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Oral Hygiene *Measures* to Improve The Condition of Patients With *Oral Thrush*: A Case Study by. Z And By. I

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Abstract.
Background. Babies at a young age are susceptible to diseases. Immunity that has not yet been formed makes it easier for babies to be infected with bacteria or fungi. One of them that often occurs is oral thrush infection. According to research conducted by Eranika in 2016, in Indonesia around 2.4 million babies are experiencing oral thrush. There are many ways to deal with oral thrush, and one way is to maintain oral health by using oral hygiene treatments. Consistent oral hygiene measures in babies will reduce oral thrush so that the impact does not cause serious problems.
Aims. To assess the results of oral hygiene measures on improving the condition of patients with oral thrush.
Method. Using the descriptive case study method. The subjects used in this case study were two babies with oral thrush. The data collection technique uses interview, observation, and documentation study techniques.
Results. The study was carried out on babies with the same complaints. Both have a nursing diagnosis of oral mucosal membrane disorders. The intervention carried out was oral hygiene measures. After 5 days of implementation, there were significant changes in both subjects. Drinking improved, they were not fussy, the oral mucosa was moist, and white plaques were reduced and cleaned.
Conclusion. *Oral hygiene* significantly influences overcoming *oral thrush* in the baby's mouth.
Implementation. Families are advised to routinely check with health services for signs of infection in the mouth.

Keywords: Baby, *Oral Thrush, Oral Hygiene*

INTRODUCTION

Babies at a young age are susceptible to disease, and the immunity that has not yet been formed makes it easier for babies to be infected with bacteria or fungi. One of them that often occurs is *oral thrush infection*. *Oral thrush* in infants is generally caused by overgrowth of the fungus *candida albicans* inside the oral cavity. *Oral thrush* is characterized by soft white

plaques similar to milk clots that, if forcibly wiped, can leave redness marks or raw bleeding (Fatikasari, 2021).

Globally, the prevalence of *oral thrush* in infants is around 11-15%. Even in the United States, *oral thrush* sufferers reach 30-37% of people are infected, and the most infected is the species *candida albicans, with a percentage of 68.6% (Stecksen et al.,* 2015). According to research conducted by Eranika in 2016 in Fatikasari (2021), in Indonesia there are around 2.4 million babies experiencing *oral thrush* (Fatikasari, 2021).

Predisposing factors of *oral thrush* in babies include vulnerable infant immunity, newborns infected from the mother's vagina, unhygienic bottle pacifiers, unclean nipples, not washing hands when breastfeeding their babies, the use of antibiotics or steroids, lack of parental knowledge, and oral *hygiene* which is inadequate. Babies who consume more formula using bottles and have inadequate oral hygiene after breastfeeding may be at risk of increasing oral thrush (Astuti et al., 2016; Taufiqi, 2022; Juhairiyah, 2021).

Oral thrush in babies can be caused by unclean milk bottles that are then overgrown with mold. When a baby consumes milk from a contaminated bottle and is transmitted into the baby's mouth, the fungus can develop in the baby's mouth and cause *an oral thrush infection.* Therefore, it is important to clean milk bottles properly (Juhairiyah, 2021).

There are many ways to deal with oral thrush. One way is to maintain oral health by doing oral hygiene treatments. Many people think that oral hygiene is not a priority, but oral hygiene itself is very important not only for adults but also for babies because the mouth is the main door for bacteria and germs to enter the body. Consistent *oral hygiene* measures in babies will reduce *oral thrush* so that the impact does not cause serious problems (Dera, 2018).

In the management of *Oral Thrush,* in addition to doing *oral hygiene* and cleaning the bottle properly, there are drug therapies that can be given, namely topical drugs nystatin, miconazole, and fiber violet (1-2%), which are applied to the baby's oral lesions (Vidia & Pongky, 2016).

METHODS

This scientific paper uses a descriptive case study design. The subjects taken were infant patients who experienced *oral thrush* and totaled two babies in the Ade Irma Suryani room of Arjawinangun Hospital with inclusion criteria aged 0-12 months, had white plaques in the mouth, used milk bottles, were willing to be a case managed for at least 5 days and participated in the entire series of activities. The implementation time of this case study starts

from April 15 - May 4, 2024. According to the provisions, treatment is carried out for a minimum of 5 days. The data collection techniques used are interviews, observations, and documentation studies. The required data collection instruments include documentation formats for nursing care assessments, oral *hygiene* SOPs, observation and author guidelines as data collection tools, and physical examination tools. Data analysis is carried out through an unstructured qualitative approach, delivered in the form of a narrative.

DISCUSSION

Overview of the Implementation of Oral Hygiene Measures

The implementation *of oral hygiene* was carried out for 5 consecutive days by taking 2 subjects. The implementation is carried out 2 times a day with a duration of 2 minutes. The description of the implementation of *oral hygiene* measures in babies begins with the author visiting the client and applying therapeutic communication to the client's family. Starting from saying greetings, introducing names, identifying clients, explaining the purpose and procedure of action, giving the client's family the opportunity to ask questions, asking for permission to carry out *oral hygiene* measures, the family signs *inform consent*, the contract takes about 5 minutes, the writer then prepares tools and materials such as fine gauze, penlight, clean gloves, bent, and warm water with warm temperatures nails 37oC. After that, the author adjusted the position of the bed tilted at an angle of 15-30 degrees to prevent the baby from choking, then washed his hands in 6 steps to maintain hand hygiene, and used clean gloves. Before the implementation of *oral hygiene* is carried out, the author conducts an examination that will be used as observation data using a penlight in the form of the state of the oral mucosal membrane starting from moisture, location, and signs and symptoms of *oral thrush.* After that the author slips the gauze into warm water until the gauze is wet then squeezes it, the gauze is then wrapped around the finger, the gauze begins to be put into the baby's mouth slowly, gently rub the gums and mucosa of the baby's mouth with a circular motion then turn the gauze over if it looks dirty and do oral hygiene againThis is done so that the mouth is as clean as possible, throw the gauze and gloves into the bend to avoid contamination to the environment, clean up the tools, wash your hands in 6 steps to prevent germs that stick to your hands, evaluate the actions taken from the client's response to changes after oral *hygiene*, make a time contract for the upcoming meeting, Give greetings and documentation to record the results after oral hygiene is carried out. In the end, the author enters observation and evaluation data into nursing care to support the preparation of KTI.

Overview of Condition Improvement

The implementation was carried out for 5 days, the results of the response on day 1 of subject 1 were white plaques on the tongue and roof of the mouth, dirty mouth with milk marks, and fussy clients. After the implementation, the client's oral mucosal membrane was moist and clean from traces of milk residue, but white plaques on the client's tongue and palate remained. Subject 2 had white plaques on the tongue and inner cheeks, a dirty mouth with milk marks, fussy clients, and crying. After the implementation, the client's oral mucosal membrane was moist and clean from traces of milk residue, but white plaques on the client's tongue and inner cheeks remained.

The results of the response on the 5th day of subject 1 were no white plaques, only milk marks, and the client was not fussy. After implementation, the oral mucosal membrane was moist, and the traces of milk residue in the client's mouth were clean. In subject 2, there were a few white plaques on the inner cheeks and a dirty mouth with milk marks, and the client was not fussy. After the oral mucosal membrane is implemented, it is moist and clean from milk marks, and the white plaques in the mouth are clean.

Gap Analysis on Both Subjects

The gap between the two subjects was different, namely that Subject 1 began to be treated on April 24, 2024, while Subject 2 began to be treated on April 27, 2024. Subject 1 with a medical diagnosis of diarrhea while subject 2 with a medical diagnosis of complex febrile seizures. Subject 1 is 2 months old with a male gender while subject 2 is 7 months old with a female gender. The white plaques in subject 1 were located on the tongue and palate and were clean on day 4, while in subject 2 they were located on the inner tongue and cheeks and were clean on day 5. Not only the difference is that there are also similarities in the two subjects, namely that they both have the same complaints, drink little, and are fussy. Then the drinking began to improve on the 5th day.

The assessment on subjects 1 and 2 was conducted in the same hospital, Arjawinangun Hospital, and in the same room, Ade Irma Suryani. Subject 1 was 2 months old, and subject 2 was 7 months old. Subject 1 found complaints of white plaques on the tongue and palate, while in subject 2 there were white plaques on the tongue and inner cheeks. This is according to the statement of (Wong in Siti et al., 2017, p. 134) that oral thrush is the presence of white plaques on the tongue, palate, and inner cheeks. (Taufiqi, 2022) also, oral *thrush* or acute candidiasis

pseudomembrane is a fungal infection that often occurs in babies. Then it was reinforced (Anggraeni, 2017) that oral thrush is often found on the mucosa of the cheeks, tongue, and soft palate, looks like clumpy white plaques and acute pseudomembrane candidiasis often infects babies due to a weak immune system.

The nutritional patterns in both subjects were obtained from the type of nutrition from breast milk and formula milk and how it was given through a milk pacifier bottle. The personal hygiene pattern mentioned by both subjects had never been in oral *hygiene*. This was discussed by (Juhairiyah, 2021); babies who consume more formula milk using a bottle and have inadequate *oral hygiene* after breastfeeding can be at risk of increasing *oral thrush. Oral thrush* in babies can be caused by unclean milk bottles that are then overgrown with mold. When a baby consumes milk from a contaminated bottle and is transmitted into the baby's mouth, the fungus can develop in the baby's mouth and cause *an oral thrush infection.* Therefore, it is important to clean the milk bottle properly.

Antibiotic drug therapy was administered to both subjects; Subject 1 received an injection of iv Anbacim 3 x 250 mg, and Subject 2 received an injection of iv Meropenem 2 x 350 mg. In the statement (Vidia & Pongky, 2016) it is stated that the fungus *candida albicans* generally already exists in the oral cavity and then undergoes a change in the balance of the oral flora due to antibiotics or changes in body and systemic immunity, which makes the body's immune system decrease. After that, the fungus will develop and attack the oral mucosal tissue.

CONCLUSION

The implementation of *oral hygiene* measures is carried out for 5 days with a frequency of 2 times a day. *Oral hygiene measures* are carried out according to SOPs, and families sign *informed consent,* after which the actions are evaluated and ended with documentation. The results of oral *hygiene* interventions in both infants showed an improvement in oral condition marked by moist oral mucosa and clean white plaques.

The gap in the two subjects was found to be different *from oral problems* in By. Z was resolved on the fourth day, while oral problems were caused by By. I was resolved on the fifth day. This proves that oral thrush or white plaques can be cured by improving *oral hygiene.*

Suggestion

Advice for families to continue oral *hygiene* routinely and independently at home. Families are advised to routinely check with health services if there are signs of infection in the mouth

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