

BONE AUGMENTATION IN INTERNAL FIXATION OF CONGENITAL PATHOLOGIES, POST-TRAUMATIC DISORDERS (NON- OR MALUNIONS) AND PSEUDARTHROSIS TREATMENT ON UPPER LIMB

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Background. The paper explores the applicability and efficiency of bone augmentation in combination with internal fixation as a primary strategy in the treatment of malunited or non-united fractures and pseudarthrosis in the upper limb.

The aim is to evaluate the impact of this approach on improving bone consolidation and the functional recovery of patients.

Materials and Methods: The study includes a review of cases treated between 2019-2021, focusing on patients (N:39) with malunited (N:11) or non-united (N:6) fractures, congenital deformities (N:2), and pseudarthrosis (N:20) of the upper limb. Various internal fixation techniques (pins, plates (LC-DCP/T-DCP/LCP)), types of graft used (autograft from the iliac crest (N:6), allograft - bone block (21), demineralized bone graft (N:5), bone substitutes - autologous nucleated cellular suspension from bone marrow (N:8)) and their impact on the healing process are analyzed.

Results. The results obtained highlight a significant improvement in bone consolidation rates and the functionality of the treated limb, emphasizing the effectiveness of bone augmentation in combination with internal fixation. Depending on the type of pathology, valuable perspectives for optimizing future treatments are presented.

Conclusions. Bone augmentation accompanied by internal fixation represents an effective approach for managing deformity, malunited or non-united fractures and pseudarthroses of the upper limb. Selecting the appropriate method of augmentation and internal fixation, adapted to the specifics of each case, is crucial for achieving optimal bone consolidation and functional recovery.

Keywords: bone augmentation, internal fixation, post-traumatic deformities, non- and/or malunited fractures, pseudarthrosis, upper limb.