Breast mass or sternalis muscle?

JORGE PÉREZ, MD*; JOSÉ E. PÉREZ-GUMÁ, MD*; RAMONITA CORREA, PhD*; MYRAIDA RIVERA, MD*; ALEXANDER CASTRO†; JOHANNA CEDENO†; MELVIN LÓPEZ†; LIZMARY NAZARIO†; KAREN OTERO†; JOSÉ QUILES†; PEDRO SÁNCHEZ†

This is the first description of the sternalis muscle being found among the cadavers used during the last two decades in the dissection laboratories of the San Juan Bautista School of Medicine.

Key words: Sternalis, Mammogram, Anomalous.

The sternalis muscle was originally described by Dobson (1). It has been found bilaterally and unilaterally (2), in black and white races by Jelev, et al (3), and in Taiwanese by Jeng and Shuen-jing (4). Most recently it has been an incidental finding on breast examinations and mammograms in which the muscle has been confused with breast masses by Falconer (5), Young Lee and Young Byun (6), and by Harish and Gopinath (7). The incidence of finding this muscle varies between 3 to 8 percent. Its importance as well as its function is a mystery. We discovered the anomalous sternalis muscle as our first year Anatomy class dissected the chest muscles of an 80 year old female. Additional findings on further dissection of the cadaver were dextroscoliosis, bowel cancer, stasis ulcers, and right knee prosthesis. In the two decades that we have been performing dissections for Anatomy class, this is the first time this muscle is described.

The muscle was studied and described extensively by Jelev, et al (3). According to their criteria, for a sternalis muscle to be accepted as a uni - or bilateral muscle, it should have the following characteristics, irrespective of length and thickness: (1) location between the superficial fascia of the anterior thoracic region and the pectoral fascia; (2) origin from the sternum or infraclavicular region; (3) insertion onto the lower ribs, costal cartilages, aponeurosis of the external oblique abdominis muscle or the sheath of rectus abdominis; and (4) innervation by the anterior thoracic (pectoral) and/or intercostals nerves. The muscle should and does conform to one of the eight distributions described in their article.

As an incidental finding in one of our cadaveric dissections, we found what we thought was a unique anomaly. However, it turns out to be a rare anomaly found in three to eight percent of the world’s population. We, hereby, document the first case to be found during the past two decades of dissection in our Anatomy laboratory. The importance of this finding does not diminish its significance as we have the same incidence of breast masses and breast cancers, and we perform the same number of breast exams and mammograms per capita as other developed countries of the world. We must be aware that this muscle exists and has been found in our local population, and, we must be cognizant of it when we perform breast exams and examine mammograms with abnormal findings.

Acknowledgements

We gratefully acknowledge the cooperation of the Anatomy Board, University of Puerto Rico, Medical Sciences Campus, for providing the cadavers.

References