Newsletter No. 9

Caries

CASE CHALLENGE – EARLY CHILDHOOD CARIES

A dental clinician treating a young child faces many challenges. It is often like treating two or more people at the same time.

Patient management is usually complex as it depends on achieving understanding of all factors involved and cooperation by both the child and the parent.

It is important to remember that communication and the interpersonal skills of a clinician can have a significant impact on the future oral health of a young patient.

Patient details

A mother in her mid 20s presents to her dentist with her 25 month old child. The child has never been to a dentist before.

Presenting problem

Only recently the mother decided it was time to begin brushing the child's teeth and noticed that the upper front teeth had changed colour. She didn't notice that the child was in pain at any stage, but she was concerned and decided to make an appointment with her dentist.

Past dental history

The child had been given a toothbrush at age one, but had been only chewing on it occasionally. Sporadically the parents placed a small amount of adult-strength fluoride toothpaste on the child's toothbrush. This was only to help the child to get used to its taste. No attempt had been made to brush the child's teeth until recently.

Dietary history

The mother described a relatively healthy balanced diet, with plenty of fruit and vegetables. The parents were keen to limit the amount of sugary food the child ate. The child went to a Child Care Centre three days a week, but the quality of food and drinks there were good. The mother also said that the child was difficult to get to sleep, therefore had been going to bed with a bottle of juice every night for the last year or so. Previously, following weaning at nine months, a bottle of milk was used for the same purpose.

Social history

Both parents and child were happy with care at the Child Care Centre. The child was also spending at least two days per week at grandparents, and occasionally staying for a sleep over.

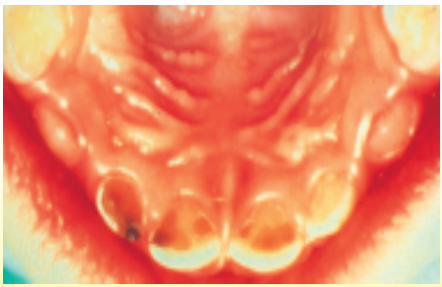

Figure 1: Palatal surfaces of deciduous teeth showing signs of decay

Oral examination

On examination the dentist noticed that both lingual and labial enamel had been lost from the four maxillary anteriors, though no deep cavitation had occurred. Both upper D's had cervically some decalcification evident both lingually and labially.

No mandibular teeth showed any signs of damage. The canines were just visible, as were the tips of the cusps of the E's.

Risk Assessment

- High caries risk due to low fluoride exposure and high exposure to dietary sugar and acids at bedtime and during the night.
- Lack of cleaning of the child's teeth until the age of 25 months suggests parents' dental knowledge is inadequate.
- Motivation for change likely to be high due to the attention to healthy diet already established.

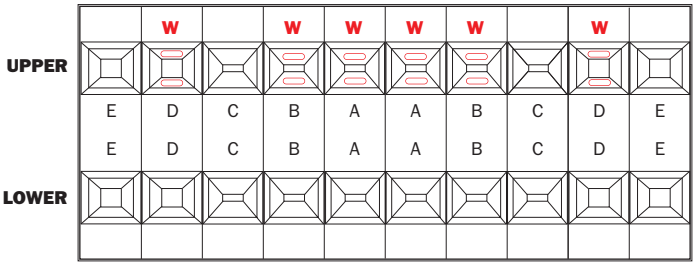

Figure 2: Patient's caries chart of deciduous teeth

Additional questions that you would ask to complete the examination:

Management plan

Dietary counselling

The mother was advised that putting a child to bed with a bottle containing juice, cordial, milk or similar drinks causes demineralisation of the enamel. It was explained that, at night when the production of saliva slows down, the presence of any type of sugar in the mouth should be avoided as sugar and acids can dissolve tooth enamel if the exposure lasts long enough.

The ultimate goal for the child would be to stop using bottle altogether.

As the mother insisted that the child would not go to bed without a bottle, it was agreed that she would begin to progressively dilute the fruit juice over three weeks until it was only water, and see how the child responded. She also agreed to ensure that the same routine was followed when the child was at the grandparents' place.

Home fluoride therapy

To stop the decay process and to hasten remineralisation the clinician suggested that:

- Parents needed to start brushing the child's teeth twice a day – in the morning after breakfast and before going to bed. The toothpaste that was to be used was a low fluoride children's toothpaste and the amount needed for brushing was only a smear.
- The mother was also asked to discourage the child from trying to rinse out the toothpaste after brushing and to make sure that toothbrushing was not forgotten when the child sleeps over at other places.

Caries management

- The mother was made aware that the first signs of remineralisation could be observed as early as after two months of following the dentist's recommendation. It was explained that some of the white areas around the back teeth would become less white, but may also become slightly discoloured. The mother was comfortable with the explanations.
- An appointment was made to place glass ionomer restorations over the maxillary anteriors for aesthetic purposes, and to improve the strength of the upper right B.

The procedures that were to take place at the next appointment were explained to the mother and the child and both were reassured that it would be painless.

Restorative appointment

There was no need to use local anaesthetic to place the restorations on the upper front teeth and the child was very cooperative. All the messages previously given to the mother were reinforced and progress discussed. A review appointment was made for four months later to check remineralization.

Four month maintenance visit

The mother reported that the child had stopped using bottle altogether and now goes to bed without it. All white spot lesions, diagnosed at the first appointment, were less white suggesting that teeth were on the way to recovery. Also no further signs of demineralisation were evident on other teeth.

Supervised toothbrushing was to be continued every morning and evening, using children's fluoridated toothpaste. A recall visit was arranged at the mother's next appointment in six month's time.

Your recommendation on dietary matters	
Your recommendation on toothbrushing.	
Your recommendation on fluoride therapy	
Your recommendation on timing of next dental examination	

Useful notes:

Dental education regarding children's teeth needs to start with expecting parents and their own oral health habits. If parents do not use toothpaste with fluoride themselves they are not likely to use fluoridated toothpaste for their children. The same rule could apply to toothbrushing behaviour.

Expecting parents need to be made aware that looking after baby's teeth starts as soon as the baby is born and begins with establishing good feeding practices. Cleaning of baby's teeth starts as soon as the first tooth appears in the mouth.

- The child in this case study has been given a toothbrush at the age of one, but used to only chew on it. Parents should be encouraged to keep the child's toothbrush in the bathroom and give it to the child only when it is time for brushing the teeth. A toothbrush should not be used as a plaything and kept with other toys. It is easiest for parents to become a role model for their child and brush their own teeth at the same time as their child's.

While dietary changes are a must, a guided improvement in tooth cleaning habits and cautious use of fluoride vehicles are important.

- When investigating dietary issues it is useful to find out how much parents spend on sweets or soft drinks weekly, whether they buy sweets on a weekly basis and how many packets. Parents may be keen on limiting sugar intake, but take no action and their weekly shopping list stays the same.
- Use of sweets as a reward may also need to be investigated. A jar of coloured pencils, crayons, balloons etc may make a useful substitute.
- Every patient should have his or her use of fluoridated (tap) water investigated.

Further information

can be obtained from the

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