PREVALENCE OF DENTAL CARIES AND TOOTH NUMBER ANOMALY IN CHILDREN WITH A CLEFT LIP AND PALATE - PILOT STUDY

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Background:

This retrospective study describes the prevalence of dental caries and tooth number anomaly in primary and permanent dentition in children with a cleft lip and palate (CLP).

Methods:

In 47 children with CLP (24 boys, 23 girls; age 4-14 years) panoramic x-rays were investigated, 28 with primary and 23 with permanent dentition. Caries index dmft/DMFT was applied. The results were compared with last available data from the Czech population. Gender, number of teeth in both dentitions, and type of the cleft (LAHSAL classification – Fig. 1) were recorded. There were 21 children with cleft of the primary palate (isolated cleft lip, cleft lip alveolus), 13 children with cleft of the secondary palate (cleft palate) and 13 children with a complete cleft lip palate (combination) (Fig. 2). The statistics were performed using the Chi-squared test, significance level p=0.05.

Fig. 1 LAHSAL classification

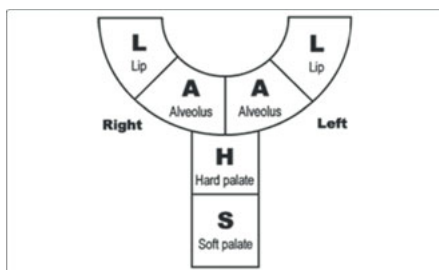
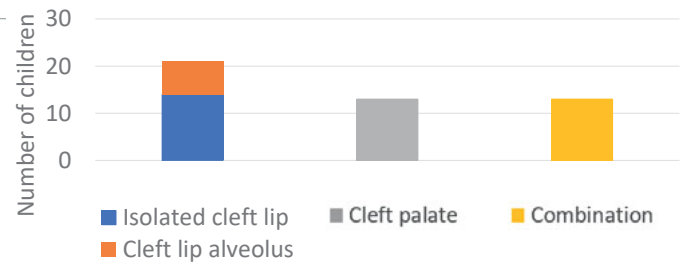


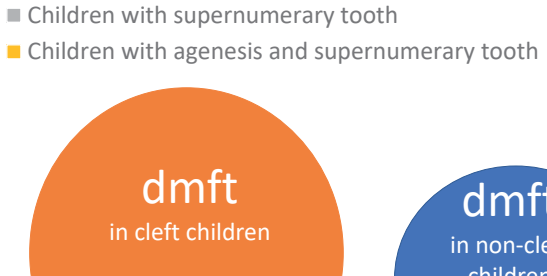
Fig. 2 Cleft type



Results:

There was a tooth agenesis in 34% (n=16) children, 8 of them with mutlitple ageneses. The most commonly missing tooth was maxillary lateral incisor (Fig. 4). The prevalence of supernumerary teeth was 45% (n=21), praecaninus being the most common (n=20). In 5 children there were both agenesis and supernumerary teeth. There was a relationship in supernumerary teeth prevalence between isolated clefts of the primary and secondary palate (p=0.01). There was a tooth number anomaly in 68% (n=32) of children (Fig. 3).
The prevalence of caries in children with primary dentition was 79% (n = 22), in permanent dentition 56.5% (n=13) (Fig. 5). No association between caries prevalence and gender was found. THE average dmft was 4.64 (boys 4.0; girls 5.5); the average DMFT was 1.61 (boys 0.9; girls 2.31). There was no significant difference in DMFT in children with cleft of the primary and secondary palate.

Fig. 3 Tooth number anomaly prevalence



Praecaninus is a supernumerary tooth located in the cleft area.

Panoramic x-ray of a child with +L cleft, 7 years 10 months old, praecaninus loco 22

Panoramic x-ray of a child with HSH cleft, 7 years 8 months old, 12, 22 agenesis, possible 15, 25 agenesis

Fig. 4 Missing teeth

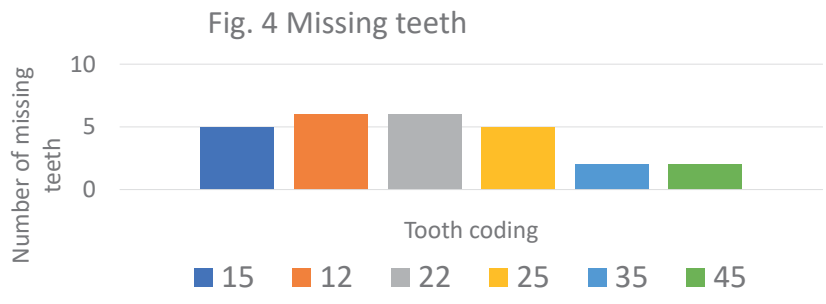
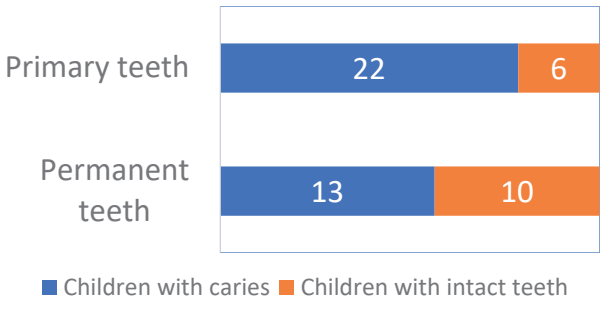


Fig. 5 Caries prevalence



Conclusion:

The prevalence of caries in children with CLP was higher in primary dentition and lower in permanent dentition than previously reported in a Czech population. There was no significant association between caries prevalence and gender. Most of the children had some tooth number anomaly. There were significantly more supernumerary teeth in children with cleft of the primary palate.