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Case Report

Frontoparietal Cranial Loss of Substance: CT Study and Microsurgical Reconstruction with Radial Flap

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Case Presentation

Introduction

Plastic Surgery has been largely evolved during last decades, although its fundamental reconstructive techniques have been adapted to a wide range of clinical needs. In this scenario, microsurgery has an increasingly important role, both for experienced surgeons, both for new learners, and the factor which makes more successful a reconstruction is the preoperative clinical and imaging-based evaluation.

A 25-year old woman presented to plastic surgery division 3 weeks after she had underwent a neurosurgical intervention for aneurism complicated by rupture of the same and consequent hematoma (Figure 1). This preliminary CT study presents a wide loss of substance on the lateral right cranial vault (Figure 2). The evaluation was conducted with and without injectable iodinated contrast medium agent and has allowed a thin-layer detailed vision of the structures of the posterior fossa and supratentorial regions. Images revealed on the right side a wide hyperdense area characterised by "biconvex lens" fashion with small air bubbles in its context and relative hematoma: the blood is likely to be in communication with a further accumulation positioned in subcutaneous soft tissues, on the right, above the bone operculum. Even in this place small air bubbles are detectable. Images also offer the vision of a hemispherical right area, referable to parenchymal damage in stabilization, compressive effect on the right parenchyma and the ipsilateral ventricular system and edema of the soft tissues of the cheek region of the right.

Reconstruction

A radial forearm flap was harvested in standard fashion to realize a microsurgical reconstruction (Figure 3). The forearm flap's area was adapted to cover the defect, microvascular anastomosis was then performed in standard fashion and Doppler was applied for both intraoperative and postoperative monitoring. Pictures show the preoperative markings and the immediate postoperative result.

Conclusions

The preoperative evaluation for a reconstructive step results precious and precious both in election and in emergency. This case presents the complexity brought by a frontoparietal cranial loss of substance and its relative preliminary CT study.

Figure 1: Underwent a neurosurgical intervention for aneurism complicated by rupture of the same, and consequent hematoma.

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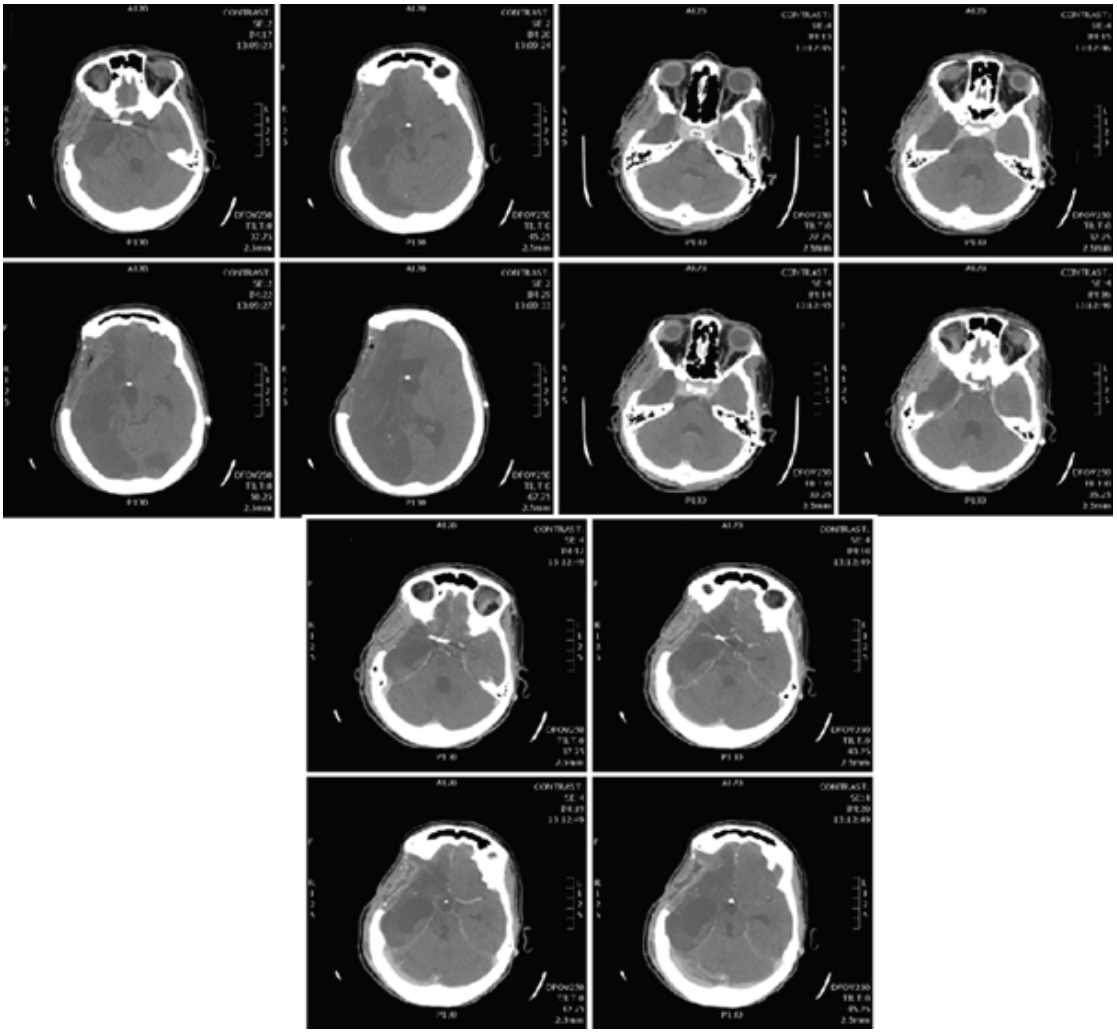

Figure 2: Preliminary CT study presents a wide loss of substance on the lateral right cranial vault.

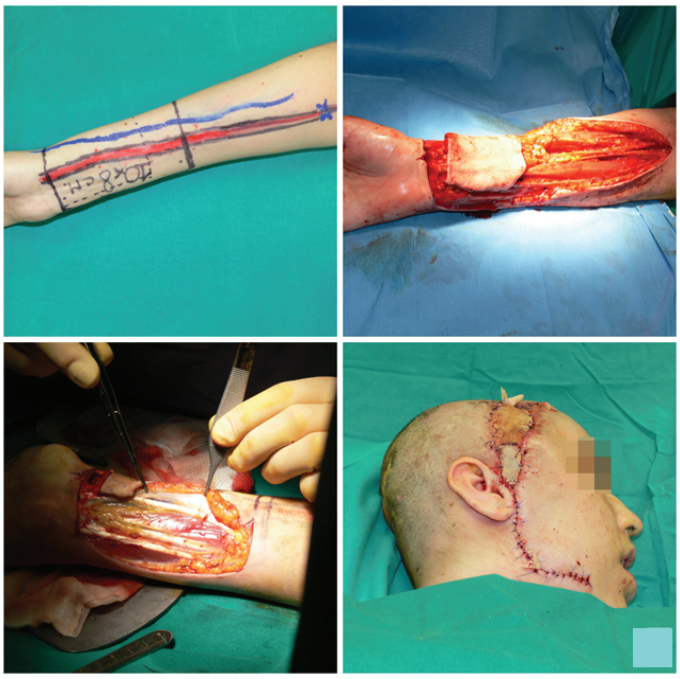

Figure 3: A radial forearm flap was harvested in standard fashion to realize a microsurgical reconstruction.

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