# Other diseases of the chest wall

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- Congenital abnormalities are often incidental findings on chest radiography (e.g. bifid rib), but there are some important exceptions. Cervical rib and thoracic outlet syndrome This rib is usually represented by a fibrous band originating from the seventh cervical vertebra and inserting onto the first thoracic rib. It may be asymptomatic, but because the subclavian artery and brachial plexus course over it a variety of symptoms may occur. The lower trunk of the plexus (mainly T1) is compressed, leading to wasting of the interossei and altered sensation in the T1 distribution. Compression of the subclavian artery may result in a poststenotic dilatation with thrombus and embolus formation. The diagnosis, assessment and surgery are fraught with uncertainties and are best left to those with a well-developed interest in this problem. Pectus excavatum The sternum is depressed, with a dish-shaped deformity of the anterior portions of the ribs on one or both sides. Whether it causes cardiopulmonary issues through compression remains unclear but certainly the disfigurement can lead to significant psychological concerns. It can be repaired either as an open procedure (modified Ravitch procedure), which involves resect - ing the a ff ected costal cartilages and mobilising the sternum, or as a minimally invasive technique, the Nuss procedure. A metal bar is placed behind the sternum to hold this central panel in its new position; the bar has to be removed after a period of time ( Figure 60.29 ). Pectus carinatum (pigeon chest) In this condition the sternum is elevated above the level of the ribs and treatment is o ff ered for aesthetic reasons. It often comes to light during the growth spurt at adolescence when, of course, the teenager is particularly sensitive about appearance. Most patients are asymptomatic and the only justification for treatment is on cosmetic grounds. Some surgeons make a very good case for this but the risk of morbidity and of a less than perfect result must be clearly spelt out to the patient and his/ her parents. Surgery (modified Ravitch) involves mobilising the sternum with the costal cartilages so that the sternum can be flattened to a more anatomical position. Surgery is best left until the late teens, when further growth of the chest wall is unlikely . Alternatively , an external orthotic brace can be worn in young patients with a pliable chest wall to remodel the chest shape over time.

# Figure 60.29 (a) Insertion of a preformed bar placed thoracoscopically beneath the pectus excavatum. (b) Chest radiograph following inser tion of a metal bar bracing the sternum forward (the Nuss procedur

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