

Summary

The primary function of the chest wall is to produce respiratory movements responsible for ventilation of the lungs, it also affords protection of thoracic viscera. Such requirements need uniquely functional apparatus.

Many etiological factors may affect the sealing and stability of the chest wall of these factors are the congenital, traumatic, chest wall tumors and post irradiation necrosis of the chest wall as well as postoperative thoracic wound infections.

The treatment of large defects of the thoracic wall is a challenging surgical problem. A chest wall defect may result in a flail segment with paradoxical movements with bad pulmonary ventilation, this is especially if the defect is anterior or large.

Consequently the use of some materials to avoid herniation or paradox and to provide some rigidity to the chest wall is necessary. Numerous materials have been employed for this purpose, including prolene mesh, stainless steel mesh and Marlex mesh also autogenous bone stability and rib graft are put across the defect to ensure the chest wall.

Various technique have been described for achieving closure of the soft tissue, including skin graft, skin flap muscle and musculocutaneous flaps, the latter is now a popular technique with many advantages in chest wall reconstruction.