Cranioplasty of calvarial skull defects: A comparative study between using three dimensional custom-made cranioprostheses versus hand-made bone cement in restoring skull configuration.

A thesis submitted in partial fulfillment of the requirements for the Msc degree in Neurosurgery.

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2018
Abstract:

(Key Words: cranioplasty, custom-made implant, bone cement)

Cranioplasty is a reconstructive procedure used to restore skull configuration. Optimal skull reconstruction is a challenge for neurosurgeons, and the strategy used to achieve the best result remains a topic of debate. The most common causes leading to calvarial skull defects include: depressed fractures of the skull, decompressive craniectomies (DC), tumor infiltration of calvarial bones, congenital deformities and inflammatory lesions. Many types of materials are allowed. The subject of this study is to compare the outcome of two different manufacturing processes in reconstruction of calvarial skull defects by using 3D custom-made cranioprostheses versus hand-made bone cement implants.