

Oral presentation

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## End-growth final results of an effective conservative treatment: a retrospective case series

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### Objective

Few papers have reported final results of conservative treatment. The aim of this paper is to review our final results between September 2003 and December 2006.

### Study design

All fifty-eight patients (17% male, 83% female) who finished their treatment in the Centre of Vigevano of our Institute were included. Mean Cobb angle at the start of treatment was  $22.6 \pm 10.6$  degrees (see Table 1), and mean age was  $13.4 \pm 2.4$  years. Treatment groups considered

included exercises, bracing+exercises, cast+exercises. Starting Cobb degrees, by groups, were: 11–20, 21–30, 31–40, over 40 degrees (see Table 2).

### Results

Mean age at the end of the study was  $17.9 \pm 2.6$  years. The differences among results according to treatment (see Table 1) were statistically significant ( $P < 0.001$ ). Patients with Cobb angle over 30 degrees at the end have been 15.5% (-10.4%), and over 40 degrees 3.4% (-10.4%). One

**Table 1: End result outcome according to treatment group**

Treatment	Cobb (time 0)	End result	% worsened	% improved
Total	$22.6 \pm 10.9$	$-4.3^\circ \pm 7.1^\circ$	9%	49%
Exercises	$14.0^\circ \pm 4.6$	$-3.4^\circ \pm 5.4^\circ$	4%	33%
Bracing+exercises	$25.7^\circ \pm 8.6^\circ$	$-4.5^\circ \pm 7.9^\circ$	11%	48%
Cast+exercises	$39.8^\circ \pm 8.3^\circ$	$-6.1^\circ \pm 7.7^\circ$	14%	40%

**Table 2: End result outcome according to magnitude of Cobb angle**

Cobb (time 0)	Number of patients	End result	P value
11–20°	25	$-1.6^\circ \pm 6.5^\circ$	NS
21–30°	18	$-7.1^\circ \pm 7.2^\circ$	<0.05
31–40°	7	$-3.8^\circ \pm 6.6^\circ$	<0.05
over 40°	8	$-6.0^\circ \pm 6.5^\circ$	<0.05

patient was referred to surgery (all others receiving surgery were referred before starting treatment).

### Conclusion

Surgery can be avoided in most patients if effective conservative treatment is performed correctly and initiated with appropriate timing. Follow-up studies of patients are needed.

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