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Title: Stabilization of sternum using absorbable copolymer plate in the open surgery for pectus deformities

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Body: Minimally invasive repair of pectus deformities have become the treatment of choice in recent years yet open surgery is still being widely performed for deformities such as mixed deformities or pectus arcuatum, where minimally invasive techniques are not feasible. Various materials such as steel wires can be used for stabilizing the sternum during open surgery. Absorbable copolymer plates have been in use for the stabilization of bony structures. The aim of this study was to investigate our results of open surgery for pectus deformities using absorbable copolymer plates for sternal stabilization. Eighteen patients who had had open surgery for pectus deformities using absorbable copolymer plates between November 2008 and January 2012 were included in the study and they were evaluated retrospectively according to the demographics, type and form of the deformity, operation duration, perioperative and postoperative complications, and recurrence. Twelve patients were male and the median age was 19,5 (range: 14-31). Seven patients had pectus arcuatum, 7 had pectus carinatum and 4 had mixed deformity. Deformity was symmetric in 13 patients. All patients had open surgical correction with the principals of modified Ravitch sternoplasty and the sternum was stabilized by screwing a 42x42x2mm absorbable copolymer plate on sternal osteotomy line. The median operation duration was 120 minutes (40-210). One patient had seroma in the postoperative period. No recurrence was seen. Absorbable copolymer plates can be used for the stabilization of sternum in open surgery for pectus deformities with low morbidity rates, as it is a safe, durable and easy-to-use material.