

# DIAGNOSTIC MONOCULAR OCCLUSION IN PATIENTS WITH ESOTROPIA

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## Purpose

To determine if angle of deviation changes significantly after diagnostic monocular occlusion prior to strabismus surgery.

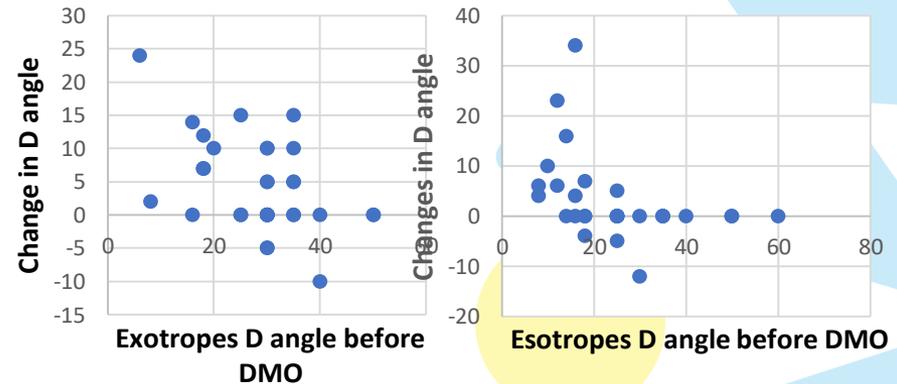
## Methods

We retrospectively analysed data from 34 patients with exotropia and 29 with esotropia. Near and distance angles were measured over 3 visits and then after 2 hours monocular occlusion. Data were analysed with paired t-test, linear regression and Fisher's exact test.

## Results

After diagnostic occlusion, the angle of deviation in exotropes significantly increased at near (mean change 8 PD, 95%CI 6-10 PD, paired t-test  $p < 0.001$ ) and distance (mean change 4 PD, 95% CI 2-7 PD,  $p = 0.0011$ ). There was no correlation between the amount of change after occlusion and the initial angle ( $p = 0.074$ ) but there was a significant inverse correlation with the distance angle ( $p = 0.004$ ). In 88% of patients with IDEX and 85% of patients with X(P) the increase in near angle was greater than 5 PD, albeit it was not statistically significant ( $p = 0.531$ ). In esotropes, there was a significant increase for near after occlusion (mean change 4 PD, 95%CI 2-6 PD, paired t-test  $p = 0.0002$ ) but it was not quite significant for

distance (mean change 3 PD, 95%CI 0-6 PD, paired t-test  $p = 0.053$ ). There was an inverse correlation between the increase after dissociation and the initial angle of deviation for near and distance ( $p = 0.045$  and  $p = 0.035$ , respectively). Patients with decompensating esophoria showed significantly larger increases in near angle compared to other esotropes ( $p = 0.017$ ).



## Conclusion

Our study shows that diagnostic monocular occlusion should be performed also in esotropes as it might change the surgical plan. The angle of deviation after occlusion can vary significantly in patients with decompensating esophoria, decompensating exophoria and intermittent distance exotropia.