Secondary correction of posttraumatic orbital wall adhesions by membranes laminated with amniotic membrane.

Abstract:
The objective of the study was to find out if human amniotic membrane could be used for corrective surgery after trauma to the orbital wall. Because of its proposed antiadhesive qualities, it seemed to be potentially suitable. We studied 8 men (mean age 37 (range 19-74) years) who had deficient ocular movement after fractures of the orbital floor. Five of them had already been operated on. Inclusion criteria were trauma dating back more than 4 months and a soft tissue stricture in the orbital floor diagnosed by magnetic resonance imaging. Patients were treated secondarily with lysis of adhesions and insertion of allogeneic human amniotic membrane laminated on to polyglactin 910/polydioxanone foil, which functioned as the carrier material. Patients were followed up for 3 months, by which time disorders of motility of the ocular bulb had disappeared completely in 5. Two patients had improved motility and a reduction in both their subjective and objective symptoms. One patient had no improvement. The considerable reduction in adhesions and scarring after insertion of the membrane confirms previous assumptions, according to which the epithelial side of the human amniotic membrane has an antiadhesive effect because of its smooth surface.