Association of Primary Teeth Contact Type and Caries in Children – A Pilot

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Purpose

The goal of this study to investigate the association of type of primary molar interproximal contact and interproximal caries in children and further compared to other common risk factors such as plaque level, fluoride exposure and dietary habit.

Materials and Methods

The study protocol was approved by the Research Ethics Committee of University of Maryland (Reference number, HP-00099013). Furthermore, informed written parental consent was obtained from children's legal guardians.

Clinical examination was completed on healthy patients 3 to 10 years of age. Interproximal contact of primary molars was recorded and categorized into 4 types: O, X, I, S.(1) Other caries risk factors were collected including clinical caries, plaque level, fluoride exposure and dietary habit.

Parents were asked open ended questions to describe their child's diet, fluoride exposure and a score was given based on Cariogram scale. All measured factors were based on Cariogram except for plaque index (Silness-Löe index).

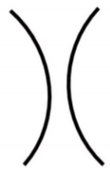
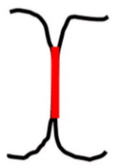
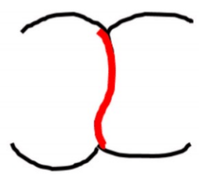
S N	Diagrammatic representation	Criteria	Type of contact
1		When there is no contact between the primary molars.	Open contact
2		When there is a point of contact (</=1.5 mm) between the primary molars.	X-shaped contact
3		When there is a straight contact (>/= 1.5 mm) between the primary molars.	I-shaped contact
4		When there is a straight contact (>1.5mm) between the primary molars.	S-shaped contact

Table 1: Types of interproximal contacts (1)

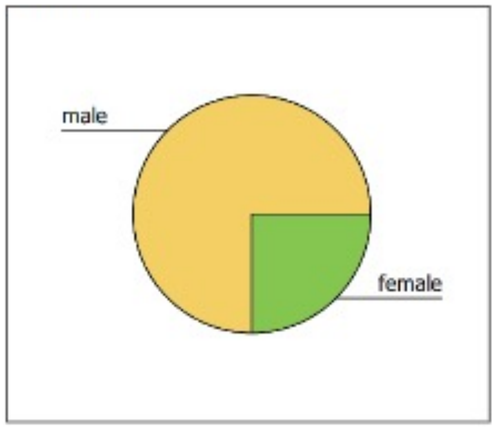


Figure 2: Males/female ratio

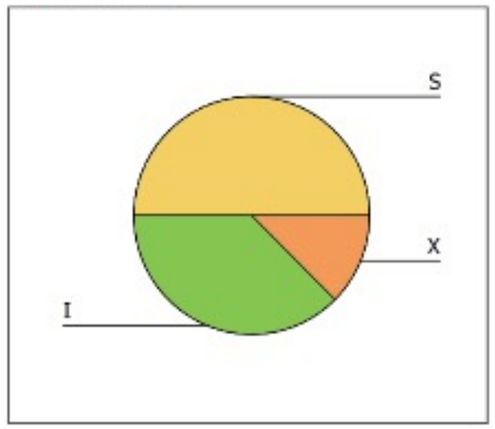
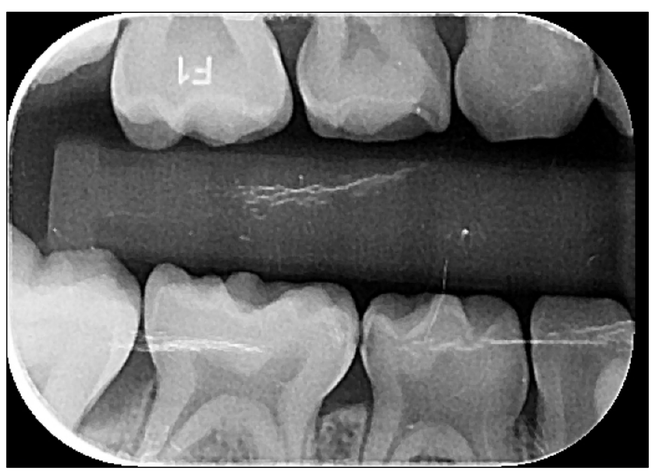


Figure 3: Types of interproximal contacts.



Interproximal caries on teeth # T,S

Results

A total of 8 participant were included. The percentage of male and female patients were (75 %) and (25%), respectively. dmft index recorded for each patient the maximum dmft score was 13 and the minimum score was 0. The maximum score found in dt, mt and ft components of the index were 12, 7 and 4 respectively.

Examination of type of contact revealed four cases of S type (50%), three cases of I type (37.5%) and X type in one case (12.5%).
A total of 6 cases showed presence of caries of which four cases have S type contact.

Conclusion

This is preliminary data from an ongoing study and due to sample size limitation, no conclusion could be drawn.

References

1- Kirthiga M, Muthu MS, Kayalvizhi G, Krithika C. Proposed classification for interproximal contacts of primary molars using CBCT: a pilot study. Wellcome Open Res. 2018;3:98. Published 2018 Sep 27. doi:10.12688/wellcomeopenres.14713.2