Priming Reduced Extracorporeal Circulation Setup (PRECiSe) with the DeltaStream Diagonal Pump

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Different systems for beating heart procedures and low priming systems limited to coronary artery bypass grafting (CABG) have been introduced. We describe Priming Reduced Extracorporeal Circulation Setup (PRECiSe), a new low priming system which supplies all features of cardiopulmonary bypass (CPB). 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. Autologous blood priming further reduces hemodilution. In a safety study the system was used for extracorporeal circulation in 11 patients undergoing CABG without adverse effects. By use of PRECiSe mean priming was reduced to 268.5 ml resulting in minimal hemodilution and transfusion requirements.

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