

Comparison of lateral orbital decompression with and without rim repositioning in thyroid eye disease

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Purpose: Rim-off lateral wall decompression may be associated with functional and cosmetic deficit. Our objective, therefore, was to describe the functional and cosmetic results of deep lateral orbital decompression with and without anterior rim repositioning for thyroid eye disease.

Methods: In this retrospective comparative case series all consecutive thyroid eye disease patients who underwent deep lateral wall decompression at the Royal Victorian Eye and Ear Hospital between 1990-2007 and the Goldschleger Eye Institute, Sheba Medical Center between 2008-2011 were included. Patients were divided into two groups: the "rim-on" group in which the anterior lateral orbital rim was repositioned and the "rim-off" group in which it was left off. Main outcome measures were: proptosis reduction, postoperative oscillopsia and diplopia, presence of visible or palpable lateral orbit depression.

Results: One hundred and twelve patients who underwent 86 orbital decompressions were included in the final analysis. The average proptosis reduction for two- and three-wall decompressions ranged between 4.6-4.9 mm in the rim-on and 4.6-5.7 mm in the rim-off group respectively. The prevalence of postoperative oscillopsia was similar in both groups. The preoperative diplopia worsened in 17 patients (32.1 %) in the rim-on group and in seven patients (12.3 %) in the rim-off group ($P = .02$, chi-square test). None of the patients developed visible or palpable lateral orbit depression.

Conclusions: Deep lateral orbital decompression without anterior rim repositioning may be an effective approach to enhance functional and cosmetic outcomes in thyroid eye disease patients without increasing the risk of lateral wall depression or postoperative oscillopsia.