Dual Chamber Atrio-Ventricular Cannula

Title: Dual Chamber Left Atrio-Ventricular Cannula

Invention: This technology is a novel cardiac cannula that is inserted through left atrium and drains blood from both sides of the mitral valve.

Background: Heart failure affects an estimated 5.7 million people in the US each year and about 600,000 new diagnoses are made each year. Heart failure can be cured with a total heart transplant but there is a wide gap in the number of organ donors available and the number of patients who need a heart transplant. To address the shortage of heart donors, heart transplants may be able to use ventricular assist devices or have cardiac surgery performed on them. Cardiopulmonary bypass has been developed to provide the circulatory support necessary for the patients to undergo cardiac surgery. Cannulation is a common procedure that is performed during cardiopulmonary bypass. Better design of cannulae is needed to decrease blood clotting and facilitate heart surgery.

Applications:
• A cardiac cannula for use during cardiac surgery.
• May be used to connect a ventricular assist device to left atrium instead of left ventricle.

Advantages:
• Able to drain blood from the chambers on both sides of the mitral valve.
• May create less clotting compare to current cannulation.

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