



Non-surgical orthodontic treatment of Class III malocclusion

Objective:

The purpose of this presentation is to illustrate the results of non-surgical orthodontic treatment of 9 Class III patients aged 12 to 43 years.

Material and methods:

The patients attended the authors' private dental practice. For the youngest female patient the treatment started after the pubertal growth peak (CS4 in the Cervical Vertebral Maturation method) and for the other patients after growth completion (CS6). The first phase of treatment consisted of the combined use of facial mask, Haas appliance on an acrylic splint (activated 10-28 turns, once per day), lower fixed appliance, and Class III elastics. A full fixed appliance and Class III elastics were used in the second stage.

Results:


All patients achieved an improved skeletal relationship, a proper dental relationship and visible enhancement in the appearance of the middle face, lip profile and the position of the chin. The positive changes in dentoskeletal cephalometric variables from the beginning of treatment (T1) to the end of active treatment (T2) were recorded especially in Wits appraisal, SNA angle and ANB angle.

Conclusion:


The successful results of non-surgical treatment carried out on skeletal postpubertal patients, and even on patients after the completion of growth, suggest that the method could be an alternative to surgical treatment of patients with moderate Class III malocclusion. Treatment time was considerably longer in one patient treated before the completion of growth compared to young adults and adult patients.

Case 1 (age 12 years)

before treatment



after treatment



3 years after treatment



T1 - pre-treatment

Case 2 (age 15 years)


before treatment



after treatment



2 years after treatment




T1 - pre-treatment

Case 3 (age 15 years)

before treatment



3 years after treatment




T1 - pre-treatment

Case 4 (age 18 years)

before treatment




after treatment




T1 - pre-treatment

Case 5 (age 23 years)

before treatment



after treatment



2 years after treatment



T1 - pre-treatment

Case 6 (age 28 years)

before treatment



after treatment




T1 - pre-treatment

Case 7 (age 27 years)


before treatment



at the end of treatment



2.5 years after treatment



T1 - pre-treatment

Case 8 (age 24 years)

before treatment




after treatment



T1 - pre-treatment

Case 9 (age 43 years)

before treatment



at the end of treatment



Table 1. Values of the cephalometric variables before (T1) and after treatment (T2) in the eight examined cases

Cephalometric values	Age		Wits (mm)		SNA (deg)		ANB (deg)	
	T1	T2	T1	T2	T1	T2	T1	T2
Case 1	12	15	-12	-5	76	82	-5	-1
Case 2	15	17	-5	0	74	75	-2	0
Case 3	15	17	-13	-4	76	78	-4	-1
Case 4	18	20	-6	+1	80	82	-2	+1
Case 5	23	25	-7	+2	71	73	-1	+3
Case 6	28	30	-6	+1	80	82	-2	+1
Case 7	27	29	-6	-2	83	85	-2	+2
Case 8	24	26	-9	-4	81	81	-3	-1

Abbreviations: T1: beginning of treatment; T2: after treatment; deg: degrees; mm: millimeters