

Sternalis muscle: report of nine cases

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The sternalis muscle (episternalis, parasternalis, presternalis, rectus thoracic, rectus sternalis and superficial rectus abdominis muscle) is an unusual muscle of the anterior chest wall. This muscle may be unilateral or bilateral. The unilateral muscle is more common and its incidence ranges between 2-8% in most reports (Barlow, 1935; Bergman et al. 1988; Bailey et al. 1998; Jevic et al., 2001; Schulman et al., 2005; Lee et al., 2006) and is more rarely bilateral in only 1.7% (Lee et al., 2006). According to Turner (1867), the first report was made by Carbrilius in 1604. However until now the sternalis muscle has not been clearly described. This muscle is important in reconstructive surgeries. Its proximal attachment can be on the tendon of the sternocleidomastoideus muscle, the sternum, the clavicle, the pectoralis major and the platysma muscles. The sternalis muscle may have an inferior attachment on the costal cartilage, the rib and the rectus abdominis muscle. Some studies demonstrate that the incidence of unilateral sternalis muscle is more frequent in females than males, but in others studies it is equally present. Bilateral sternalis muscle is more frequent in females than males. Nine cases were found, eight unilateral and one bilateral. The unilateral cases, six were right-sided and two left-sided. It was observed in one case the presence of two bellies right-sided. The superior attachment was on the sternal belly of the sternocleidomastoideus muscle, the sternum and the pectoralis major fascia and the inferior attachment was on the on the 4th, 5th, 6th and 7th costal cartilages and the rectus abdominis muscle. In two cases we could see the innervation and vascularization. The innervation was different in their anatomic components: the belly was innervated by anterior cutaneous branch of intercostals nerve and the tendon was innervated by thoracic anterior nerve (pectoral). The arterial supply was made of perforating branches of the internal thoracic arteries.

Keywords: sternalis muscle, anatomic variation, anterior chest wall, trigger points.