A Case Study

# Excision of Descending Thoracic Aortic Aneurysm and Graft

*By* **Miss Thresia Zacharia**

On February, 2 Mr. S. a farmer, aged 40 years, was admitted in the Male Surgical Ward in C.M.C. Hospital, Vellore.

He was married with no children. He complained of gradual onset of pain in the back, since 1964.

On examination a large mass was visible and palpable at the left lower thoracic and upper lumbar region of the back. It was not tender and did not move with respiration. No thrill was palpable. Mass was slightly palsalible. Examination of the heart revealed that it was on the right side at the level of the 4th intercostal space.

**History** : No history of cough or chest pain or syphilis or diabetes.

X-ray of the chest showed the heart was pushed to the right side due to large mass. A rounded mass seen in the left chest 8th and 9th thoracic vertebral bodies were eroded which was due to this mass.

Kahn test was done-negative. Aorta gram was done (An incision was done in the left brachial artery, a cardiac catheter passed through brachial artery to the descending aorta). The dye (urografin 70%. 50 ccs injected through catheter, being in the descending aorta outlined a fusiform and saccular aneurysm that extended from 8th to 12th thoracic vertebrae.

**Treatment** : He was advised Surgery i.e. excision of aneurysm and replacement with graft.

The patient and relatives were explained the extent and risk of the surgery and were reassured that he could be able to return to normal life in due course. A written consent for surgery was obtained from the relations.

**Pre-operative Investigations.**

*Blood* : Haemoglobin 14.8 gm. Blood Urea 20 mg. Blood Group "O", Rhesus factor-Postive and Cross matched. *Urine Normal.*

On the evening of the operation locally, chest, back, abdomen were shaved from neck downwards to pubis and scrubbed with soap and water. Anaesthetist examined the patient and ordered Butabarbitone 200 mg. at H.S. for a good night sleep and nothing by mouth thereafter.

In the morning on 14th February a bed bath and toilet attended. Fresh clothes put on, patient was reassured again and checked for artificial denturs, loose teeth etc.

Pre-medication was given at 7 a.m. Injection pethidine 100 mg and Injection Largactil 50 mg. intramuscularly given. Patient was kept quiet and was sent to operation theatre at 8 a.m.

In the operation theatre a self-retaining catheter was put in the bladder and put on continuous drainage.

General anaesthesia started. Endotracheal tube was put in and connected with the respirator. Continuous naso-pharyngeal and rectal leads attached for temperature recording, by thermocouple (An electric instrument which would show the temperature instantly on demand.)

Cardiac Monitor was attached. (This mechine shows the continuous work of the myocardium and showing the ECG and pulse rate. It has got defibrillator and also got artificial pacemaker.)

Hypothermia started at 8.20 a.m. by surface cooling (by ice put on the wet sheet spaced over the body). The naso-pharyngeal temperature was brought down 29 degree C at 9.30 a.m. The cooling was stopped (The hypothermia helped to reduce the function of tissues). Patient was positioned in semi-right lateral. Area prepared with iodine and spirit.

**Incision** : Chest and abdomen opened by left thoraco abdominal incision.

Diaphragm divided and a large aneurysm was visible attached with the descending aorta. Dissection done from both sides of the aneurysm. Injection of heparine 50 gm. injected into the aneurysm (to prevent thrombus and clot formation in the lower extrimities.) Both ends of the aneurysm were clamped with craw ford aortic clamp. This time was noted by anaesthetist and recorded. A slight hypertension also noticed.

The aneurysm mobilized and put a tape under the aneurysm and measured and excised. A "Dacron" graft about (15 cm. long and 32 mm. diameter), was sutured with 3/0 polythelene suture. It is an innert material and has got sufficient tensity strength. It is in different sizes depending on the size of artery. During the aortic occulation the temperature was 30 degree C. The proximal clamp was released, there was no leak, now distal clamp too released. This time noted again. Total occulation time was 45 minutes. Pulse could be felt in both lower extremities. All small bleeding areas were cauterised. The chest and abdomen closed in layers.

Thoracotomy tube was put in (via) stab wound. A controlled water seal chest drain was connected. Manitol 20% 100 mls. intravenous given, urine flow satisfactory. Blood loss during operation was 4,500 ccs. and that was replaced.

Patient was transferred to Recovery Room in a fair condition and kept flat in warm bed. Oxygen administerred by nasal catheter method and patient was connected on continuous Cardiac Monitor. Electric blankets were used to warm up the patient and removed when rectal temperature showed 36 degree C.

Antibiotic chloramphenicol 250 mg, intravenously 6 hourly and intravenously fluids continued.

Blood pressure continued to be low 80/50 mm. Hg. Foot end of

*(Contd. on page 236)*

**Orthopedics**—*(Contd. from p. 222)*

wheeled out of the ward. In the past it took few months for a below-the-knee amputee to walk on his artificial limb but with modern technique using immediate post of B/K Prosthesis it is amazing to see the patient walking in the ward on the 3rd post-operative day, likewise a patient with crippling Ostioarthritis of hip joint may walk out of hospital in 2 to 3 weeks following total replacement of hip joint. The use of vitalium Prosthesis plates, pins and intro-medulary peg have reduced the risk of hypostate pnemonia because of early mobilisation and this has helped the orthopedic nurse to give the best and easy nursing care. When the patients are put on these various appliances it is handy for the nurses to mobilize the patient without damaging the affected limb and encourage the patient to cough and to take deep breathing so as to avoid hypostatic pneumonia. She also can easily give bath and help prevent formation of pressure sores. Use of stryker frame is another device which is commonly used in caring the orthopedic patients. Use of this frame has made the nurses to turn patient easily without much manual efforts. This has reduced the danger of complication and the patient is kept comfortable.

Today nursing demands comprehensive nursing care. In this respect the patient's psychological needs also assume importance. Nurse must find time to sit with the patient, talk freely and listen patiently in order to help relieve some of his problems. This is more so essential because orthopedic patients have the feelings of getting disabled and be useless in the society.

## The Future

The world is advancing very rapidly and we as nurses have to keep pace with the modern trends. If the increasing number of orthopedic patients are to be helped there is need for more orthopedic hospitals and more nurses specialised in the field of orthodepics.

The status of a nurse has progressed slowly from that of a hired girl with a strong back bone to that of a professional career which requires skill. The modern nurse is not only concerned with the care of the patient but the preventive and educational aspects. The society of today demands a new type of a nurse, educated to fit in the health team whose function is rapidly changing.

---

**A Case Study**—

*(Contd. from page 235)*

the bed raised slightly. There seemed to be some oozing of blood and come out through the chest tube and was replaced by transfusion in 24 hours.

Examination of the blood and urine showed normal.

Injection pethidine 50 mg. given for pain and oral hygiene was performed two to four hourly.

On the first post-operative day Mr. S. was nursed at complete bed rest. Patient's general condition was satisfactory. Oxygen and Cardiac Monitor were discontinued.

Temperature, pulse, respiration were near normal. Blood pressure normal. Deep breathing and bed exercise were carried out to prevent venous thrombosis.

Intravenous fluids continued and sips of water given by mouth. Usual post operative nursing care given as to very sick patient.

On the 2nd post operative day patient's general condition improved and was very satisfactory. Blood urea, temperature, pulse, respiration and blood pressure were norml. Urine flow also normal. Urethral catheter was removed. Intravenous fluids and oral fluids continued. His toilet was attended in bed and all nursing precautions were taken to keep his skin clean. This was continued till the patient could do it himself.

X-ray showed full expansion of lungs. Heart shadows were normal.

Nothing particular was noticed on the 3rd day. On the following day patient continued to improve without any complaints. Chest drains were removed. Antibiotic discontinued. Soft diet allowed. Next day regular diet was given and patient was sitting on a chair near the bed.

On the 8th day skin sutures were removed. General condition good and on the 12th day was attending occupational therapy department. X-ray of the chest and abdomen were normal.

Urine and blood also normal. X-ray of spine showed weakness between 8th to 12th dorsa vertebrae and erosion of vertebral bodies due to previous (aneurysm). So patient was given "High Taylar Back Brace" to be worn, and he was not allowed to sit and walk without it.

He was discharged and advised to come for check up after 3 months spending just over one month in the hospital. Patient and the relatives happily went home praising God for the recovery of normal health.

---

**From the Secretary's Desk**

*(Contd. from page 215)*

your membership without break. We send out reminders two months before your subscription is due. It is not just the money alone we are concerned, but we want your continued membership, which is the source of strength to the Association.

## Nurses Welfare Fund

Last but not the least, we must remember our old and sick nurses. There is a 'Nurses Welfare Fund' from which hundreds of old and sick nurses had relief in the past and at the moment 25 nurses are getting help from the fund. Demands on this fund are ever increasing, but due to lack of funds we are unable to entertain many of them. Your contribution, be it big or small, will go towards a worthy cause and bring solace to the aged and sick nurses.

Thank you.

M. PHILIP
*Secretary*