Abstracts of Papers Presented At The 157th Research Meeting of The Medical Research Centre of Bombay Hospital Trust on Monday 11th February 2008 Convener Dr. HL Dhar

1. Jehovah's Witness – Myths and Facts

Preeti Kantak, Maya Parihar – Malhotra

Introduction : The refusal of blood products by Jehovah's Witness makes this group a unique population with the potential for disastrous outcomes secondary to haemorrhage. To provide comprehensive care to patients who are Jehovah's Witness, the care provider should understand the background of their belief system. Charles Russell founded the group in 1872 in Pennsylvania. Many of the followers' beliefs are based on literal translations of Bible. Genesis 9 and Leviticus 17 state that one cannot eat the blood of life; these passages are interpreted to include the exchange of blood products. For the Jehovah's witness, receiving blood products may lead to excommunication and eternal damnation. An individual who offers to transfuse blood is considered by many members to be acting through devil's influence. Understanding these facts is very crucial when caring for patients who are Jehovah's Witness.

At the very minimum, the patient should be asked about whether she will be willing to accept any or all of the following: whole blood, fresh frozen plasma, cryoprecipitate, albumin, isolated factor preparations, non blood plasma expanders, haemodilution, and cell savers.

An early discussion allows the patient a chance to make an informed decision. Identification and treatment of an existing anaemia are very important in care of these patients. A physician has to be both willing and able to allow a properly educated patient to die once he/she has indicated that he/she prefers death over transfusion. It is always difficult for a physician, who has been trained to save lives, to accept a patient's decision that can lead to death. If a physician does not want to participate in the care of such patients, he should be transferred to the practice of a physician associated with a tertiary care centre. The transferring physician is obliged to ensure that another physician has agreed to accept the patient. This may be difficult to arrange in an emergency situation, so early transfer of the patient is extremely prudent.

Available options for Jehovah's Witness are – 1) autologous blood donation 2) Erythropoietin 3) cell salvage system.

Autologous blood donation : It involves optimizing the patient's haematocrit with oral iron supplementation or erythropoietin, if this is acceptable. Then having them donate their own blood at least 72 hours but ideally 2 weeks before planned surgery. After appropriate testing, the blood is stored and held for the patient. It will be discarded if not used for the same patient.

Erythropoietin : It can be administered to these patients with a haematocrit of < 40%. It stimulates bone marrow to maximize RBC production. Not all Jehovah's Witness accept these medications because each is packaged with 2.5 ml of albumin per dose.

Cell salvage system : It can be employed as a form of intra-operative autologous blood donation. It allows for free blood in the abdomen to be aspirated, filtered and then reinfused into the patient preoperatively. Such systems use centrifugal cell separators that segregates the RBC's from plasma, wash the RBC's with normal saline and prepare them for reinfusion. The danger is that when used during

cesarean delivery, it carries the potential risk that foetal cells, amniotic fluid and debris may enter the maternal circulation if they are not properly filtered, theoretically predisposing to amniotic fluid embolism.

Abstracts of Papers Presented At The 158th Research Meeting of The Medical Research Centre of Bomby Hospital Trust on Monday 10th March 2008 Convener Dr. HL Dhar

1. Ilizasov Technique in the Treatment of Congenital Pseudarthrosis of the Tibia

HR Jhunjhunwala, KP Venkatesh

This study analyzes the risks and benefits of Ilizarov's technique in Congenital Pseudarthrosis of the tibia (CPT). This is a prospective review of 10 patients between 6 and 14 years treated between 1995 and 2005 for CPT, by using Ilizarov's technique.

In 8 cases, there were previous multiple surgeries and in 2 cases primary Ilizarov technique was used.

In all cases excision of Hamartomous fibrous tissue around pseudarthrosis, end to end compression and proximal corticotomy for lengthening was done. Mean fixation of Ilizarov frame was about 40 weeks. In 2 cases bone grafting at end-to-end site was done after 20 weeks of previous surgery. At 3.5 years of average follow up, the pseudarthrosis was united in all ten cases. In one case there was a fracture of shaft of tibia which was treated by plaster immobilization and fracture was healed up in 8 weeks. To avoid this complication, the limb is protected by well moulded arthrosis for 2 years.

We have found that Ilizarov technique is a good method of treatment in Congenital Pseudarthrosis of the Tibia.

2. Reconstruction in Previously Irradiated Patients

Mahinoor Desai, CM Choudhari, SR Tambwekar

The histologic changes in irradiated blood vessels led earlier investigators to believe that microvascular surgery was not possible in previously irradiated patients or would result in more complications.

However, with the utilization of pedicled flaps in irradiated patients we have encountered more complications than the usual.

The purpose of this study was to compare postoperative outcomes in pedicled flaps versus microvascular free flaps for reconstruction in patients who had prior radiotherapy. Our results show that complications are more with the use of pedicled flaps.

We also observed that changes in the recipient vessels, when examined under a microscope such as initimal dehiscence, hyalinization of tunica media and microthrombi adherent to the wall, are the factors which are detrimental to anastomotic patency.

We advocate that if meticulously planned and performed reconstruction with microvascular free flaps actually leads to less complications and less morbidity than pedicled flaps.

Though our experience thus far is with a limited number of patients, the study is ongoing and we hope to publish more comprehensive results in the near future.

3. Diagnostic Dilemma in Small Bowel Obstruction

Ashutosh Baghel, MM Begani, N Agarwal

Introduction : Sub-acute small bowel obstruction can be a diagnostic dilemma if radiological investigations prove inconclusive. In patients who do not settle with conservative management, diagnostic laparoscopy can be beneficial in determining the diagnosis and definitive treatment options can be offered to the patient.

Material and Methods : Case 1 : 51 year old female patient presented with intermittent colicky abdominal pain since 8-10 months. The pain increased after blood and then wears off in 3-4 hours. She also had loss of appetite, weight loss and nausea and vomiting occasionally.

Case 2 : 51 year old male patient also presented with colicky pain in lower abdomen since 5 months. Pain increased after food, wears off in 4-5 hours. Associated complaints of vomiting, nausea, weight loss, he had a similar pain 5 months back for which he was treated conservatively and diagnosed as having sub-acute intestinal obstruction clinically.

Results : Case 1 was posted for diagnostic laparoscopy but due to equipment failure underwent laparotomy which revealed the cause of the obstruction to be small bowel stricture and a faecolith. She underwent resection anastomosis. Case 2 underwent laparoscopy and was found to have Meckle's diverticulum and jejunal stricture for which wedge resection and stricturoplasty was done respectively.

Conclusion : Small bowel obstruction can be due to various causes which may not be picked up by radiological investigation. Diagnostic laparoscopy has a definite role in achieving a diagnosis in these cases and the pathology can thus be treated laparoscopically.

4. A Case Report of Serous Cystadenoma of Pancreas

Ashutosh Baghel, MM Begani, N Agarwal

Introduction : Serous cystadenoma of the pancreas is rare lesion thought to be almost invariably benign. Since 1978, 211 cases have been reported in the literature. The current role for conservative management remains questionable because of our current inability to reliably differentiate many of these benign neoplasms from malignant cystic neoplasms of the pancreas. Cystic neoplasms of pancreas are less common accounting for about 10-15% of all cystic pancreatic lesions. They are usually always benign with rare malignant transformation.

Pancreatic serous cystadenoma used to be referred as micro cystic cystadenoma or clycogen rich cystadenoma.

These terms are no longer used and the preferred name is now serous cystadenoma. Serous cystadenomas are more common than mucinous cystic neoplasms with a ratio of 2:1.

Material and Methods : A 71 year old Male patient admitted with chief complaint of Bleeding per rectum (black stools) since 4 months, history of weakness, loss of appetite, haemoptysis one episode, nasal bleeding, anaemia all since 15 days.

Now since past 1 month presented with lump in epigastric region, black tarry stools since past 4-5 days. On investigation by a CT scan he was found to have a pancreatic mass of 12.1 x 9.9 cms in the head of Pancreas with widening of C loop of duodenum. Liver/spleen/kidneys normal. No enlarged lymph nodes/no free fluid. All haematological report were normal except anaemia with haemoglobin of 10.9. His tumour marker of Ca 19-9 were 82.46 (0-37 normal range). He was found to be HBs Ag reactive.

CT Guided FNAC was inconclusive. Clinically he was suspected to have serous cystadenoma of pancreas.

Results : He underwent a Whipple's surgery on 12/2/2008 with feeding jejunostomy. Patients withstood the surgery well and was extubated on postoperative day 1. Ideally serous cystadenomas are benign conditions with a rare progression to metastasis. These tumours should be resected completely if symptomatic which has a fair prognosis. Although this patient had a complication of biliary leak postoperatively in this case the prognosis is guarded.

Conclusion : Most serous cystadenomas which are symptomatic necessitate operative intervention either by resection or biliary or gastric bypass. The safety of resection becomes an important consideration and is based primarily on location of the tumour and the experience of the surgeon. Tumours of the head or uncinate process would require a Whipple-type pancreaticoduodenectomy. With cystic lesions in the head/uncinate process consideration should be given to bypass-type procedures without formal resection if unresectable. Thus surgery is the best mode of treatment.

5. An unusual Postoperative Wound Infection with Mycobacterium Chelonae

Neepa Vellimuttam, MM Begani, N Agarwal

Introduction : Mycobacterium cheloane is a rare cause of human infection and is difficult to diagnose unless suspected for the same. We wish to present our case report of a case of laparoscopic paraumbilical hernia who developed this infection postoperatively.

Material and Methods : A 38 year-old male patient, diagnosed to have paraumbilical hernia, underwent laparoscopic mesh hernioplasty. Three months post-operatively he developed swelling, redness and tenderness at the site of surgery. The mesh had to be removed and the causative organism was confirmed to be to M. chelonae. Definitive identification of this species of mycobacterium was possible by growth characteristics and biochemical tests.

Results : The patient was started on routine four drug AKT but did not respond to the same. He developed secondary infection with Pseudomonas which was treated with injectable Piperacillin and tazobactam. He has also been on injection amikacin and tab clarithromycin, the only two drugs shown to be sensitive to the rapid growing mycobacterium for the last two months and complete recovery is still awaited.

Conclusion : In the present study, the most probable source of infection could be inadequate sterilization process, such as contaminated water being used for washing instruments, over dilution of disinfectant and storage of disinfectant for long time. It is important in this era of lapraroscopy that the surgeon remains aware of the possibility of infection with NTM and suspect it so in cases of chronic wound infection.

6. Comparison of Haemorrhoid Surgery in Day Care versus Hospital Setting

MM Begani, Reshma Palep

Objective : To evaluate our results of haemorrhoidectomy done as an outpatient procedure in comparison with hospitalized patients.

Design : Retrospective study.

Setting : Abhishek Day Care Centre and Bombay Hospital.

Material and Methods : From June 2000 to June 2007, 369 patients required haemorrhoidectomy, 824 patients underwent sclerotherapy and 97 patients were treated with cryotherapy at ADC in an ambulatory setting. In the same period, 478 patients required haemorrhoidectomy, 43 patients underwent sclerotherapy and 2 patients were treated with cryotherapy at Bombay Hospital with post-operative hospitalization.

Results : Mortality, morbidity, need for admission to hospital, and acceptability to patients was compared. All patients in the ambulatory group were observerd for 6.5 hours (range 6-11 hours). The average post-operative stay for the hospitalized patients was 2.53 days (Range 2-3 days). The complication rate for outpatients was 1.5% while that of hospitalized patients was 3.2%.

Conclusion : Day care haemorrhoidectomy is a safe and effective way of reducing costs without increasing morbidity, mortality, and is acceptable to most patients.

GROWING HUMAN BLOOD IN A LABORATORY BRINGS HOPE

The technique seems to be an important first step towards producing an unlimited supply of disease free blood.

Researches stimulated multiple human stem-cell lines to differentiate and mature in vitro to form functional erythrocytes. They were able to grow blood types A,B,O, and both rhesus-positive and rhesus-negative.

The next steps will be to show that the stem-cell derived blood is safe and functional in animals and ultimately in human beings. Clearly there is a long way to go and the expenses will undoubtedly be substantial, much more than the cost of processing donated blood. But in many developing and transitional countries where an inadequate safe blood supply results in countless deaths, and in medical crisis situations where blood stocks run low, the prospect of boosting the global blood supply is a most welcome one.

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