Research Article

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Yasuko Yoshida

Toshihide Ohno

Rina Shikano

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An Approach To Digitsucking Cases

PART II

Some Ideas In Giving Instructions

By

Yasuko Yoshida, D.D.S., Orthodontist,
5-17-24 Manabe, Tsuchiura City, Ibaraki, Japan

Toshihide Ohno, D.D.S., D.D.Sc., Orthodontist,
1-3-29 Shinoharakita, Kohhoku, Yokohama, Japan

Rina Shikano, D.H.,
1-23-29 Shinoharakita, Kohhoku, Yokohama, Japan

INTRODUCTION

It was discussed in PART ONE of the paper that in the daily clinical work the authors give instructions to treat digitsucking cases in three stages: (1) making the patient conscious of the problem and maintenance of the awareness by applying behavior therapy, (2) training for the tongue habit and orbicularis oris muscles by applying myofunctional therapy, and (3) improvement of malocclusion with habit breakers and functional appliances.

In giving instructions for digitsucking cases, it is important to understand the feelings of the child who receives the instructions as well as the person who looks after the child everyday, usually the mother, as to how she feels about the child's digitsucking.

In actually instructing the patient, new ideas should constantly be incorporated to improve the contents of the program, given that children we treat are very young.

PURPOSE OF THE STUDY

In this paper, a part of the compiled results from a questionnaire survey conducted on 30 digitsucking cases which we instructed at our clinic in the past six years will be presented. Further, check sheets, gloves and a book for instruction will be introduced that we have developed in our daily clinical work during the first stage, i.e. making the patient conscious of the problem and maintaining the awareness. How the patients responded when such means were applied will also be discussed together with the case presentation.

RESULTS OF THE QUESTIONNAIRE SURVEY ON DIGITSUCKING CASES

Some results are summarized from the questionnaires filled in by parents of our digitsucking patients. The data was based on results obtained from respondents. Out of 30 patients surveyed, four were excluded from the data due to lack of cooperation or insufficient data.

Parents gave a number of reasons for wanting to terminate their children's digitsucking including the possibility of the habit leading to malaligned teeth, embarrassment child might experience if the habit persisted once the child started school, and finally, the effect the habit might have on speech intelligibility. Those parents concerned about tooth alignment represented 69.3% of

the total, pronunciation/speech articulation 11.5%, psychological/mental concerns 11.5% and esthetics 7.7% (Fig. 12).

Figure 12

Reasons Why Parents Want To Stop Child's Digitsucking

Affects tooth alignment/speech articulation/phonetics	18 (69.3%)
Unclear pronunciation	3 (11.5%)
<ul style="list-style-type: none"> • unclear when speaking and difficult to listen to • want child to be able to pronounce "s" sounds 	
Concern over psychological effects	3 (11.5%)
<ul style="list-style-type: none"> • the child will be embarrassed if the habit persists even after starting school • may suffer from complex in the future 	
Bad for esthetics	2 (7.7%)
<ul style="list-style-type: none"> • loosely closed lips • uncosmetic for a girl 	

(total 26 replies)

When parents were asked to describe the interventions they had employed to help their children to refrain from digitsucking, 41% reported giving the child a verbal warning, 20.5% wrapped the finger with a band-aid or dressing, 33.4% represented a variety of lesser used approaches, and 5.1% reported that they had done nothing (Fig. 13).

Figure 13

How Parents Tried To Stop The Child's Digitsucking

• Warn the child verbally, explain	16 (41.0%)
• Wrap finger around with band-aid, dressing towel, etc.	8 (20.5%)
• Apply mustard, medicine etc. on finger	5 (12.8%)
• Use gloves, knee socks	4 (10.3%)
• Hold the child's finger to sleep	3 (7.7%)
• Do nothing	2 (5.1%)
• Pull the finger out	1 (2.6%)

(26 multiple replies)

While the authors consider the age of approximately five years to be an appropriate age for their program, the data indicates that if the patient wants to stop digit-sucking and if the cooperation of the parents and significant others can be obtained, it is feasible to work with younger children.

METHOD OF INSTRUCTION

Figure 14

Coloring charts, three types: Top: The Zoo; Left: The Aquarium; Right: Collecting Insects.

After some experimentation the authors decided upon a set of coloring and sticker charts as a reward system for those children reaching a predetermined period of time free from digitsucking (Fig. 14 and Fig. 15). Three coloring charts are used employing animals, fish, and insects/plants respectively. The animal and fish coloring charts are designed for two weeks and the insect chart for ten days. Regardless of which chart the child chooses they are allowed to color only one figure for each day free of digitsucking. Additionally the child is allowed to place a sticker on a chart for each day free from digitsucking.

Figure 15

Sticker Chart "Words of Pledge" are to be written at the top.

The child selects a sequence with which to color the figures or place the stickers. At each visit with the

instructor the number of figures left uncolored or spaces without stickers indicate how many days the child was unable to refrain from digitsucking. There is also space on the sticker chart for an agreement to be written between the child and the instructor. The parent or significant other is also encouraged to add comments or agreements with the child in the space provided.

Handmade gloves (Fig. 16) are given those children reportedly sucking their digits "subconsciously" just before falling asleep or during sleep. The child chooses his/her favorite glove from several brightly decorated gloves. The glove is designed to be long enough to cover the child's elbow. Effectiveness of the glove is enhanced by cloth of appropriate thickness to impede the bending of the arm.

Figure 16

Handmade elbow length gloves for preventing digitsucking.

Ancillary to the treatment program each client is given a book written by the authors. The objective of the book is to motivate children to stop digitsucking. The first half of the book is heavily laden with pictures geared to children. The second half goes into detail explaining digitsucking and is designed to help the parent understand the problem. The book is used in the instructional program and made available in the waiting room and on a loan basis to families. Several mothers have reported that their children stopped sucking digits immediately after the book had been read to them.

CASE STUDIES

Case 5

A male, four years, six months of age at the time of the examination had been digitsucking since around four months of age. Upon arrival he was loudly sucking his left thumb just before falling asleep and during his nap. Upon examination he revealed a horizontal open bite due to lingually inclined primary central incisors. Tongue thrust was noted with accompanying speech articula-

tion disorders involving the phonemes /s/, /t/ and substitution of /l/ for /r/. There was a 1.4mm overbite and 6.6mm overjet (Fig. 17-A). Seven months later the overjet had improved (lower picture). Lateral view (Fig. 17-B) shows improvement in the overjet with the maxillary alveolus retruded. The initial profile showed protruded lips and strained chin. Following treatment, there has been a "significant" improvement due to the change in the overjet.

Figure 17-A

Case 5: Top: Boy, 4 yr. 6 mo. old, at the start of the instructions. Bottom: 7 months later.

Figure 17-B

Case 5: Left: Boy, 4 yr. 6 mo. old, at the start of the instructions. Right: 7 months later.

Initially treatment consisted of a coloring chart but due to child's inability to color within the lines and upon his request the coloring chart was replaced with a sticker chart. This experience reminded the authors that

sometimes there are discrepancies between a grown-ups point of view and how a child sees things. Thus flexibility is a necessity and the ability to see a situation from a different perspective is important to the success of therapy.

Case 6

A female, seven years, eleven months old at the time of the initial examination has started digitsucking when she was about six months of age. She had previously been told by her family not to suck her finger and consequently was not digitsucking during the day. However, she was still reportedly sucking her left thumb just before falling asleep.

Figure 18-A

Case 6: Top: Girl, 7 yr. 11 mo. old, at the start of the instructions. Bottom: 11 months later. The overbite has been improved.

Figure 18-B

Case 6: Top: Girl 7 yr. 11 mo. old, at the start of the instructions. Bottom: 11 months later. The overjet has been improved.

At the initial examination she had 0.5mm of overbite and 3.7mm of overjet. The upper picture (Fig. 18-A) is from the initial examination and the lower is eleven months later. Improvement is attributed to the extraction of the primary canines to relieve crowding half way through the treatment and also to myofunctional treatment following the digitsucking program. The overbite has become deeper (Fig. 18-A) and the overjet has improved and maxillary alveolus has retruded (Fig. 18-B).

Her profile shows that protruded lips and the strained mentalis observed at the initial examination have improved a little.

Treatment initially employed the use of the coloring chart. Although the client enjoyed coloring and meticulously colored the figures on the charts a mere discussion of the effects of digitsucking in the first session of instruction was sufficient for her to immediately stop digitsucking. For her second visit she came back with her animal chart fully colored. To ensure that the habit was under control she was followed for two more weeks using the sticker chart (Fig. 19).

Figure 19
A sticker chart used in Case 6. Since she did not show interest in getting rewards, the reward space was not used.

SUMMARY AND DISCUSSION

1. Parents' primary concern about digitsucking is related to its "bad effect on tooth alignment." In counseling patients it is important to emphasize that "having malaligned teeth" not only has cosmetic effects but that such a condition may also effect eating and speech.
2. The most frequent reply that parents gave with regards to managing their childrens' digitsucking behaviors was to warn their children verbally. The authors interpret this to reflect the parents' feeling of wanting to terminate the habit as naturally as possible without having to resort to appliances or devices.
3. The coloring charts and sticker charts proved to be

popular in general. The coloring chart appeared to be too demanding for a child three years of age or younger. It appeared advantageous to have a variety of coloring charts and a sticker chart to maintain motivation and to appeal to a wider range of interest. The authors feel it is necessary to try to keep a good stock of stickers on hand which have up-to-date designs. It was also noted that some children were not interested in coloring or in the stickers and subsequently an alternative approach will need to be developed to target an older population. Perhaps the sticker chart could be put to better use through creative use of the comment space.

4. The book used in the instructional program varied in effectiveness depending on the age of the child and their level of understanding. The authors believe that the book's effectiveness can be enhanced if the parent or the clinician would read it with the child. Lending the book out to the parents or significant others increased their understanding of the program and hence their cooperation. This procedure also cut down on some of the instructional time during the treatment session.

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