The Heart Surgery Forum®

KEY REFERENCES

Proximal and Distal Anastomotic Devices

Current descriptions in the literature of experimental and clinical applications of minimally invasive techniques to enhance outcomes of coronary artery bypass grafting (CABG) are varied. Many techniques facilitating anastomotic procedures are described, but long-term data supporting improved patency rates, efficiency of surgical techniques, and outcomes are limited. The growing need for minimally invasive procedures and ways to reduce the complexity of endoscopic suturing (with or without robotic enhancement) will drive the impetus for the development and implementation of such anastomotic devices. Applications of simultaneous suturing, stapling, clipping, stenting, and sealing devices have provided insight toward the development of clinically acceptable procedures to facilitate positive outcomes in conventional and minimally invasive CABG surgery. The ability to decrease operative time, create superb anastomoses without technical imperfection, and potentially improve long-term patency rates lends excitement to the nascent field of facilitated anastomotic devices in cardiac surgery. This compilation includes references that address key aspects regarding the history and development of anastomotic technology as well as the current implementation of modern devices for the construction of anastomoses in minimally invasive and conventional coronary artery surgery.

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