When Does Masked Bilateral Superior Oblique Palsy Occur in Children?

The term “masked bilateral superior oblique palsy” is often applied to the occurrence of a hypertropia in the unoperated eye following unilateral inferior oblique weakening surgery. Some question whether this is simply an overcorrection, and it may be in some cases. In my experience, it is more likely to occur following an inferior oblique weakening procedure in one eye combined with a resection of the inferior rectus muscle in the fellow eye. As a result of this observation, I have limited inferior rectus recessions to cases where there is a large vertical deviation (> 15 prism diopters [PD]) that is greatest in down gaze. I have also found that very small recessions of the inferior rectus muscle produce a great effect when combined with contralateral inferior oblique weakening.

However, there is no question that a hypertropia with a previously unrecognized overaction of inferior oblique muscle in the opposite eye can follow a unilateral inferior oblique weakening procedure. In this issue, Dotan et al. describe the clinical characteristics of this condition in children and provide an explanation as to when masked bilateral superior oblique palsy is likely to occur. Eighteen percent of children who underwent unilateral inferior oblique weakening surgery manifested masked bilateral superior oblique palsy postoperatively, requiring subsequent surgical weakening of the inferior oblique muscle in the unoperated eye. In this group, the preoperative primary position hypertropia was smaller and the authors determined that children with a preoperative primary position hypertropia of less than 5 PD more often required reoperation. They concluded that masked bilateral superior oblique palsy is a possible outcome after surgery for the correction of pediatric unilateral superior oblique palsy, especially when primary position hypertropia is less than 5 PD. None of their patients had even a slight overaction of the contralateral inferior oblique muscle preoperatively.

Surgeons need to be aware of this postoperative occurrence and inform the caregivers of the child that they may need surgery in the fellow eye 2 or 3 months after the initial surgery. The article nicely summarizes the theories as to why this condition occurs.

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