

REGRETS:

The editorial board of the Pakistan journal of Cardiovascular & Thoracic Surgery regrets the error made in printing of the inaugural issue. We offer our deep regrets to Professor Santilal K. Gaddhi, MD, as his name was mistakenly not printed as the co-author of the article Post Cardiopulmonary Bypass, Excessive Bleeding and its Management.

The corrected Abstract is as under:

POST CARDIOPULMONARY BYPASS: EXCESSIVE BLEEDING AND ITS MANAGEMENT

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ABSTRACT

Excessive post operative bleeding after cardiopulmonary bypass is a complex process and the causes are multifactorial. In the modern era of medicine with the increased fear of contracting transfusion related problems, it is vital that a complete haemostasis is achieved at the end of surgical procedure and the bleeding stops within a reasonable time after transfer of the patient to the intensive care unit. In the last several years of blood and blood products usage during open heart procedure has decreased phenomenally. In the 1950's twenty to thirty units of blood were used in cardiac operations, but now in the 1990's the rate is down to almost none in most of the operative procedures. If the trend of blood transfusion had not decreased than the number of operations performed today would not have been possible as it would have required enormous number of blood units available. Bleeding following cardiopulmonary bypass can be a major contributor of morbidity and mortality. The incidence of re-exportation in post cardiopulmonary bypass is less than 3%. However, re-exportation by itself may increase the morbidity which may include renal failures sepsis and added risk of blood and blood product transfusion. Proper anticoagulation of the patient is of utmost importance in patients undergoing cardiopulmonary bypass. Heparin which is used for its anticoagulant effect was discovered by Mcleen when working to find a procoagulant. A fortunate discovery because without it the cardiac surgery would not have been possible. At the end of CPB the heparin is neutralized with protamine, developed by Charg off and Olson in 1938. The causes of excessive post CPB bleeding are complex and improperly understood. However, it is important to diagnose the medical cause using laboratory tests and if they are all negative or unhelpful, then surgical re-exportation becomes mandatory. The definition of excessive bleeding is not clearly delineated. Blood loss of 150 ml/hour/sq meter of body surface area is considered excessive. Another study defined excessive blood loss of greater than 400 ml during the first two hours after surgery. However, Saleem et al. defined it to be greater than 100 ml ;in any one hour. The causes of perioperative bleeding are many and can be classified as below.

1. Known patient conditions
2. Residual heparin
3. Decrease in plasma factors
4. Decrease in platelets; number of function
5. Fibrinolysis
6. Surgical

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