

Nasal Monobloc for Late Nasal and Orbital Asymmetry of Uniconoral Synostosis

Purpose

Patients with uniconoral synostosis may develop asymmetries of the orbits and nasal complex long after fronto-orbital advancement. To address these asymmetries, the nasal monobloc procedure was designed at our institution. A nasal monobloc mobilizes a united nasal and medial orbital segment of bone to perform corrective translational and rotational movement. The purpose of this study was to examine the surgical outcomes of nasal monobloc for orbital and nasal asymmetry related to uniconoral synostosis.

Methods

A retrospective review of all patients treated with nasal monobloc at our institution was performed. Demographic information was recorded, and relevant imaging (3D and 2D photographs) was utilized for outcome analysis. From imaging, nasal deviation on frontal view, nasal deviation on basal view, and orbital aperture width were assessed. Aperture index (Left aperture width/right aperture width) was calculated from aperture width measurements to compare orbital symmetry. Patients without imaging were excluded.

Results

Inquiry yielded ten patients treated with nasal monobloc, and of these, six patients (3 males, 3 females) had adequate imaging for analysis. Three patients had 3D images, and in the remaining three patients 2D photographs were utilized. 3D images (n=3) exhibited correction of frontal nasal deviation by 67.24% (5.35 degrees), basal nasal deviation by 62.47% (4.52 degrees), and aperture index asymmetry by 79.95%. 2D images (n=3) revealed improvement of frontal nasal deviation by 53.14% (2.95 degrees), basal nasal deviation by 49.75% (2.40 degrees), and aperture index asymmetry by 59.22%. Follow was 3.5 to 68.1 months (mean=22.6 months). All patients were satisfied with their outcome, and no revisions were undertaken.

Conclusions

Nasal monobloc is a reasonable surgical treatment to improve the long-term sequelae of uniconoral synostosis, including frontal nasal deviation, basal nasal deviation, and orbital aperture asymmetry.