

Subclavian artery rupture and its mechanism of repair: A review of literature

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Introduction: Subclavian artery rupture is related to external trauma, spontaneous cause and less frequent by iatrogeny. Surgical repair has been used most frequently than endovascular repair, We aimed to specifically compare subclavian rupture and mechanism of repair.

Methods: We systematically searched PubMed, EMBASE, and Cochrane up to January 2013. The outcomes studied were lesion repair patency and survival rate compared to the mechanism of rupture and the repair method used.

Results: Out of 634 twenty-six articles presented the studied data and were included in the study. On the endovascular group, most common cause of subclavian was spontaneous (50%) whereas in the surgical group traumatic rupture was the most common cause (72%). Most of patients from the surgical group were male (72%), but at the endovascular group male represented 50% of patients. Patients were older on the endovascular group (57.1 ± 16 years) compared to surgical group (39.6 ± 19.31 years). Left subclavian artery was compromised in 62% in the surgical group and 50% in the endovascular group. Patients in the endovascular group were followed for longer time (4.2 ± 7.67 months) compared to surgical group (2.1 ± 3.79 months). In terms of patency, all the patients in the endovascular group presented with 100% patency of lesion after lesion repair whereas surgical group, 75% of patients presented with 100% patency ($p > 0.05$). Any of the patients in the endovascular group presented with functional dysfunction while 38% patients in the surgical group presented some level of functional dysfunction. For the last, mortality was higher in the surgical group (19%) compared to no mortality in the endovascular group. ($p > 0.05$).

Conclusion: Surgical repair for subclavian artery rupture is associated to lower patency rate, and higher residual dysfunction as well as death although there was no statistical significance when compared to endovascular repair.

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