



### Introduction

In Brazil, the population based showed 11.7% preterm birth prevalence in 2013. The prematurity brings repercussions on the early childhood (lower values in birth weight, height and head circumference when we compare with the values of a full term child). Premature birth has affected the morphology of the craniofacial complex.

### Objectives

The aim of this study is to evaluate the preterm birth impact on skeletal base's discrepancies (maxilla and mandible) and dento alveolar developmental of 30 adolescents (10 to 13 years at present), who had premature births.

### Methods

Our sample was divided in two groups according to the calculated average value of birth's head circumferences, based on head circumference specific for gestational age and gender by Olsen curve. The median value was 28cm. Thus, 14 (46.7%) children had head circumferences at birth lower or equal to 28cm and were classified in the group  $HC \leq 28cm$  and 16 (53.6%) another children were classified in the group  $HC > 28cm$ . The plasters models were measured by Korkhaus analyses.

## RESULTS

	Gestational age (weeks)	Birth weight (g)	Age (plaster)	Head circumference at birth (cm)	Intubation time (days)	Hospitalization time (days)	Atresia
Patient 1	31 5/7	1730	10y	30	4	32	N
Patient 2	32 3/7	1100	16y	26	16	111	N
Patient 3	31 1/7	1970	10y7m	31	2	54	N
Patient 4	32 3/7	1550	11y7m	27	2	40	N
Patient 5	31	1750	13y8m	30	17	47	N
Patient 6	36 6/7	1950	10y5m	32	0	28	N
Patient 7	31 5/7	1580	10y7m	29	0	26	N
Patient 8	26 6/7	835	11y1m	24,5	5	127	Y
Patient 9	29 1/7	1150	13y4m	25	1	50	N
Patient 10	31 6/7	1380	10y9m	30	0	50	N
Patient 11	31 2/7	1195	10y	28,5	6	42	N
Patient 12	24 2/7	650	10y11m	23	67	162	N
Patient 13	27	1070	11y	25	0	50	N
Patient 14	29 2/7	1424	12y6m	27,5	4	74	N
Patient 15	32	1240	10y9m	28,5	0	38	N

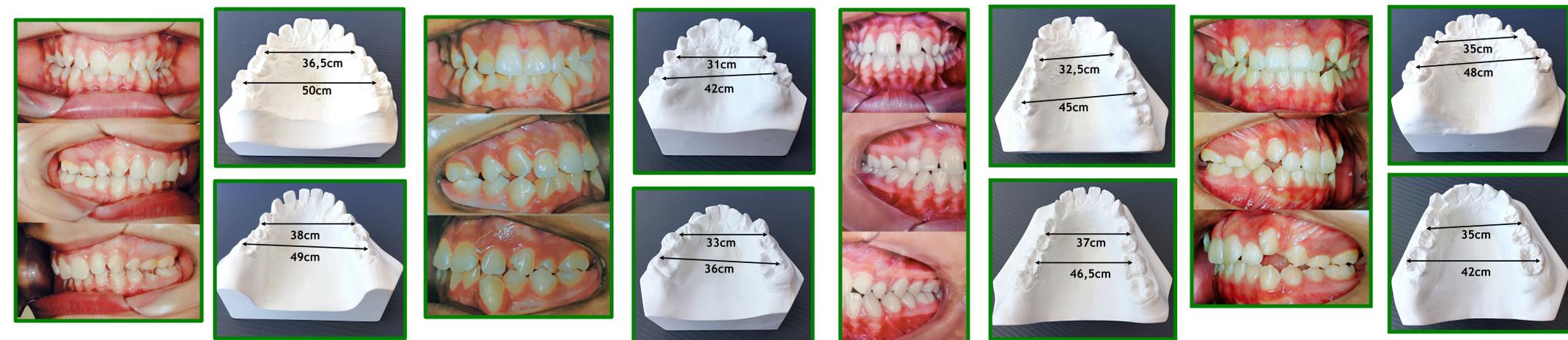
Atresia: Y= YES; N=No

Pacient 8

Patient 16

Patient 18

Patient 26



	Gestational age (weeks)	Birth weight (g)	Age (plaster)	Head circumference at birth (cm)	Intubation time (days)	Hospitalization time (days)	Atresia
Patient 16	25	790	10y2m	23	55	168	Y
Patient 17	32 5/7	1565	12y	29	0	26	N
Patient 18	31 4/7	1505	12y5m	29	0	24	Y
Patient 19	34	1815	13y	32,5	0	14	N
Patient 20	36 4/7	1730	11y	31	0	14	N
Patient 21	35 5/7	1650	11y10m	31,5	0	24	N
Patient 22	23 4/7	980	10y	24	13	95	N
Patient 23	29 6/7	1225	10y5m	27	0	57	N
Patient 24	35 6/7	1460	12y3m	29	1	28	N
Patient 25	36 2/7	1715	11y10m	31	0	12	N
Patient 26	29 4/7	1260	12y11m	28	2	76	Y
Patient 27	35 4/7	1700	10y	29	0	14	N
Patient 28	24 4/7	785	9a	20	91	91	N
Patient 29	28	860	11y6m	23,5	6	100	N
Patient 30	30	620	11y11m	26	13	82	N

Atresia: Y= YES; N=No

## CONCLUSION

We can observe that has a higher percentage of anterior atresia between children classified with  $HC \leq 28cm$  (21.4%) when we compare with the group  $HC > 28cm$  (6.2%). Despite of statistical test did not detected meaningful statically between the groups ( $p=0.315$ ), we can observe a relation between head circumference and anterior atresia in this population.

## REFERENCES

1. Rev Saúde Pública 2013; 47(5):1-12. Prevalence of preterm birth according to birth weight group: a systematic review. Silveira MF et al.
2. European Journal of Orthodontics 2013; (35): 475-482. Dento-alveolar characteristics in adolescents born extremely preterm. Rythén M, Thilander B, Robertson A.
3. J Appl Oral Sci 2011; 19(2):169-74. Dental arch dimensions in the mixed dentition: a study of Brazilian children from 9 to 12 years of age. Louly F, Nouer PRA, Janson G, Pinzan A.