



Portable "tub" for hypothermia.

tient makes transfer to the operating table simpler. Excess water is removed by lowering a corner of the plastic to drain into a bucket or can. The patient is usually transferred to an operating table covered with a water cooled mattress to allow for continued control of body temperature. The plastic "tub" is very serviceable under ordinary use. Sharp instruments or careless handling will obviously damage it, but repair is simple by patching with Mystic tape.

The technique permits rapid cooling. An average of two hours over "dry" surface cooling used alone is saved. The cost of the entire "tub" is less than \$15.00. The equipment is not bulky. Movement of the patient is safer and more convenient because of the removable sides of the "tub" and its elevation to operating table height. One movement of the patient (induction gurney to ice tub) is eliminated from usual immersion techniques. The "tub" is convenient for therapeutic hypothermia in other areas of the hospital.

CASE REPORT

Obstruction From Thoracic Aneurysm

Drs. G. T. Edwards and Sanford Cobb of the University of Miami School of Medicine, and Jackson Memorial Hospital, Miami, Florida, report a case which presents certain unusual features of obstruction from a thoracic aortic aneurysm.

The patient was a 63 year old Negro man, 5 feet 5 inches tall, weighing 182 pounds.

During a routine physical examination two years before admission, he was found to have a pulsating suprasternal mass which was diagnosed as an aortic aneurysm. He had been asymptomatic until about 3 weeks before admission, when he had developed a "cold," accompanied by some pain in his chest and left arm. This pain was interpreted as being

caused by the aneurysm, and, because it was suspected that the aneurysm might be dissecting, he was scheduled for resection and replacement of the aneurysm.

This patient had worked as a brick layer and a farmer up to the time of his hospital admission. Except for moderate obesity and moderate hypertension, he was in good general health. On direct questioning, he denied any respiratory symptoms whatsoever and could comfortably lie in any position. He had not been taking medications. His past history was noncontributory.

Physical examination demonstrated the suprasternal mass, moderate obesity, a right-eye prosthesis, and an enlarged prostate; it was otherwise within normal limits. Blood pressure was 170/100. Laboratory work was within normal limits, with a hemoglobin of 11.8 g. Electrocardiogram was interpreted as a borderline tracing with no specific abnormalities. Angiocardiography confirmed the presence of aneurysm of the ascending and proximal arch of the aorta, with some suggestion of dissection; the exact extent of the aneurysm was not clearly outlined. These studies did not clearly show the trachea.

The patient was given premedication of secobarbital 125 mg., morphine 12 mg., and scopolamine 0.6 mg., and came to the operating room one and one half hours later, drowsy, outwardly calm, lying comfortably supine in bed, breathing easily. Blood pressure was 220/80. He was given 100 mg. of thiopental, allowed to breathe oxygen for over two minutes, and was then given an additional 100 mg. of thiopental and 80 mg. of succinylcholine, following which ventilation was continued with oxygen.

When spontaneous respirations ceased due to the succinylcholine, it was impossible to ventilate the patient by mask. A no. 10 Portex Magill tube was introduced into the trachea, but the patient still could not be ventilated. Due to a difficult exposure of the larynx it was felt that the endotracheal tube might not be correctly placed. It was withdrawn and after two attempts, the tube was definitely seen to pass into the larynx satisfactorily. Very high bag pressures produced inadequate ventilation.

Believing that the obstruction might be due to bronchospasm, aminophyllin 250 mg. was given slowly intravenously; this was followed by three doses of isoproterenol, 0.4 mg. each. Since neither these drugs, nor an additional 40 mg. of succinylcholine, improved ventilation, it was believed that the obstruction was due to a compression of the trachea by the patient's aneurysm. An emergency bilateral thoracotomy was done and the chest wall was retracted anteriorly. This allowed easy ventilation through the tube. In an attempt to avoid further difficulties the Portex tube was replaced with an anode wire spiral tube. With ventilation established anesthesia was begun with halothane (less than 1 per cent), nitrous oxide and oxygen through the endotracheal tube. After about four or five minutes, however, the patient was found to be without obtainable blood pressure by indirect manometry and without peripheral pulse. It was found that the aneurysm was obstructing venous return through the venae cavae. The asphyxia and subsequent surgical difficulties associated with emergency management resulted in death.

Autopsy showed only the presence of a sacular aneurysm of the ascending aorta, and massive bilateral atelectasis.

Discussion. Postmortem examination, both on the operating table and by the pathology department, failed to reveal the mechanism whereby this patient was able to breathe easily at work, lying in bed or, indeed, after a "sleep-dose" of thiopental, but then became completely obstructed after paralysis and induction of anesthesia. Preoperative evaluation did not lead to the anticipation of any respiratory difficulties, other than perhaps some technical difficulties with laryngoscopy due to the patient's heavy build and short neck (this did in fact provide some moderate difficulties). The complete lack of respiratory symptoms seemed to indicate that the aneurysm did not encroach on the airway. Even in retrospect, we felt that the management used was reasonable; such procedures as intubation with deep anesthesia (rather than a relaxant), awake intubation, or use of Carlen's tube (to get past the aneurysm; placement of such a tube would have been quite difficult) were not seriously considered preoperatively.