

not overheat blood even at the slowest transfusion rates. Return to the factory at the end of two years is recommended for a check of the electrical components. A decal label is placed on the side of the device giving the data recommended for return.

CASE REPORT

During a case in which massive blood replacement was anticipated, this blood warming device was set up in the usual manner. The transfusion was started and after the patient had received only very little blood the anesthesiologist noted that the tubing leading from the blood warmer to the patient felt excessively warm to the touch. A thermometer floating in the water bath was checked, and the temperature was noted to be 60° C. (140° F.). The use of this blood warmer was immediately discontinued. No untoward effects were noted in the patient, either during anesthesia or in the postoperative period. The device was returned to the factory for inspection and repair. The data on the label recommend-

ing return to the factory had been effaced. A check of our records showed that the machine had been in our possession for eighteen months.

DISCUSSION

The administration of overheated blood with resultant denaturation of proteins may have serious effects on the patient. It is imperative to monitor the temperature of blood warming devices with a thermometer that is easily visible to the anesthesiologist. Using an unprotected glass thermometer is impractical because of high breakage rate. Following recommendations to the manufacturer, a design change was made. All current and future production includes a safety thermostat which is activated in the event the control thermostat should malfunction. A dial thermometer has also been installed to monitor the temperature of the water bath. All units in the field have been recalled for modification.

REFERENCE

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An Unusual Complication Following Venous Cutdown

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Venous cutdowns provide a stable route for the administration of intravenous fluids and drugs, and are frequently used to monitor control venous pressures. The hazards of catheter emboli^{1,2} and catheter contamination^{3,4} have been emphasized. The complication in the case reported here is considered to be unusual and worthy of note.

CASE REPORT

A 61 year old white woman was admitted with recurrent carcinoma of the cervix, having received roentgen-ray and radium treatments two years previously. Chest roentgenograms taken four day prior to surgery showed the lungs to be clear and free of disease. The pa-

tient was otherwise in good health, and was scheduled for an exploratory laparotomy and possible pelvic exenteration. A cutdown was done in the right antecubital fossa, utilizing a 15-gauge polyethylene catheter on the evening prior to surgery. The catheter was inserted a long distance in order to monitor central venous pressure in the event that extensive surgery was performed. She had received 1,300 ml. of fluid through the cutdown before anesthesia was induced, 1,000 cc. dextrose 5 per cent in lactated Ringers and 300 ml. dextrose 5 per cent in water.

The patient received Pentothal, 275 mg., through the cutdown, became sleepy, but did not lose consciousness. The induction was completed with cyclopropane, and 80 mg. of succinylcholine was given through the cutdown

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to facilitate intubation. This failed to produce any evidence of muscle relaxation after five minutes. She was then given 80 mg. of succinylcholine intramuscularly and satisfactory relaxation was obtained. Another intravenous route was established in the left arm, utilizing a 15-gauge Rochester needle. The cutdown catheter was withdrawn approximately 5 cm. before blood could be aspirated freely. It was then secured in this position, and dextrose 5 per cent in water with a 0.1 per cent succinylcholine drip was started. Approximately one hour after anesthesia was induced, ventilatory difficulties became apparent, and expiratory "wheezes" were noted bilaterally on auscultation of the chest. Respiratory excursions of the chest were definitely limited on the right and breath sounds on the right were significantly reduced. The endotracheal tube was removed and re-inserted without any improvement in ventilation. Bronchodilators, aminophylline and Bronkephrine, produced only transient improvement in ventilation. During this period of inadequate ventilation, the pulse rose from 80 to 140 per minute with little change in blood pressure. The patient was obviously cyanotic. The period of ventilatory difficulty lasted throughout the two-hour operative procedure, during which period the patient had received 700 ml. of dextrose 5 per cent in water via the cutdown. A radio-opaque dye was injected into the cutdown catheter and chest films were obtained in the operating room. This revealed the tip of the intravenous catheter in the superior vena cava and opacification of the right hemithorax. Increased density in

the medial aspect of the right lung field was felt to represent atelectasis of a portion of the right lung. Thoracentesis was done on the right, and 350 ml. of blood-tinged fluid was obtained. There was immediate and dramatic improvement in the patient's color and ventilation. Chest films taken two days postoperatively revealed considerable clearing of the appearance of the right lung and some clearing of the previously observed atelectasis. Chest films taken six days postoperatively revealed complete clearing of the pleural effusion and atelectasis.

It is believed that the sequence of events in this case was due to dissection of the polyethylene catheter into the right pleural space and the subsequent infusion of fluids into this space. The problems that occurred may have been anticipated from the initial incomplete response to the drugs administered via the cutdown catheter. This represents a potentially serious complication of venous cutdowns that could very well prove fatal if unrecognized.

REFERENCES

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Anesthetic Management of Wiskott-Aldrich Syndrome

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The essential triad for the diagnosis of the Wiskott-Aldrich syndrome is thrombocytopenia, eczema and recurrent infections.^{1,2} The type of infection varies; otitis media,²⁻⁴ pyoderma,^{2,}

^{3,5} septicemia,²⁻⁴ meningitis⁵ and pneumonia.^{5,6} Additional features include bloody diarrhea,² anemia,^{2,3,7} epistaxis,⁸ splenomegaly,^{2,3,7} eosinophilia,^{3,7} increased serum globulin,³ and a fatal outcome. The condition is transmitted via a familial sex linked recessive gene carried by the female and manifested only in male infants, much like hemo-

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