the chairperson. About 25 doctors attended the meeting.

Tarash UHC, Shirajgonj: On 17th February 2008 a round table meeting was arranged by Tarash UHC on "Role of Ceftriaxone to treat various infections" at the Conference Room. Dr. Md. Abdul Kader, UH & FPO was present as the chairperson. About 20 doctors attended the meeting.

Dhunat UHC, Bogra: A round table meeting was arranged by Dhunat UHC on "Role of Ceftriaxone to treat various infections" on 16th February 2008 at the room of UH & FPO. Dr. Golam Hossain, UH & FPO chaired the meeting & Dr. Fazlul Haq, RMO was the chief guest. About 20 doctors attended the session.

General Hospital, Pabna: On 23rd March 2008, Pabna General Hospital arranged a round table meeting on "Pulmonary embolism" at the Conference Room. Dr. Dipak Kumar Ghosh, Deputy Civil Surgeon, Pabna was the chairperson of the occasion & Dr. Iftekhar Mahmood, Senior Consultant, Medicine was the keynote speaker. About 50 doctors attended the meeting.

Health Camp

Moulvi Bazar

Hobigonj Sadar: On 19th &20th February 2008 Orion Laboratories Ltd. arranged a Health Camp for poor patients at Hobigonj Sadar. Dr. Akhter Uddin Murad was present as the chairperson of the camp. About 200 patients of Hobigonj Sadar were seen in the health camp.

MSD NEWS

Medical Services Department (MSD) of ORION Laboratories Limited successfully arranged significant number of Round Table Meetings, Scientific Seminars, Intern Doctors Reception Programs & Health Camp in different venues of all over Bangladesh during November 2007 to March 2008.

Scientific Seminar

Cardio Vascular Surgery Department, NICVD, Dhaka: Renowned freedom fighter and American citizen 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 and 2005, 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. From the last 21st January, he advised the vascular patients, performed operations and demonstrated some educational workshops for the doctors. Mention that, Dr. Rahman is the husband of freedom fighter Mrs Sitara Begum, Bir Protic. On 22 January 2008, he presented a paper on ``Overview of current Endovascular practice in Vascular Surgery''. The seminar was organized by Cardiovascular Surgery Department, NICVD' at Bangladesh China Friendship Conference Centre. Dr. A K M Mohibullah, Director & Professor, NICVD chaired the seminar and Professor N. A. Kamrul Ahsan, Professor & Head of department, Cardiac Surgery, NICVD & Hospital and other cardiovascular physicians & surgeons from various institute of Dhaka were present in the seminar. Orion Laboratories Ltd sponsored the seminar. Mr. Tapan Kumar Roy, Senior Vice President, Marketing and Dr. Mohammad Zakirul Karim, Senior Manager, MSD, Orion Laboratories Ltd were also present on the occasion.

Bangladesh Institute of Child Health & Dhaka Shishu Hospital, Dhaka: Bangladesh Institute of Child Health & Dhaka Shishu Hospital jointly arranged a Scientific Seminar on "Role of oral Zinc Supplementation on growth of preterm babies" on 11th March 2008 at Bangladesh-China Friendship Conference Centre. National Professor M R Khan was present as the Chief Guest in the seminar. Professor Md. Ruhul Amin, Secretery, Academic Council welcomed everyone in the seminar. The keynote speech was delivered by Dr. Md. Nazrul Islam. The speaker highlighted the result of oral zinc supplementation on preterm babies from a randomized controlled trial carried out in neonatal ward of Dhaka Shishu Hospital, in collaboration with Atomic Energy Centre, Dhaka from January 2006 to May 2007. The study revealed a distinct beneficial role of oral zinc supplementation along with multivitamins on preterm babies. The study showed zinc supplementation with multivitamin helps in promoting their growth. Professor M. A. K Azad Chowdhury, Professor of Pediatrics & Head of Neonatology, Professor Md. Salim Shakur, Director, Dhaka Shishu Hospital, Dr. S. K. Roy, Senior Scientist, ICDDR,B, Dr. Tracey Lynn Perez Koehlmoos, Health System Research Scientist, ICDDR,B and Dr. Shamashad Begum Quraishi, Senior Scientific Officer, Chemistry Division, Atomic Energy Centre expressed their expert opinions on the topic as discussants. Chairperson Professor Mohammed Hanif, Academic Director, BICH ended the seminar by delivering his closing speech. The seminar was sponsored by Orion Laboratories Limited. Mr. Tapan Kumar Roy, Senior Vice president, Marketing; Orion Laboratories was present in the occasion.

Paediatric, Gynae Department of RpMCH & Bangladesh Perinatal Society: On 15th March 2008 Department of Paediatric, Department of Gynae & Obstetrics of Rangpur Medical College Hospital and Bangladesh Perinatal Society, Rangpur jointly arranged a scientific seminar on "Perinatal health issues" at Lecture Gallery-1, Rangpur Medical College. Prof. Md. Azizul Islam, Principal, RpMCH & Head of the Dept. of Gynae & Obs. chaired the seminar and Prof. T A Chowdhury, Prof. M. N. Absar, Head of the Dept. of Paediatrics, Dr. Md. Qazi Shahadat Hossain, Director, RpMCH were the special guests. The keynote speakers of the seminar were Dr. M. A. Mannan, Prof. Sayeba Akhter, Prof. Md. Nurul Absar, Prof. Md. Azizul Islam, Prof. Laila Arjumand Banu and Prof. Md. Shahidullah. Prof. T. A. Chowdhury, Prof. Nurul Islam, Prof. Hamidur Rahman & Prof. Nazmun Nahar were present at the occasion as the panel members. About 250 doctors attended the scientific seminar.

Department of Gynae & Obs. MMCH: A scientific seminar was arranged on 23rd February 2008 by department of gynae & obs. at the Conference Room, MMC. Professor Dr. Kamrun Naher, Head, Dept. of Gynae & Obs chaired the seminar. The topics of the seminar were "Mode of delivery and risk of delivery related perinatal death among twins at term: a retrospective cohort study of 8073 births", "A case of intra-uterine growth retardation (IUGR)" and "Resuscitation a new born baby" presented respectively by Dr. Afroza Begum, IMO; Dr. Shahnaz Begum and Dr. Zinnat. About 100 doctors and 50 examinee students attended the scientific seminar.

Intern Doctors Reception Program (IDRP)

Chittagong Medical College Hospital: An Intern Doctors Reception Program was arranged on 27th February 2008 with the doctors of Chittagong Medical College Hospital at BMA Auditorium, Chittagong. Dr. Nur Har Begum, Deputy Director, CMCH was present as the chairperson of the occasion. Dr. Khondkar A K Azad, Associate Professor, Surgery & Dr. Md. Abdul Karim, Assistant Director, CMCH were present as special guest. About 215 doctors enjoyed the reception program.

Dinajpur Medical College Hospital: On 25th January 2008 Dinajpur Medical College arranged an Intern Doctors Reception Program at Sananda Chinese Restaurant. Dr. S. K. Sadek, Assistant Registrar, Paediatric was present as the Chairperson. About 80 intern doctors enjoyed the program and raffle draw.

Round Table Meeting (RTM)

Dhaka

Pediatric Department, Shahid Shuhrawardy Hospital: A round table meeting was arranged by Paediatric Department of Shahid Shuhrawardy Hospital on "Millenium development goals & early childhood development" on 12th December 2007 at the classroom. Dr. M. A. Halim, Professor, Department of Paediatrics was present as the chairperson. Dr. Md. Bellal Hossain & Dr. Shariful Islam were the keynote speakers. About 45 doctors attended the meeting.

Haematology Department, BSMMU: On 21st January 2008 a round table meeting was arranged by Haematology Department, BSMMU on "Drug resistance in hematological management" at the seminar room. Professor Dr. Jalilur Rahman was present as the chairperson. Dr. Amin Lutful Kabir was the keynote speaker. About 40 doctors attended the meeting.

HCDP, Uttara: A round table meeting was arranged by HCDP, Uttara on 25th February 2008 on "Heart failure management" at Sea Shell Chinese Restaurant. Professor Dr. Sadequzzaman, Physician & Cardiologist was present as the chairperson and keynote speaker. About 10 doctors attended the session.

Burn Unit, DMCH: A round table meeting was arranged by Burn Unit, DMCH on "Surgical Management of persistent non-healing radionecrosed ulcers" on 3rd March 2008 at the Conference Room. Dr. S L Sen, Project Director, chaired the meeting and Professor Syed Shamsuddin Ahmed, Head of the Department was the keynote speaker. About 50 doctors enjoyed the session.

Cardiology Department, SSMCH: Department of Cardiology, SSMCH arranged a round table meeting on "Role of metabolic agent in the treatment of ischemic heart disease" on 13th March 2008 at the Conference Room. Professor Syed Azizul Haque, Head of the department was present as the chairperson and Dr. Anisur Rahman Khan, Assistant Professor was the keynote speaker. About 40 doctors attended the session.

Chittagong

Orthopedic Ward, CMCH: A round table meeting was arranged by Orthopedic Ward of CMCH on 24th November 2007 on "Correction of neglected idiopathic club foot by ponseti method" at the seminar room. Dr. Md. Anowar Hossain, Professor & Head, Department of Orthopedic chaired the meeting. Dr. Monjurul Islam, Ex-Head of the Dept was present as the Chief Guest and Dr. Bidhan Chandra, Associate Professor was present as the Special Guest. Dr. Md. Sobhan, Resident, Orthopedic was the keynote speaker. About 50 doctors enjoyed the session.

Department of Neurology, CMCH: On 12th February 2008 Neurology Department of CMCH arranged a round table meeting on "Clopidogrel in prevention of stroke" at Hotel Meridian. Dr. Moshiuzzaman Alfa, Assistant Professor chaired the session and Dr. Md. Moniruzzaman, Registrar was present as the Special Guest. About 20 doctors attended the meeting.

Comilla

Akhaura Upazila Health Complex, B.Baria: Akhaura Upazila Health Complex arranged a round table meeting on March 22, 2008 on "Comparative Review on Cephalosporin" at the conference room. Dr. Mahmudur Rahman Khan, UH & FPO was present as the Chairperson. About 20 doctors attended the meeting.

The rest of the MSD news at page - 572

Medi News

FDA approves new HIV drug after priority review

On January 18, 2008 The U.S. Food and Drug Administration approved etravirine tablets for the treatment of HIV infection in adults who have failed treatment with other antiretrovirals. Etravirine is a non-nucleoside reverse transcriptase inhibitor (NNRTI) that helps to block an enzyme which HIV needs to multiply. The drug was approved to be used in combination with other anti-HIV medications. Sold under the trade name Intelence, etravirine received a priority review by the FDA. Development of etravirine was triggered by the observations of in vitro anti-HIV activity of etravirine against mutant, NNRTI-resistant HIV strains. "This is another significant new product for many HIV-infected patients who are NNRTI-resistant and whose infections are not responding to currently available medications," said Debra B. Birnkrant, M.D., director of the FDA's Division of Antiviral Products. When used with other active anti-HIV medicines and when taken as prescribed, etravirine reduces the amount of HIV in the blood and increases white blood cells that help fight off other infections. In addition, etravirine may reduce the risk of death or infections that can occur with a weakened immune system. The FDA's approval of etravirine is based primarily on data from 599 adults who received etravirine in two randomized, double-blind, placebo-controlled trials. After 24 weeks of treatment, more of the patients who received etravirine along with background therapy experienced reductions in the level of HIV in their blood than did those who received a placebo and background therapy. The most common adverse events reported were rash and nausea. Patients developing a rash while taking etravirine should contact their doctor. To avoid drug interactions, patients starting etravirine treatment should tell their prescribers and pharmacists about all the medications they take. Information about drug interactions is contained in the etravirine package insert. In the overall development program for etravirine, rare cases of serious skin reactions such as Stevens-Johnson syndrome and erythema multiforme were reported. Patients taking etravirine may develop infections, including opportunistic infections or other conditions that may develop in patients living with HIV infection. The long-term effects of etravirine are not known, and its safety and effectiveness in children ages 16 years and younger has not been studied. Etravirine also has not been studied in pregnant women. Women who are taking HIV medications when they become pregnant are advised to consult their physician or other health care professional about use of etravirine during pregnancy and about registering with the Antiviral Pregnancy Registry.

FDA News

Heart risk can be predicted without lab tests

When it comes to predicting a person's cardiovascular disease risk, cheap, simple and noninvasive methods can be as effective as lab tests, a new study finds. The U.S. researchers noted these non-lab methods could be especially useful where lab testing is inconvenient or unavailable, such as in developing countries. Worldwide, about 80 percent of cardiovascular deaths occur in developing nations, Dr. Thomas Gaziano, of the division of cardiovascular medicine at Brigham & Women's Hospital in Boston, said in a prepared statement. The team analyzed data on 6,186 people who were aged 25 to 74 when they were first examined between 1971-75 for the NHANES-I study. At the time, these participants did not report any history of cardiovascular disease, such as heart attack, heart failure, stroke or angina or cancer. Over a 21-year period, people in this group had 1,529 first-time cardiovascular events, including 578 deaths due to cardiovascular disease. The researchers compared the lab-based method and the non-lab method in calculating a number called the c-statistic to assess cardiovascular risk prediction. The lab method included age, systolic blood pressure, smoking status, total cholesterol, diabetes status, and current treatment for high blood pressure. The non-lab method substituted body mass index (BMI, a ratio of weight to height) for cholesterol. The lab and non-lab method gave similar c-statistics, but the non-lab method can provide risk factor information non-invasively and much faster just five to 10 minutes, the study authors said. They added that a cholesterol test is too costly for many people in developing countries. The study was published in the March 15 issue of The Lancet. "Although this method requires further validation and calibration, use of a simple non-laboratory approach, as suggested by WHO (World Health Organization), could have profound effects on the affordability and availability of an adequate screening program in developing countries," the study authors wrote. "Initial screening without blood testing could lead to the quick initiation of treatment without the added cost or inconvenience of laboratory testing and would also keep any potential loss to follow-up due to the extra step in testing to a minimum". However, an accompanying editorial in the journal suggested this approach may not be appropriate for people in developing countries. "Although tools that use non-laboratory-based variables can help to improve affordability of screening programs for non-communicable diseases, they should not compromise the safety of patients. For equitable care of cardiovascular disease and other major non-communicable diseases, universal access to a set of essential interventions, including laboratory assays, may be required, even in settings with limited resources", wrote Dr. Shanthi Mendis, of the WHO in Geneva, and Dr. V. Mohan, of the Madras Diabetes Research Foundation in India.

HealthDay

Short hospital stay after heart attack can be safe

Contrary to expectations, the decreases in length of hospital stay for heart attacks seen over the last two decades have not increased death rates after discharge, according to a report in the American Journal of Cardiology. In fact, just the opposite may be true. Using data from the Minnesota Heart Survey, Dr. Alan K. Berger from the University of Minnesota, Minneapolis and colleagues found the typical hospital length of stay decreased progressively from 9 days in 1985 to 4 days in 2001; at the same time, in-hospital deaths after heart attack were decreasing from 11.6 to 5.4 percent. "There was a significant decrease in both 1-month and 6-month (death) rates after discharge from 1985 to 2001", the researchers report. Thirty-day death rates tended to be lower for patients discharged early, the investigators say, and rates at 6 months were slightly higher among patients staying in the hospital 5 or more days after their heart attack. Patients discharged from the hospital early were more likely to undergo angioplasty during their hospitalizations, the researchers note, whereas patients discharged later were more likely to undergo heart bypass surgery. "Physicians should utilize standard guidelines and protocols to determine which patients would benefit from additional hospitalization and procedures," Berger said.

American Journal of Cardiology

Breast cancer more aggressive among obese

Women with breast cancer have more aggressive disease and lower survival rates if they are overweight or obese, according to findings published in the March 15 issue of Clinical Cancer Research, a journal of the American Association for Cancer Research. "The more obese a patient is, the more aggressive the disease," said Massimo Cristofanilli, MD, associate professor of medicine in the Department of Breast Medical Oncology at The University of Texas M.D. Anderson Cancer Center. "We are learning that the fat tissue may increase inflammation that leads to more aggressive disease." Cristofanilli and colleagues observed 606 women with locally advanced breast cancer. These women were classified by body mass index into the following three groups: normal/underweight (24.9 or below), overweight (at least 25 but less than 30) or obese (more than 30). Body mass index is calculated by dividing a person's weight by their height. At five years, overall survival was 56.8 % among obese women, 56.3% among overweight women and 67.4 % among normal weight women. The 10-year survival rate was 42.7 % among obese women, 41.8 percent among overweight women and 56.5 % among normal weight women. The rate of inflammatory breast cancer, previously shown to have worse outcomes than non-inflammatory breast cancer, among obese women was 45 % compared with 30 percent in overweight women and only 15 % in women considered normal weight, researchers found. Risk of breast cancer recurrence was also higher in obese or overweight women. By five years, 50.8 % of obese women reported a recurrence compared with 38.5 % of normal weight women. By 10 years, the rate of recurrence was 58 % among obese women and 45.4 percent among normal weight women. Cristofanilli said physicians need to pay close attention to breast cancer patients because commonly used drugs, such as tamoxifen, tend to increase weight gain during treatment. "Following the nausea, our patients tend to overeat, which further increases their risk of weight gain. We need to impalement lifestyle modifications interventions and develop better methods to follow these patients closely." The study was funded by the Susan G. Komen Foundation, the Nellie B. Connally Fund for Breast Cancer Research and the Inflammatory Breast Cancer Research Group.

Journal of the American Association for Cancer Research

Medi News

Sleep disruption harms heart and kidneys

The heart and kidneys may become damaged when the body's internal biological cycle or circadian rhythms are out of sync, a Canadian study said. Study leader Dr. Michael Sole of the Peter Munk Cardiac Center and the University of Toronto Toronto says his studies show heart tissue renews itself during sleep, but the latest findings suggest the heart and kidneys may become damaged when the body's circadian rhythms are out of sync with external cues like light and dark. "Disrupted circadian rhythms have a devastating effect on the heart, kidney and possibly other organs", Sole says in a statement. "Shift workers and flight-crews might want to consider these findings when scheduling work time". Sole advises these workers try to maintain a constant working schedule for one month or more so the body can readjust its clock to external cues. Sole notes hospitals should make sure sleep-wake cycles in the critically ill are not disrupted. In the latest study, published in the April issue of the American Journal of Physiology - Regulatory, Integrative and Comparative Physiology, Sole and colleagues found in hamsters the heart becomes damaged and enlarged - cardiomyopathy and kidney tubules become scarred when internal biological clocks are out of sync with light and dark.

United Press International

Vitamin D cuts risk of diabetes

Giving young children vitamin D supplements may reduce their risk of developing type 1 diabetes later in life, research suggests. Children who took supplements were around 30% less likely to develop the condition than those who did not. Type 1 diabetes results from the immune system destruction of pancreatic cells which produce the hormone insulin. The study, by St Mary's Hospital for women and children, Manchester, appears in archives of disease in childhood. Type 1 diabetes is most common among people of European descent, with around two million Europeans and North Americans affected. It is becoming increasingly common, and it is estimated that the number of new cases will rise by 40% between 2000 and 2010. The Manchester team pooled data from five studies examining the effect of vitamin D supplementation. Not only did the use of supplements appear to reduce the risk, the effect was dose dependent - the higher and more regular the dose, the lower the likelihood of developing the disease.

BBC News

Long-term pill use risks atherosclerosis

Women who use the contraceptive pill for years risk a build-up of plaque in their arteries, according to a study released this week. While the European study suggests long-term pill users may therefore be at increased risk of heart attack or stroke, the researchers say their findings are no need for alarm. Bottom line - don't discontinue your pill suddenly. "Don't panic. Don't call your gynaecologist tomorrow morning", says lead researcher Dr Ernst Rietzschel of Ghent University in Belgium, whose team presented the results at an American Heart Association meeting this week. Rietzschel's team studied 1301 women aged 35-55. Of these, 81% had used the pill for an average 13 years. The researchers measured plaque levels using a technique called vascular echography. They saw a rise of 20-30% in arterial plaque in two big arteries - the carotid in the neck and the femoral in the leg - for each decade of use. A slow build-up of plaque, made up of fat, cholesterol, calcium and other material, on the inside of artery walls can lead to atherosclerosis, when the arteries harden and narrow. "The main concern is if you have higher plaque levels that you might develop a clot on one of these plaques and have a stroke or a [heart attack] or sudden cardiac death," says Rietzschel. "That's the main risk with having plaque, with having atherosclerosis." Women who take the pill long term can take other steps to cut their risk of cardiovascular disease, he says, like eating a healthier diet, getting more exercise, not smoking and controlling cholesterol. "There are other ways of doing contraception. Oral contraception is not the only possibility", he says. Dr Gordon Tomaselli, a Johns Hopkins University cardiologist and American Heart Association official, says he is surprised by the findings. "It's a bit eye-opening, I think", says Tomaselli. He says the findings need to be factored into the equation for women deciding whether to take the pill. "What would I tell my daughter to do? I might suggest maybe not oral contraception", Tomaselli says. Rietzschel says the findings may indicate that there could be an upswing in heart disease among women who have taken the pill, considering that those who began in the 1960s were now reaching a peak age for such illness. "We might be at the foot of a wave. But the wave might be a small ripple", he says. Many studies have looked at the medical consequences of using the pill. For example, experts say cigarette smoking raises the risk of serious side-effects, including heart attacks, blood clots and strokes. But this is the first study to suggest atherosclerosis as a side-effect. "We thought that once you stopped using oral contraceptives, the risk of clotting went away. That would seem to be too simplistic a view now", Rietzschel says.

AFP

Light therapy for depression

Our bodies are designed to take advantage of the natural environment to help regulate some of our internal processes. One example is the light-dark cycle. Our sleep-wake cycle is meant to be tied to the light-dark cycle. Certain hormones are also released according to the light-dark cycle. Melatonin is one such hormone. During day light less melatonin is released. During darkness, more melatonin is released. It helps you sleep, and also affects your alertness and ability to concentrate. All of this is important because many people do not get enough exposure to natural light. People work indoors and, especially during winter months, spend little time outdoors in the daylight. This is particularly a problem at the northern latitudes. There is actually a form of depression, known as Seasonal Affective Disorder (SAD), which is depression that occurs during the winter months and is suspected to be caused by a lack of sunlight. So the bottom line is that exposure, If these low-tech methods don't do the trick, you can consider a special high-intensity light therapy unit. These look like fluorescent tubes on an angled stand. You sit in front of it for 20 - 40 minutes per day when you first get up in the morning. They are available from medical supply companies and cost about $150-$300. People with bipolar disorder should use care when using light therapy units. Don't use them during a manic period, as it may make symptoms worse.

psycheducation.org

Nonsmokers sleep better

People who smoke are four times more likely to wake up tired than nonsmokers according to a February 4, 2008, American College of Chest Physicians news release, and a study published in the February issue of the journal Chest. Recent research found that smokers not only find it harder to get to sleep, but also spend less time in deep sleep than nonsmokers. These findings were the result of a study led by Dr. Naresh M. Punjabi of the Johns Hopkins University School of Medicine in Baltimore, Maryland. His group first looked at a group of 6,441 volunteers who had taken part in a national study of cardiovascular health. The researchers intention was to find healthy smokers; that is, a group of smokers who did not suffer from emphysema, heart disease, lung cancer, diabetes or any other illness. The task proved difficult because from the entire group, using the preset guidelines, only 40 smokersfit the healthy profile. Researchers paired these 40 healthy smokers, who incidentally smoked an average of 25 cigarettes a day, with 40 healthy nonsmokers. Both groups were then supplied at home sleep-study equipment that, among other things, was capable of measuring and tracking their brain waves as they slept. What the study found was that the sleeping smokers' brain waves were of a higher-frequency and faster rate than their nonsmoking counterparts. Patterns of high-frequency, fast brain waves are associated with light, poor quality sleep. The nonsmokers' brain wave patterns, on the other hand, revealed longer periods of deep nourishing sleep; the kind of sleep that promotes growth, wound healing, and hormone secretion; in other words, patterns that produce a good night's sleep. The group was also queried about how they felt they had slept, and if they woke up feeling rested. Only 5% of smokers felt they had slept well; whereas 23% of the nonsmokers responded that they had slept well, and that they woke up rested. The study points out that the smoker is deprived of the restorative effects of sleep, which is just one more reason to encourage smokers to quit. Dr. Punjabi hopes that this, and continuing research, will lead the way to better products to help the smoker get a good night's sleep because when smokers are tying to quit, waking up tired everyday makes quitting just that much harder.

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pep Corner

Zinc & Age-related macular degeneration

A leading cause of blindness in people over the age of 65 in the U.S. is a degenerative disease of the macula, known as age-related macular degeneration (AMD). The macula is the portion of the retina in the back of the eye involved with central vision. Zinc is hypothesized to play a role in the development of AMD for several reasons: (1) Zinc is found at high concentrations in the part of the retina affected by AMD (2) retinal Zinc content has been shown to decline with age and (3) the activities of some Zinc-dependent retinal enzymes have been shown to decline with age. However, scientific evidence that Zinc intake is associated with the development or progression of AMD is limited. Observational studies have not demonstrated clear associations between dietary Zinc intake and the incidence of AMD. A randomized controlled trial provoked interest when it found that 200 mg/day of Zinc sulfate (81 mg/day of elemental Zinc) over two years reduced the loss of vision in patients with AMD. However, a later trial using the same dose and duration found no beneficial effect in patients with a more advanced form of AMD in one eye. A large randomized controlled trial of daily supplementation with antioxidants (500 mg of vitamin C, 400 IU of vitamin E, and 15 mg of beta carotene) and high-dose Zinc (80 mg of Zinc and 2 mg of copper) found that the antioxidant combination plus high-dose Zinc and high-dose Zinc alone, both significantly reduced the risk of advanced macular degeneration compared to placebo in individuals with signs of moderate to severe macular degeneration in at least one eye. Data from smaller trials have generally not observed a protective effect of vitamin and mineral supplementation on AMD. At present, there is little evidence that Zinc supplementation would be beneficial to people with early signs of macular degeneration, but further randomized controlled trials are warranted .

Zinc & HIV/AIDS

Sufficient Zinc is essential in maintaining immune system function and HIV-infected individuals are particularly susceptible to Zinc deficiency. In HIV-infected patients, low serum levels of Zinc have been associated with a more advanced stage of the disease and also with increased mortality. In one of the few Zinc supplementation studies conducted in AIDS patients, 45 mg/day of Zinc for one month resulted in a decreased incidence in opportunistic infections compared to placebo. However, the HIV virus also requires Zinc and excessive Zinc intake may stimulate the progression of HIV infection. In an observational study of HIV-infected men, increased Zinc intake was associated with more rapid disease progression and any intake of Zinc supplements was associated with poorer survival.These results indicate that further research is necessary to determine optimal Zinc intakes for HIV-infected individuals.

http://lpi.oregonstate.edu/infocenter/minerals/zinc/index.html#lpi_recommend

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