

1 **Abstract**

2 **Background:** To detect significant factors associated with excessive postoperative
3 exo-drift in young patients with intermittent exotropia who had undergone unilateral
4 lateral rectus muscle recession and medial rectus muscle resection.

5 **Methods:** We retrospectively examined the records of 64 consecutive patients <18 years
6 old who underwent surgery between April 2004 and December 2011. We sought risk
7 factors for excessive postoperative exo-drift among patients' demographic and clinical
8 characteristics using univariate and multivariable linear regression analysis.

9 **Results:** Younger patients ($P = 0.007$), and those with larger preoperative exo-deviation
10 at distance ($P = 0.033$), a lower incidence of peripheral fusion at distance ($P = 0.021$) or
11 a greater postoperative initial eso-deviation ($P = 0.001$), were significantly more likely
12 to have an excessive postoperative exo-drift (>20 prism diopters). Univariate analysis
13 revealed significant associations between excessive postoperative exo-drift and age at
14 surgery ($P = 0.004$), preoperative exo-deviation at distance ($P = 0.017$) and
15 postoperative initial eso-deviation at distance ($P < 0.001$). Multivariable linear
16 regression analysis showed that postoperative initial eso-deviation at distance ($P =$
17 0.008) was significantly associated with postoperative exo-drift.

18 **Conclusions:** Postoperative exodrift in unilateral RR is predicted by the initial

1 postoperative eso-deviation, which may offset the overcorrection. However, the
2 exo-drift is greater in cases with a large preoperative exo-deviation and/or at a younger
3 age, and should be followed carefully.

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5 **Key words:** intermittent exotropia; postoperative exo-drift; recurrent exotropia;

6 recession and resection procedure; strabismus surgery