Oblique chondrotomy alone for repair of neglected cleft sternum in adulthood

Mohamed A.K. Salama Ayyad Hussein Elkhayat

Abstract:

Objectives Cleft sternum is an infrequent anomaly which typically drags parents' attention since birth with subsequent surgical repair in early years of life but few cases ask for surgical consultation at adulthood. We report 3 cases during the last 10 years in whom we use only a release oblique osteochondrotomy incision to primary repair the cleft without the need for a prosthetic material or bone graft. Methods A retrospective descriptive study for three cases of congenital complete cleft sternum surgically repaired between 2004 and 2014 at cardiothoracic surgery department, Assiut University, Egypt. Surgery was done through a vertical midline incision, removal of the redundant skin, and the sternal edges were defined. Pectoralis muscle flap were created on both sides. A sliding cartilage flap was created between the second and fourth costal cartilages, and the sternal bars from both sides were advanced to meet in the midline followed by sternal approximation with stainless steel sutures of appropriate size. Results Mean ages of cases we have operated were 17.6 years ± SD 1.52. All patients recovered smoothly, extubation was done in the operating room and with no need for postoperative mechanical ventilation. Chest wall movement was stable completely. Patients were discharged between 4th ‑ 6th days postoperatively according to pain tolerance. Cosmetic results were acceptable for all patients. Chronic pain/neuralgia were not reported in 2 years follow up period. Conclusions We propose a simple surgical technique for repair of cleft sternum in adulthood without the need for prosthetic material or bone grafts. In comparison with previous techniques, it offers the theoretical advantage of restoring the anatomy without the risk of infection of the prosthesis or hazards of bone graft.

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