

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 ± 10.6 degrees (see Table 1), and mean age was 13.4 ± 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 ± 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 ± 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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