

17-Year-Old Male with Electrical Conduction Burn, with Contact Area in Skull Treated with Orticochea-Type Flaps

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ABSTRACT

The Orticochea flap, a multi-flap closure technique, is a recent addition to the field of reconstructive surgery. It is a safe and acceptable alternative for scalp reconstruction, as it can cover a skin and bone defect with local full-thickness skin, reducing the length of the procedure. The technique is particularly useful for rehabilitating cranium and frontal abnormalities, as it provides an appropriate blood supply and increases the surface area for closure. The orticochea flap is particularly suitable for significant frontal or vertex defects, no prior radiation exposure, and no hairline distortion.

KEYWORDS: Orticochea, flaps, reconstructive surgery.

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INTRODUCTION

The field of reconstructive surgery is challenging due to the extensive selection of reconstructive treatments available for the reconstruction of cranium and frontal abnormalities. One and two In 1967, Dr. Orticochea disseminated his four-flap technique for rectifying significant defects. Three openings were incorporated in 1971. 3 The Orticochea flap, a multi-flap closure, is an excellent alternative for scalp reconstruction due to its potential to produce tissue that can accommodate hair and reduce the length of the surgical

procedure^{1,2}. We present an interesting case of a 17-year-old male with electrical conduction burn, with contact area in skull treated with orticochea-type flaps.



Figure 1. Preoperative skull wound



Figure 2. Orticochea flap



Figure 3. Postoperative aspect of scalp

DISCUSSION

The primary goals of scalp restoration are to achieve functional and cosmetic results. Functional concerns encompass the provision of an appropriate blood supply through vascularized tissue to protect the calvarium from desiccation and infection. The Orticochea flap, a relatively recent technique, reconstructs the frontal and occipital regions of the cranium using three flaps, as opposed to the conventional. This preserves the vascularity of each membrane while increasing the surface area that can be closed. For these flaps, a three-flap approach is preferred over a four-flap procedure due to the fact that they require extensive undermining to develop and are pedicled by bilateral superficial temporal arteries and occipital arteries. 5. When there is a significant (>30 cm²) frontal or vertex defect, no prior radiation exposure, and no hairline distortion, the Orticochea flap is well-suited to the scalp reconstructive method devised by Desai et al. The orticochea flap is a safe and acceptable alternative in the treatment of substantial transient substance loss due to the feasibility of closure in a single surgical event and the acceptable cosmetic and functional outcomes achieved by covering a skin and bone defect with local full-thickness skin ³⁻⁵.

CONCLUSION

In conclusion, the Orticochea flap technique stands out as a versatile and effective method for scalp reconstruction, particularly in cases involving significant tissue loss and the need for aesthetically pleasing outcomes. This technique, which utilizes multiple flaps to ensure a robust blood supply and adequate tissue coverage, addresses both functional and cosmetic goals of scalp restoration. The case of the 17-year-old male with an electrical conduction burn demonstrates the practical application of the Orticochea flap, showcasing its ability to achieve satisfactory results in a single surgical procedure. Overall, the Orticochea flap offers a reliable and efficient solution for complex cranial and frontal reconstructive challenges, making it a valuable option in the field of reconstructive surgery.

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