

careful consideration, we selected nine articles for a thorough review and analysis. No extra articles were found in the reference lists (Fig. 1).

Study and patient characteristics

All of the studies reviewed were retrospective, with a total of 280 patients undergoing open surgical repair for TAFE (2, 5, 6, 8–13). Comprehensive patient data were presented only in two articles (8, 13). All studies reported basic demographic details (sex and age). The majority of patients were male, ranging from 52% to 80%. The mean age varied between 30 and 79 years old. However, there were discrepancies in the reporting of comorbidities, with only six studies providing descriptions of comorbidities to varying extents (5, 6, 8, 10). Patient and study characteristics are summarized in Table 1.

Symptoms of thoracic aortic pseudoaneurysm

Patients with TAFE typically experience dyspnea at a rate of 22%, followed by chest pain (18%) and fever or sepsis (17%). Stroke, dysphonia, heart failure, or a combination of symptoms are rare occurrences. It is unclear how many patients with TAFE are asymptomatic, as some studies fail to report on asymptomatic cases.

Tab. 1. Study and patient characteristics

	N	Male (%)	Age (years ± SD)	NYHA III–IV (%)	Connective tissue disorder (%)	Hypertension (%)	COPD (%)	Chronic renal failure (%)
Atik et al. (8)	60	70	53 ± 15	25	3	63	33	12
Dumont et al. (9)	11	52	52a	N/A	N/A	N/A	N/A	N/A
Katsumata et al. (6)	10	80	56 ± 13	N/A	1	N/A	N/A	N/A
Malvindi et al. (10)	27	71	64 ± 15	N/A	7	N/A	N/A	N/A
Malvindi et al. (5)	43	77	60 ± 12	23	7	N/A	14	2
Mohammadi et al. (11)	28	64	30 – 74a	N/A	N/A	N/A	N/A	N/A
Razzouk et al. (12)	13	54	51 ± 16	N/A	15	N/A	N/A	N/A
Sullivan et al. (2)	31	77	40 ± 20	N/A	N/A	N/A	N/A	N/A
Villavicencio et al. (13)	57	75	57 ± 18	34	9	47	7	14

^a – additional details were not provided

However, some authors suggest that a majority of patients with TAFE experience no symptoms (5, 10–12).

The details regarding prior surgeries, TAFE's location, and symptoms are summarized in Table 2.

Causes of thoracic aortic pseudoaneurysm

Prior surgery

In 90% of the cases, patients had undergone prior aortic or cardiac surgery. Aortic root procedure, specifically Bentall, was the

most frequently associated procedure which accounted for 24% of cases. The remaining procedures included aortic replacement, valve replacement or repair, coronary bypass graft, or heart transplant. Infection was responsible for 24% of TAFE cases in the group of patients with prior cardiac surgery.

Other causes

Among patients without a history of prior cardiac surgery, 2% had cardiac issues with no known triggering risk factors, 1.4% were linked to complications from blunt chest trauma, and the rest were caused by factors

Tab. 2. Previous surgery, TAFE characteristics, and symptoms

	Prior surgery (%)	Location of TAFE (%)	Symptoms (%)
Atik et al. (8)	RR 28 AVR/MVR 16 SC/AV/ArchR 16 CABG/AVR 6 RADR 6 Other 6	Proximal composite valve graft anastomosis 32 Distal aortic anastomosis 28 Coronary button reimplantation or vein graft anastomosis 17 Aortic isthmus 8 Proximal supracoronary ascending aorta 8 Aortic cannulation site 3 Proximal aortic arch 2 Aortotomy 2	Ascending aorta Heart failure 36 Chest pain 21 Sepsis 19 Incidental finding 7 Bleeding or drainage from wound 5 Superior vena cave syndrome 5 Pulsatile suprasternal mass 5 Stroke 2 Ascending aorta and arch Sepsis 44 Chest pain 44 Stroke 12 Arch Tracheal compression 33 Chest pain 33 Pulsatile suprasternal mass 33 Descending aorta History of trauma 100 Left main bronchus compression 33 Incidental finding 33 Hemoptysis 17 Chest pain 17
Dumont et al. (9)	CABG/AVR 36 Bentall 18 Coarctation 18 OHT 18	Ascending aorta 3 Aortic suture line 3 Proximal bypass 2 Descending aorta 3 Descending aorta 3	N/A