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Abstract

Pectus Carinatum (PC) or protrusion deformity of the chest wall accounts for 5 % of all chest wall deformities affecting 1 in 2500 live births (Ravitch, *Congenital deformities of the chest wall and their operative correction*. WB Saunders, Philadelphia, 1977). It is also known as pigeon chest. It can be unilateral, bilateral or mixed and there is predominance in males (Robicsek, *Chest Surg Clin N Am* 10(2):357–76, 2000).

Keywords

Pectus Carinatum • Pigeon chest • Congenital chest wall deformity

Pectus carinatum (PC) or protrusion deformity of the chest wall accounts for 5 % of all chest wall deformities affecting 1 in 2500 live births [1]. It can be unilateral, bilateral or mixed and there is predominance in males with a ratio 4:1 [2]. However in some areas PC is almost equally or more frequent than PE [3, 4]. PC has not attracted the same interest as PE and the majority of the clinicians and thoracic surgeons are still unaware of surgical or conservative management options available. Since PC is rarely noticed at birth it is

believed to be acquired rather than congenital. In most of cases it is perceived by the age of 10, is accentuated at puberty and reaches its peak at the ages of 16 and 18 respectively in female and male [3]. On the other hand a congenital association can be established by the following: presence at birth [4]; association with Marfan syndrome, congenital heart disease and hand agenesis [5]; observation in monozygotic twins [6, 7]; occurrence in more than two members in the same family. An association with reflux and mitral stenosis or prolapse has also been reported [8]. Another theory includes exaggerated growth of the cartilages [9, 10]. In PC an anterior growth can pull the sternum. Depending on the location of the protrusion PC can be classified into the two following types:

- Inferior PC or chondrogladiolar (chicken breast or pigeon breast): It is the most frequent

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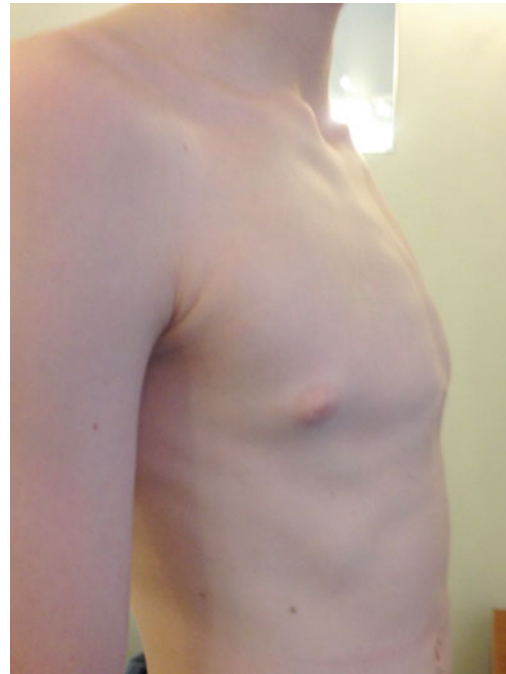
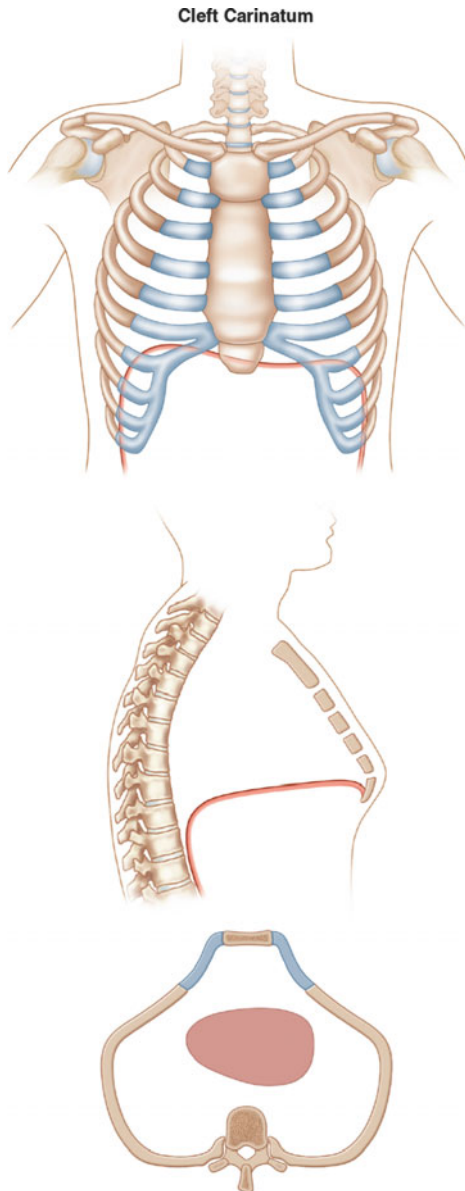
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type and characterize by a prominent sternum mainly in its mid and lower portion. In almost all cases is associated with lower bilateral costal depression. It is more often symmetric (Figs. 5.1, 5.2, and 5.3).

- Superior PC or chondromanubrium (pouter pigeon or Currarino & Silverman syndrome): It consists of upper protrusion of the sternal

notch that is proximal to midsternum and lower pseudo depression. It is subdivided to upper PC with midsternum depression and without midsternuml depression [11].

Clinically the deformity presents a typical progressive growth and can be accompanied by cardiovascular and respiratory symptoms similar



Figs. 5.1, 5.2, and 5.3 Inferior PC or chondrogladiolar (chicken breast or pigeon breast): It is the most frequent type and characterize by a prominent sternum mainly in

its mid and lower portion. In almost all cases is associated with lower bilateral costal depression. It is more often symmetric

to PE. These usually include palpitations, dyspnoea, wheezing with exertion and reduced exercise tolerance. Usually the cardiac and pulmonary function are less implicated than in PE but psychological effects of PC can be severe and responsible for low self esteem [12] leading to the necessity of a surgical correction.

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