

## Histochemical and morphological aspect of fresh frozen bone after maxillary graft: a preliminary study

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Bone grafts are being made using materials extracted from autogenous bone because of its excellent biocompatibility. Bone grafts are widely used, in dentistry, for the reconstruction of severely atrophic jaws, caused by trauma, oncologic diseases, oral infections or congenitally missing teeth.

Although autografts remain the "gold standard", however, the amount of bone, donor site morbidity and unpredictable graft resorption are limitations of using this bone source. There is an increased use of fresh frozen bone allografts (FFBs) in orthopedics and in dentistry.<sup>(1)</sup> The FFB is aseptically harvested from different skeletal sites of live or cadaveric donors, immediately frozen and stored at  $-80^{\circ}\text{C}$ <sup>(2)</sup>. The rigorous protocol for bone processing, which eliminates living cells and consequently the risk of transmission of diseases, and the reduced immunological reaction. The fresh frozen bone provided with osteoconduction and osteoinduction properties

The aim of the present work was to study the morphological characteristics of fresh frozen after 6 month of bone graft to evaluate new bone formation. For the study, we selected 10 patients which were undergone to bone graft after bone atrophy; the study was carried out by histology, immunofluorescence and scanning electron microscopy techniques.

Results have shown, after 6 month of graft, the presence of cellular elements demonstrating new vital bone apposition and supporting that fresh frozen grafts present regenerative capacities. These morphological data support the results prevalently clinical demonstrated in Literature.

These are preliminary results which need further measurements in follow-up periods, histologic and ultrastructural features and also experimental protocol on animal models.

### References

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