

PREOPERATIVE SALVAGE AND AUTOTRANFUSION IN SHAHID RAJAI CARDIOVASCULAR MEDICAL CENTER

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ABSTRACT

One of the simplest forms of autotransfusion is the use of a cell-salvaging system that used aspiration and anticoagulation to collect shed blood and return it to the patient. The simplest way to perform this function include collection sets consisting of double-lumen tubes through which an anticoagulant is mixed with shed operative blood. Anticoagulant is usually heparin or citrate-phosphate-dextrose (CPD) and so on. We used heparin. Blood aspirated by negative pressure through a vacuum source was collected in a reservoir and directly reinfused to the patient through a filter. In cardiac surgery blood transfusion is unavoidable. The two primary reasons for employing autologous transfusions are: (1) avoidance of complications associated with allogenic transfusion and (2) conservation of blood resources. We used autotransfusion for redo cardiac surgery and patients with rare blood groups. We found cell saving is cost effective in cardiac surgery. We did not need allogenic blood transfusion. Bleeding and reoperation were much less. When we used allogenic blood transfusion 10 percent of patients came back due to bleeding, whereas when we used autotransfusion by salvaging, we didn't need reoperation. On the other hand, at the end of the operation, we had a lot of dilute blood in the oxygenator that we were able to use again with salvage. The volume of wound drainage recovered in most patients was more than 1000 ml. It contained virtually no fibrinogen, and no anticoagulation was required before reinfusion. The hematocrit value usually ranged between 20 to 25 percent. The red blood cells transfused had normal survival and oxygen delivery capacity. Autologous transfusion could significantly decrease allogenic transfusion requirements in cardiac surgery. Additional controlled studies are needed to define the role of this technique. We think routine use is not justified.

EFFECT OF APNEA ON THE LOCATION OF VENOUS CATHETERS INSERTED VIA BASILIC VEINS

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ABSTRACT

Twenty-three to 35 percent of catheters inserted through basilic arm veins for measurement of central venous pressure (CVP) are inaccurately or incorrectly placed. 45 to 67 percent lie in internal jugular vein rather than in a central intrathoracic vein; if the patient's head is turned toward the arm of insertion, inaccurate placement will be reduced to 20 percent. It has been suggested that catheter entry into the internal jugular vein can be prevented if the patient is apneic during catheter insertion.

A 16 gauge 70cm long catheter was inserted into the basilic vein at the antecubital fossa of either arm. The patient was apneic and head was turned toward the arm of insertion. Post-operative chest X-ray was done to determine the location of the catheter tip. Among the 100 cases under study, the location of the catheter tip was as follows: right atrium 62%, superior vena cava 19%, subclavian vein 6%, internal jugular vein 2% and axillary vein 1%.

Failure to place a CVP catheter tip in an ideal central location does not necessarily prevent accurate central venous pressure measurement. In addition, placement of the catheter tip into the jugular veins may result in serious problems in patients who are at the risk of venous air embolism or in patients undergoing intravenous hyperalimentation. In cardiac surgery placement usually is not important, because pressures measured in the external jugular and internal jugular veins can accurately approximate central venous pressures.

This study suggests that turning the head of the patient toward the arm of insertion and placing the chin on to the ipsilateral shoulder and apnea during the introduction of central venous catheter via basilic vein would significantly increase the success of accurate intrathoracic placement.

Key words: central venous pressure, catheter, apnea, position

COSTS OF CARDIOVASCULAR THERAPEUTIC MODALITIES IN ISFAHAN UNIVERSITY HOSPITAL PATIENTS (1993-1998)

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ABSTRACT

Introduction: Costs of cardiovascular therapeutic modalities impose a great economic burden, both for the patients and the health and insurance systems. For a proper managerial decision to be made, detailed information would be necessary.

Methods: In a retrospective descriptive-analytical study, a total of 2304 cardiovascular cases admitted in Isfahan University Hospitals during a 6-year period were studied. A randomized cluster sampling model was used for case selection and the sample size for each year was calculated according to this formula: $Nz^2 pq/(N-1)d^2=z^2pq$. A checklist was used for data collection.

Results: The costs of therapeutic modalities and admission were calculated according to each patient group during the 6 years period. Daily admission and surgical procedure costs were calculated for each disease entity. The uppermost economic burden was due to ischemic heart disease.

Conclusion: The increasing trend of economic burden suggests a sum of 400 billion Rials to be devoted to cardiac patients in the year 2004. Prevention could be a means to increase cost-effectiveness in health care services for these patients.

Key words: Health economics, cardiovascular disease

METHADONE: A SAFE EFFECTIVE DRUG IN ADDICT CABG CASES

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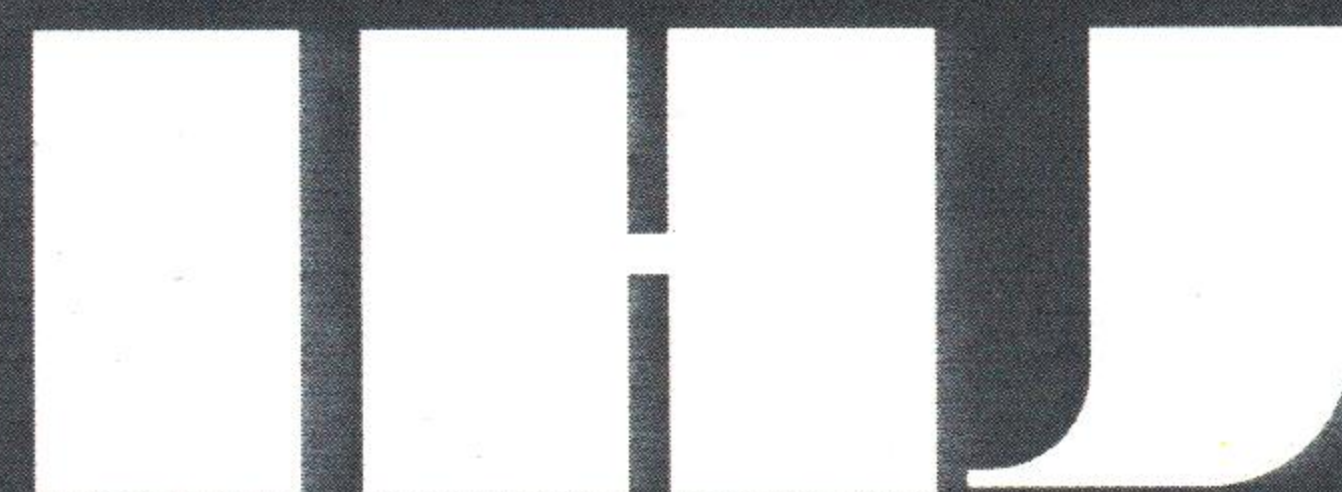
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ABSTRACT

Among different type of narcotics used for CABG, methadone could be a good choice. In a control study, two 50 case groups were selected among the CABG patients in the age range of 49 to 73 years. The two groups were similarized as much as possible regarding demographic factors and also the anesthetic approach. The first group who were addicts) received 10mg methadone 90 minutes before surgery as premedication and also 0.5 mg/kg methadone during the induction; while the second group did not. The patients were followed during a 72 hour period. None of the addicted patients had postop pain or any other complications including signs withdrawal syndrome.

Key words : Methadone; coronay artery bypass graft; addiction anesthesia

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SUNLIGHT HEAT INDUCED MORBIDITIES DURING IRAN AND IRAQ WAR

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Iran and Iraq war was started in 1980; in a widespread front, located mostly in a warm climate (esp. in summer). Both the people living there and the troops fighting during the war, had heat stroke morbidities due to excessive sunlight exposure.

In a cross-sectional descriptive study, during a 3 months period in the summer (1982), among a total of 185000 troops, 9477 cases had heat related complaints. The heat related problems were classified in 3 categories; namely heat fatigue (44.02%) heat exhaustion (49.47%) and heat stroke (6.49%).

The first category of the disease was the least problematic entity, which was relieved by cold drinks and resting at cool locations. The second category was associated with water and electrolyte loss, which needed I.V fluid therapy. The third group were relieved only by inhalational methods, cold blankets and gross I.V therapy. The results suggest a relatively high incidence of heat related morbidities which need more medical attention and also, more sophisticated studies to assess suitable therapeutic modalities

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