

Surgical treatment of thoracic aortic pseudoaneurysm: a systematic review of the literature

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Introduction: Thoracic aortic false aneurysm is a rare complication of cardiac surgery or procedures on the thoracic aorta. We present the results of a systematic review of the literature. Our aim was to determine the best treatment options and surgical techniques.

Methods: We performed a literature search regarding thoracic aortic pseudoaneurysm and its surgical treatment in English, limited by the dates 1st January 1979 to 31st December 2022. We searched the PubMed and EMBASE databases for the following medical terms: thoracic aortic false aneurysm, pseudoaneurysm, and surgical treatment.

Results: Our search screened 4,046 articles. Only nine articles were eligible. The other articles were single case reports or small series of case reports with fewer than nine patients. All the studies were retrospective. Ninety percent of the cases underwent prior aortic or cardiac surgery. The surgical treatment strategies were chosen according to the location of the pseudoaneurysm and were overall inconclusive.

Conclusion: According to the current literature, there are no clear guidelines or recommendations; therefore, the operation should be tailored to each patient individually. Regular checkups involving imaging techniques after cardiac surgeries are recommended. Despite significant advancements in endovascular treatment, it is often not suitable, making open surgery the treatment of choice.

Key words: thoracic aortic false aneurysm, aortic pseudoaneurysm, a systematic review.

Chirurgická léčba pseudoaneuryzmatu hrudní aorty: systematický přehled literatury

Úvod: Falešné aneuryzma hrudní aorty je vzácnou komplikací kardiochirurgických výkonů nebo výkonů na hrudní aortě. Uvádíme výsledky systematického přehledu literatury. Naším cílem bylo stanovit nejlepší možnosti léčby a operační postupy.

Metody: Provedli jsme rešerši literatury zabývající se pseudoaneuryzmatem hrudní aorty a jeho chirurgickou léčbou v angličtině, která byla vymezena daty 1. leden 1979 až 31. prosinec 2022. V databázích PubMed a EMBASE jsme vyhledávali následující medicínské termíny: falešné aneuryzma hrudní aorty, pseudoaneuryzma a chirurgická léčba.

Výsledky: Naše vyhledávání prověřilo celkem 4 046 článků. Pouze devět z nich splňovalo kritéria způsobilosti. Ostatní články byly samostatné kazuistiky nebo malé série kazuistik s méně než devíti pacienty. Všechny studie byly retrospektivní. Devadesát

DECLARATIONS:

Declaration of originality:

The manuscript is original and has not been published or submitted elsewhere.

Ethical principles compliance:

The authors attest that their study was approved by the local Ethical Committee and is in compliance with human studies and animal welfare regulations of the authors' institutions as well as with the World Medical Association Declaration of Helsinki on Ethical Principles for Medical Research Involving Human Subjects adopted by the 18th WMA General Assembly in Helsinki, Finland, in June 1964, with subsequent amendments, as well as with the ICMJE Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals, updated in December 2018, including patient consent where appropriate.

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