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研究題目：The relationship of the problem on breastfeeding and ankyloglossia in neonatal babies

Objective：

Ankyloglossia or tongue-tie is a congenital problem characterized by an abnormal lingual frenulum which can cause the limitation of tongue mobility. The past study suggested that Ankyloglossia could influence breastfeeding, swallowing and speech function, and thus frenotomy procedure has been carried out commonly in infants and toddlers.

In this present study, the aim was to take a part in understanding the actual condition of various problems on breast feeding and in establishing the support system for the problems. For that, it was investigated that the relationship of the problems on breastfeeding in newborn babies with ankyloglossia and the severity of ankyloglossia.

Subjects and methods：

The subjects of this study were 65 full term newborn babies (37 boys and 28 girls) and their parents who were less than 1 month of age at the medical examination with the chief compliant regarding to breastfeeding. The actual condition of ankyloglossia of the subjects were evaluated into following 4 degrees, 'normal', 'mild', 'moderate' and 'severe' based on the position where the lingual frenulum attaches the body of tongue. Interview examination about problems of breastfeeding was carried out to the parents and caregivers of the babies separately with questionnaire paper in the clinic. The following problems of breastfeeding, 'attachment', 'breast/nipple pain', 'breast/nipple trauma', 'lengthly feed times', 'leaking milk from mouth' and 'weak sucking' were included into the contents of the above questionnaire, and adequate items were chosen by the parents and caregivers.

Then, these results were added up and investigated the relationship of the breastfeeding circumstances and ankyloglossia in both boy and girl group respectively.

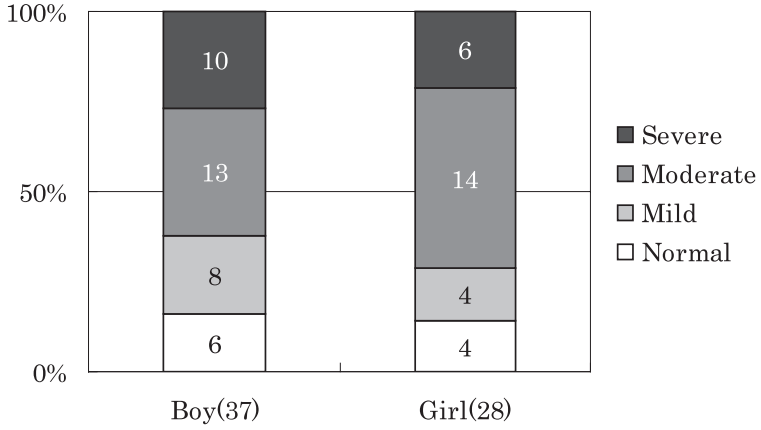


Fig. 1 Number and severity of ankyloglossia in boy and girl-group

Results and discussion：

Of the 37 subjects in group of boys, 6 were evaluated 'normal', 8 were evaluated 'mild', 13 were evaluated 'moderate' and remained

10 boys were evaluated 'severe' depend on the severity of ankyloglossia. For the group of girls, 4 of the total female subjects were classified into 'normal' or 'mild', respectively. Fourteen girls were into 'moderate', 6 were into 'severe'. Compared with boys and girls, no significant difference was indicated in the severity of ankyloglossia as shown in Fig.1.

Next, the results of the prevalence of problems on breastfeeding were shown in Fig.2 and 3. Fig.2 displayed the comparison of frequency of the problems in boy-group compared with the severity of ankyloglossia, moreover, Fig.3 showed that of girl-group, separately.

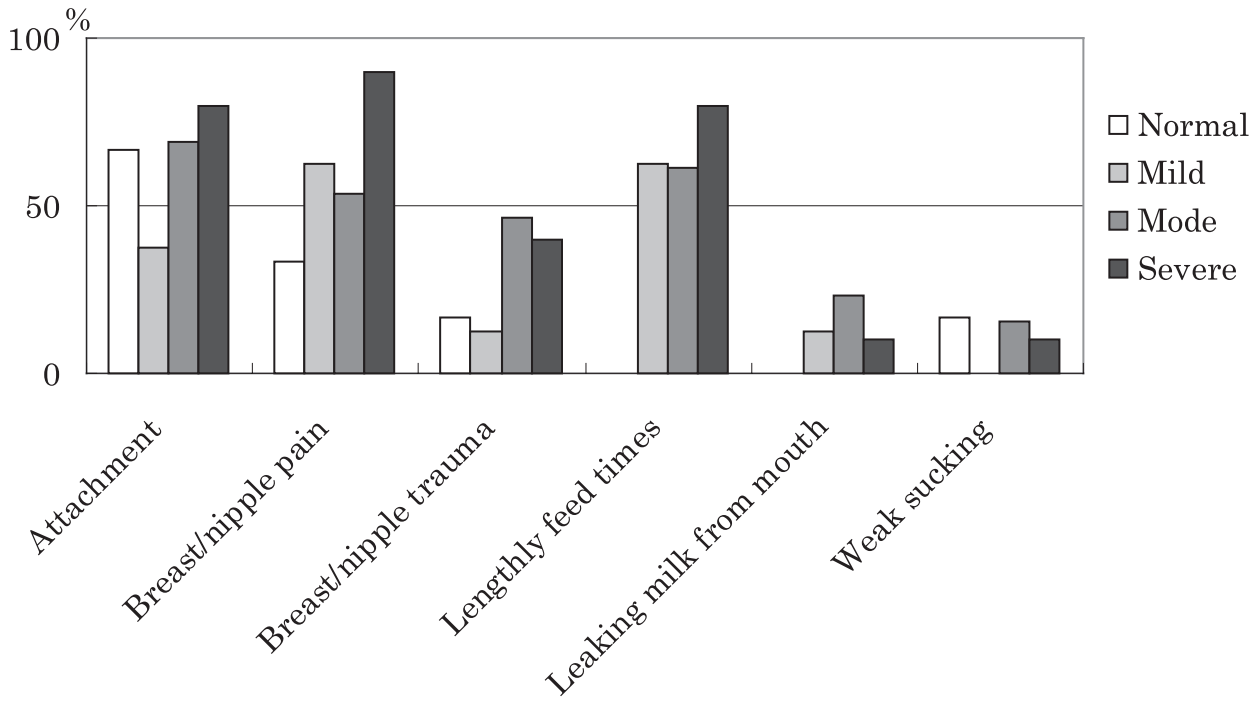


Fig. 2 Prevalence of breastfeeding problems in boy-group

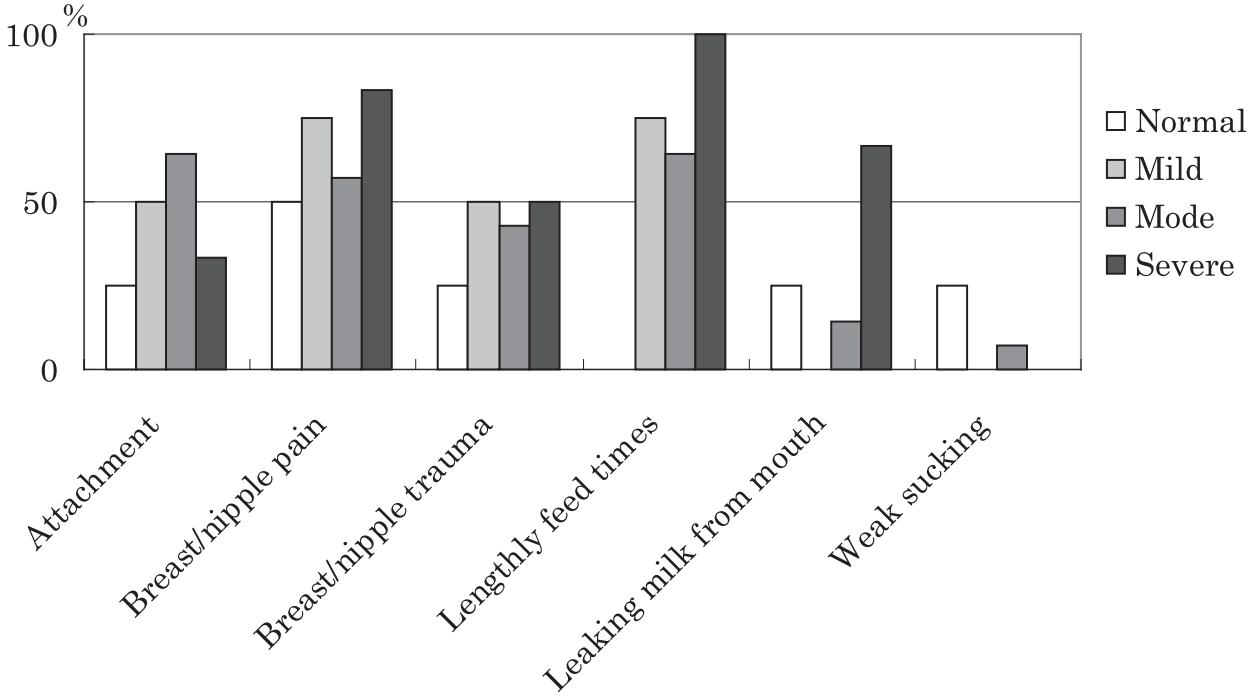


Fig. 3 Prevalence of breastfeeding problems in girl-group

In boy-group, the most common breastfeeding issues was 'attachment', 'breast/nipple pain' and 'lengthly feed time', therefore, the prevalence of each complaint was higher for the infant group with severe ankyloglossia than the other groups. In contrast, no mother or caregiver of male infant without ankyloglossia represented 'lengthly feed time' as an issue of breastfeeding.

Similar tendency was shown in the group of girl, though all of the mothers or caregivers of infants with severe ankyloglossia pointed out 'lengthly feed time' as a breastfeeding problem, no mothers or caregivers of infants categorized into normal did indicate the same problem. Additionally the breastfeeding issue of 'leaking milk from mouth' that showed lower percentage in the group of boy appeared more frequently in the group of girl with severe ankyloglossia.

The previous studies suggested that infantile ankyloglossia could limit tongue mobility obviously. Moreover, sucking motion of infants is mainly operated by primitive reflux, and the movement of tongue takes an important role on holding nipples and milk ejection. In case ankyloglossia causes the stricture of tongue movement for breastfeeding, a mother's nipple may not be held stably, then, it could lead the difficulty of breastfeeding for the mother and could reduce the infant's sucking movement. Now, therefore, further issues such as accordingly extended breastfeeding time, lesion of nipple and decrease of amount taken would be resulted when tongue movement of the infant with ankyloglossia. As indicated by present study, various breastfeeding problems that the mother felt including attachment, pain of breast or nipple were occurred and many of them were thought as the subjective issues for the mothers of infant diagnosed ankyloglossia. Meanwhile, leaking of milk and weak sucking which would be main cause of feeding movement and function tended to be minor regardless of sex of subjects.

As conclusion, it is suggested that wide-rainging supports for mothers and caregivers of children with ankyloglossia and breastfeeding issues are needed and the content of support should not focus on only functional problems caused by reduced tongue movement but subjective problems.

成果発表：

平成 23 年度小児歯科学会学術大会（盛岡）にて口頭発表予定