

The Importance of Reconstructing the Orbital Floor and Vomer-Palatal Sagittal Axes

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Amidface reconstruction with long-term collapse due to missed skeletal restoration was detailed.¹ The soft tissue restoration using a free musculocutaneous flap and two scalp flaps did not successfully maintain volume over time. Retrusion of the central area was attributed to the damaged vomer. Regression of the upper sector was due to the absence of the right zygomatico-maxillary orbital floor and nasal bridge, while the de-projection of the lower part arose because of the missed hard palate along with its dento-alveolar component. This Viewpoint aims to emphasize the sagittal shrinkage that occurred after missing the opportunity to rebuild both the orbital floor and the vomer-palatal axial arrangements (Fig. 1).

The missed orbital floor and hard palate should have been compensated for by titanium mesh sheets. Prefabricated skeletal fixing frames are now available to reduce peroperative time and effort. A vomer-palatal bridge could have been created using a vascularized fibular, iliac, or scapular fragment,^{2,3} anchored to the intact bilateral maxillary tuberosity. Large surgical teams with microsurgical skills can now perform multiple tissue transfers simultaneously.

The skeleton plays a fundamental role in maintaining structural integrity. There are no dispensable components among the midface skeletal sagittal, horizontal, and vertical major force trajectories. The anterior orbital floor is anatomically based posteriorly on the greater wing of the sphenoid bone, backed by the stone-like petrous part of the temporal bone. The vomer-palatal sagittal axis serves as the main force trajectory protecting against midface central regression. The vomer is supported by the central skull base milestone, the sphenoid bone. The hard palate is supported posteriorly on both sides by the

strong maxillary tuberosity, which is in contact with the vertical powerful pterygoid process of the sphenoid bone masterpiece.

In conclusion, a stable orbital floor and a robust vomer-palatal axis are just as crucial as other horizontal axes and vertical pillars in maintaining the three-dimensional structure of the reconstructed middle third of the face. Failures, when seen as preparatory steps for success, can ultimately be rewarding.

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DISCLOSURE

The author has no financial interest to declare in relation to the content of this article.

PATIENT CONSENT

The patient provided consent for the use of his image.

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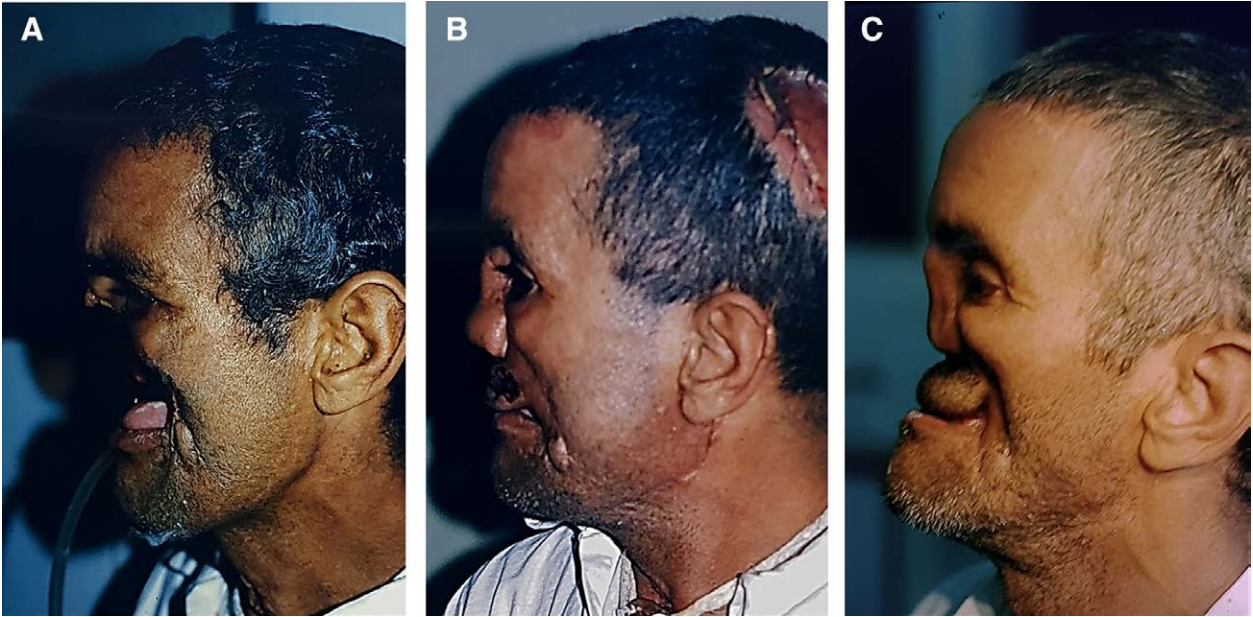


Fig. 1. Collapse of unsupported facial soft tissue. The patient's preoperative (A), 3-month (B), and 6-year (C) postoperative profile photographs, displaying the long-term midface sagittal regression.