

# Results of superior oblique weakening in intermittent exotropia with a pattern anisotropia

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Weakening of superior obliques have been accepted to treat A anisotropia. After the introduction of Berke<sup>1</sup> of the tenotomy of the superior obliques other procedures to treat the overaction of superior oblique have been reported.

Ciancia and Prieto Diaz<sup>2</sup> in 1970 presented the recession of the superior oblique by the nasal approach as an important alternative. Caldeira<sup>3</sup> and Romano and Rohlt<sup>4</sup> presented a graduate recession of superior oblique. Prieto Diaz<sup>5</sup> reported the posterior partial tenectomy of superior oblique for treatment of small A pattern. In recent years the tenotomy by the temporal approach reported by Goldstein<sup>6</sup> has been an important technique to treat the overacting superior oblique. There is a great discussion for the treatment of patients with intermittent exotropia with A pattern with a weakening of the superior obliques using a tenotomy. It is the purpose of this study to evaluate the results of bilateral superior oblique weakening in patients with intermittent exotropia that have fusion at near.

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## Material and method

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Eight patients with intermittent exotropia with A pattern anisotropia between 25 and 40 prism diopters with an average of 31 prism diopters of A pattern anisotropia were treated, besides the horizontal surgery to treat the exotropia in the primary position a disinsertion of superior obliques<sup>7</sup>, a tenotomy by the temporal side<sup>8</sup> or a recession of the superior obliques<sup>3</sup> were done.

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None of these patients have a trasposition of the horizontal rectus.

The age of patients were between four and a half and 14 years of age with an average of 8 years of age.

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## Results

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All the 8 patients before surgery have fusion at near. The A pattern anisotropia was corrected in all patients. In<sup>1</sup> a moderate V pattern anisotropia was observed. In 5 patients an important hypertropia was got between 6 and 14 prism diopters and 3 patients presented a hypotropia between 10 and 12 prism diopters. One of the patients that had a recession of superior obliques by nasal approach presented a hypertropia of 14 with torticulis. The fusion was lost in all the 8 patients (Table 1).

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## Comment

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Weakening of both superior obliques for the treatment of A pattern anisotropia when there is an overaction of the superior obliques has been accepted for most of the investigators. Souza Diaz<sup>9</sup>, reported the correction of A pattern anisotropia using different techniques. In 1987 I reported a graduate tenotomy of the superior obliques by temporal approach for the treatment of A pattern anisotropia<sup>8</sup>, showing that the

TABLE 1

RESULTS OF SUPERIOR OBLIQUE WEAKENING IN INTERMITTENT EXOTROPIA					
Patient	Age	Pre-Dev	Superior Oblique Weakening	Pos- Dev	Results
1	5	X'4 X6 0 X6 XT25	Desinsertion	ET4HT6	Lost Fusion Hypertropia
2	12	X'4 XT25 0 XT25 40	Disinsertion	HOT10	Lost fusion Hypotropia
3	7	X'X4 0 X4 XT25	Disinsertion	HT8	Lost fusion Hypertropia
4	6	X'4 X4 0 x4 XT30	Tenotomy	HOT12	Lost fusion Hypotropia
5	14	X'18 XT35 XT20 XT35 XT60	Tenotomy	ET14 V HT10	Lost fusion V pattern Hypertropia
6	4	X'14 XT30 XT20 XT30 XT60	Tenotomy	HOT10	Lost fusion Hypotropia
7	5	X'20 XT40 XT20 XT40 XT55	Recession	HT12	Lost fusion Hypertropia
8	6	X'14 XT30 XT18 XT30 XT50	Recession	HT14	Lost fusion Hypertropia

correction was less when the tenotomy was done near the insertion of the superior oblique and greater when the tenotomy was done more far from the scleral insertion of the tendon. There is not question that a tenotomy or a recession are

good procedures for A pattern anisotropias in patients with no fusion potential. But there is an important controversy to weak the superior obliques with tenotomies or similiar procedures in patients with fusion potential as are the intermitent

exotropias. Reynolds and Wackerhagen<sup>10</sup> in 5 patients with fusion with A pattern anisotropia using a bilateral tenotomy of the superior obliques by temporal approach showed that the fusion was not lost in these group. Others investigators, Parks<sup>11</sup> and Veronneau - Troutman<sup>12</sup> have reported that there is a contraindication for a tenotomy of superior obliques in patients bifixators as are the patients with intermittent exotropia with A pattern. In the present study in 8 patients with intermittent exotropia with A

pattern anisotropia after a tenotomy or recession of superior obliques an important vertical deviation was got with lost of fusion in all eight patients. Based on this study I do not advised a weakening procedure as a tenotomy or recession of superior obliques for the treatment of A pattern anisotropia in bifixators as are the patients with intermittent exotropia. Other options as trasposition of horizontal rectus can improved the A pattern and prevents a lost of fusion.

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### Abstract

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Eight patients with intermittent exotropia with A pattern anisotropia had a bilateral disinsertion, tenotomy or recession of superior obliques. In five patients besides the weakening of the superior obliques had horizontal surgery to treat the exotropia in the primary position. The A pattern anisotropia range between 25 and 40 prism diopters with a mean of 31 prism diopters. In all of the eight patients a lost of fusion was got. Five remained with a hypertropia and three with a hypotropia. The secondary vertical deviation ranged between 6 and 14 prism diopters. According with this study in bifixators as intermittent exotropia with A pattern anisotropia I do not advised a tenotomy or recession of superior obliques.

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### References

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