

Subclavian artery dissection and its mechanisms of repair: A review of literature

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Introduction: Subclavian artery dissection might be related to the external trauma, iatrogenic and spontaneous cause. Endovascular repair, surgical repair or conservative methods have been described but there is no clinical study proven which method is superior.

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 dissection and the repair method used.

Results: Out of 785 articles twenty three articles presented the studied data and were included in the study. There were a total of 9 cases of traumatic dissection of the subclavian, 6 cases of iatrogenic cause, and 15 cases of spontaneous dissection. Patient were older at iatrogenic group compared to the others, male gender was more prevalent within all groups; left subclavian was compromised more frequently in all groups. Patients from the surgical group were followed for a longer period of time (15.5 ± 17.20 months). Endovascular repair was the most common method used in all three groups followed by surgical and conservative method. Spontaneous group was the only one to report a case treated conservatively and patient remained symptomatic with left arm numbness. 100% survival was noted on all three groups, although there were 2 deaths reported on surgical group but not related to the dissection itself.

Conclusion: Subclavian artery dissection can occur due to different causes, and either endovascular or surgical repair might provide higher rates of lesion patency and symptom improvement compared to conservative treatment; and presents the same survival rates for all them.

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