Carotid Artery Repair after Suicidal Hanging

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Objective:

Survival of blunt carotid artery injury sustained during suicidal hanging is a rare event, and is reported as Amussat s Sign in literature. 32 patients surviving the initial trauma have been reported from 1971-2024 (21 papers).

Methods:

Literature review from 1971-2023 in Pubmed, Embase and Google Scholar. Three own patients have been treated from 2006-2024.

Results:

43.8% underwent urgent repair, 12.5% delayed repair, no Information: 43.8%. Open surgery was performed in 31.2%, endovascular repair in 3.1%, no repair in 43.8%, not specified in 21.8%. 30-day mortality: 28%. We treated 3 male patients from 2006-2024, 2 urgent with bilateral saphenous vein interposition grafts and 1 delayed with endarterectomy and vein patch plasty. Urgent cases presented with Glasgow Coma Scale > 7. The delayed case presented with up to 5 daily transient ischemic attacks. One patient required tracheal reconstruction, one tydreoidectomy. No 30 day mortality, Improvement of neurologic status in all patients. Postoperatively patients received extensive psychiatric counseling and neurorehabilitation after surgery.

Conclusion:

Survival of suicidal hanging with carotid artery injury is extremely rare. Indication for repair has to be made urgently in most cases, as the patients are presenting with unstable neurologic symptoms. If repair is considered, open repair is necessary in most cases. Endovascular repair may be possible in selectively in cases with minor vascular injury. 30-day mortality exceeds 25% in literature.