Case Report

Right sternalis muscle

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ABSTRACT

Knowledge regarding the muscular variations of the chest and their identification for the proper dissection planes through radiological examination is important. Sternalis is an occasional muscle, which lies along the side of the sternum. It may be confused as a tumor. The existence of sternalis muscle, its location, orientation and early identification are necessary in breast surgeries. Presence of sternalis muscle adjacent to the breast is of clinical importance. © IJAV. 2009; 2: 41–42.

Key words: [sternalis muscle] [location] [nerve supply] [tumor] [breast surgery]

Introduction

Myotome portion of the somites give rise to most of the skeletal muscles of the body. Muscles of the extremities develop from somatic mesoderm. Splanchnic mesoderm gives rise to cardiac muscle and most of the smooth muscles; whereas mesoderm of the pharyngeal arches gives rise to some of the head and neck muscles. The sternalis muscle is a derivative of superficial part of the rectus abdominis muscle [1]. Sternalis is a flat, ribbon-shaped muscle that begins from the lower part of the ribs, rectus sheath and then courses upward, finally inserting into the upper part of the sternum and ribs or the sternocleidomastoid muscle [2]. Various authors have classified sternalis muscle under 4 main categories regarding the structure it has been derived: (a) from pectoralis major, (b) from rectus abdominis, (c) from sternomastoid and (d) from the panniculus carnosus [3].

It is necessary to record and discuss unusual anatomical variants with the use of advanced diagnostic and therapeutic tools as these variants could present a challenge to the radiologist or surgeon in establishing a diagnosis [4].

Case Report

During the dissection classes for MBBS students in the Department of Anatomy at Melaka Manipal Medical College, the right sternalis muscle has been noticed in a 65-year-old male cadaver (Figure 1). It was located at the anterior thoracic wall, along the right lateral side of the sternum. It originated as a tendon from the fascia of the right rectus abdominis and external oblique aponeurosis, ran upwards on the right lateral side of the sternum, finally inserted into the tendon of the right sternocleidomastoid muscle. It was measured 10 cm in length and 1.5 cm in width in the middle of the muscle. It was innervated by the 3rd and 4th anterior intercostal nerves (Figure 2).
supplied by the pectoral nerves but it was pierced by the intercostals nerves.

Sternalis muscle appears as an unusual bulge in the median breast in mammography, which could be mistaken either for a tumor on initial investigation or as a recurrence of cancer during post-treatment checkups.

Sternalis muscle can be easily identified by the use of CT or MRI [11]. Many surgeons and radiologists are not familiar with the sternalis muscle [6]. Early identification of sternalis muscle, its location is necessary to proceed in an appropriate plane during surgical dissection in breast surgeries [4].

References