PRECiSe (Priming Reduced Extracorporeal Circulation Setup): results of a safety study

Beholz S, Kessler M, Thölke R, Konertz W

Background
Different systems low priming systems limited to CABG have been introduced. We describe PRECiSe (Priming reduced extracorporeal circulation setup), a new low priming system which supplies all features of cardiopulmonary bypass.

Methods
PRECiSe incorporates the Deltastream™ diagonal pump, which pumps blood from the right atrium to the aorta via a membrane oxygenator and a filter; the system is placed beneath the patient’s head resulting in extremely short tubings. A reservoir allows the use of suckers and vents. Autologeous blood priming furthers reduces hemodilution. Results: In the safety study the system was used for extracorporeal circulation in 11 patients undergoing CABG without adverse events. By use of PRECiSe mean priming was reduced to 268.5 ml resulting in minimal hemodilution and transfusion requirements.

Conclusion
The use of PRECiSe for extracorporeal circulation in CABG is safe and reduces priming volume as well as transfusion requirements. Further studies are necessary to investigate the clinical benefit for the patients as well as the use of the system in open heart procedures.

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