

Physician - Minimal Invasive, TAVI, Robotic Cardiac Surgery

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Our Experience With Axillary Cannulation in Minimally Invasive Bypass Patients

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Objective: This study aimed to evaluate the outcomes of patients operated on using extracorporeal membrane oxygenation (ECMO) cannulas inserted into the axillary artery via the Seldinger technique after exploring the axillary artery.

Method: Eighteen patients who underwent minimally invasive bypass surgery with an ECMO cannula via axillary artery cannulation between January 2024 and August 2024 were retrospectively reviewed.

Results: All 18 patients had successful ECMO axillary artery cannulation without any incidents of axillary artery damage. There were no cases of ischemia, edema, or permanent neurological deficits in the right upper extremity, and no infections were observed at the cannulation site. The mean time to extubation after the operation was 6 h, the mean intensive care unit stay was 1.05 days, and the mean hospital stay was 5.9 days. No prolonged intubation or mortality was observed.

Conclusion: As the prevalence of minimally invasive direct coronary artery bypass grafting increases, so does the need for alternative cannulation techniques. Axillary artery cannulation presents as a significant option. Its primary benefits include providing antegrade cerebral and systemic perfusion and eliminating the risk of retrograde embolization. However, local complications such as brachial plexus and axillary artery damage may occur. The use of the Seldinger technique with an ECMO cannula can minimize these risks. Our study found no systemic or local side effects with this technique in the operated patients.

Keywords: Axillary cannulation in minimally invasive bypass.