



The Effectiveness of “Milk Booster” / Galactagogue to Increasing the Breastmilk Production

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ABSTRACT

Breast milk is the best food for babies from the first beginning of life. Breast milk contains complete nutrients that are needed by babies. The breastfeeding process is a natural phase experienced by a mother. In order to breastfeed well and smoothly, the mother must prepare from the moment of pregnancy. However, sometimes an obstacle occurs in the process of breastfeeding. Thus resulting in the breastfeeding process not running smoothly. Milk booster or Galactagogue can be consumed by breastfeeding mothers to increase breast milk production. Milk boosters can be in the form of drugs or special supplements that according to research are proven to increase breast milk production. This research is a literature review research to study and analyze the effectiveness of milk booster / galactagogue in increasing breast milk production. As well as reviewing various milk boosters / galactagogue which are proven to increase breast milk production based on evidence-based. This research method is a literature review using Google Scholar, PubMed data and Scindirect. The results of this study show that milkbooster / galactagogue is effective in increasing breast milk production.

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1. INTRODUCTION

Breastfeeding is a process experienced by a mother as a very valuable phase of life in her life. A mother strives to give breast milk as the best food for her baby. The struggle of a mother who gives breast milk to her baby not infrequently experiences various obstacles and obstacles. Both physically and psychologically and not a few mothers feel insecure when breastfeeding and think that their milk is not enough to meet the needs of their babies. Inhibiting factors in exclusive breastfeeding include health factors and health facilities, lack of perception of breast milk, and sociodemography. Low knowledge about breast milk, socio-cultural and environmental [1].

Various interventions can be carried out to be able to increase breast milk production. The interventions carried out are in the form of nonpharmacological and pharmacological techniques. Nonpharmacological techniques in the form of acupuncture, consumption of herbal tea and ginger, breast care and oxytocin massage, skin to skin between mother and baby. Pharmacological techniques with the use of domperidone. The use of this therapy has been proven to be effective in increasing breast milk production because it can stimulate the hormone prolactin which plays a role in producing breast milk production [2].

One of the interventions carried out by mothers to increase breast milk production is to use breast milk boosters or Galactagogue. Breastmilk booster is a food that can increase breastmilk production. Milk booster in the form of supplements, tea, milk, cookies, or pastries. Milk booster is also known as a special supplement for breastfeeding mothers that are believed to be able to maintain and increase the number of products. Breast milk booster is also interpreted as a designation for certain drinks and foods that have properties and are believed to increase breast milk production and facilitate the breastfeeding process. Sources of breast milk boosters can come from fruits, vegetables, nuts, or seeds as well as fish [3]. Lactagogue is a drug or substance that is believed to help stimulate, maintain or

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increase breast milk production. Low milk production becomes the most frequent reason to stop breastfeeding their babies so mothers and doctors try to find a cure to solve this problem (IDAI, 2013a).

Is breast milk booster effective for consumption by nursing mothers and needs to be given to every mother? And what about breast milk boosters according to evidence-based results? This study aims to review some of the latest literature to determine the effectiveness of breastfeeding boosters and breast milk boosters according to the latest research.

2. RESEARCH METHOD

The research method uses a Literature Review Study, where in this study search is carried out on scientific sources that are accurate and valid, and closely related to the topic being searched. Search for related scientific sources is obtained from Google Scholar, Pubmed, and ScienceDirect in the form of scientific articles using keywords: Milk booster, galactagogue, and breast milk production.

3. RESULTS AND ANALYSIS

A study using the Randomized Controlled Trial (RCT) method conducted in Madiun, East Java, examined 100 breastfeeding mothers who had babies aged 1-3 months. Divided into intervention groups and control groups. This study aims to determine the effectiveness of goat milk feeding to increase breast milk production. Data were collected through observation and 24-hour food recall sheets. After consuming goat's milk, there is an increase in breast milk production. The average milk production in the intervention group was higher than in the control group. Protein intake in the intervention group was also higher than in the control group. The study concluded that goat milk is effective in increasing milk production and protein intake in nursing mothers. Consuming goat milk regularly for 10 days can increase breast milk production, nutritional needs can be met properly and the baby's immunity will be further increased. Goat milk contains protein with small particles so that it can be more easily digested by babies in addition to being able to meet the daily needs of protein in nursing mothers [5].

Local plants are widely used as milk boosters to increase breast milk production. One of the studies conducted in Denpasar, Bali, aims to describe the potential of several local plants based on evidence-based through a qualitative review. Some of the local plants studied in pregnant and lactating women are Katuk leaves, Moringa, and papaya as a galactagogue. The results of this study showed that Katuk leaf decoction is more effective in increasing breast milk production than leaf extract. A dose of 114 mg of extract accelerates the production of colostrum in the puerperium. Breast milk production was higher in the group that consumed moringa leaf extract capsules than in Moringa leaf flour. Papaya leaves are used as a relaxation therapy by attaching to the breast. Papaya leaves in the form of herbal medicine are more effective in increasing breast milk production. The phytochemical content of Katuk leaves, Moringa leaves and papaya leaves can increase prolactin levels and can increase breast milk production. This herbal plant can be consumed at the end of the third trimester to postpartum because there are no side effects for pregnant women and nursing mothers [6].

The research, which was conducted in Malang, was conducted using a survey method with a cross-sectional approach with a total sample of 96 respondents. The purpose of this study was to find out the description of the use, effectiveness, and side effects of chemical and herbal galactagogues. The results of this study show that the most widely used galactagogue is herbal (85.4%) consisting of Katuk leaves, fenugreek, and Gejah herbs. The use of chemical galactagogue (7.3%) consists of domperidone and metoclopramide. The use of combined galactagogue is as much as (7.3%). Breastfeeding mothers who use galactagogue based on advice (67.6%), easy to consume (12.4%), easy to get (9.5%), more effective (8.6%), and low price (1.9%) from various sources of information such as doctors (33.9%), midwives (18.3%), parents (16.5%), siblings (13.8%), friends (8.3%), internet (7.3%), pharmacists (0.9%) and nurses (0.9%). There were side effects felt by 12.3% of respondents such as the appearance of body odor, weight gain, headaches, difficulty sleeping, and constipation in infants (1%) [7].

Torbangun Leaf Soup is one of the herbal plants that is believed to help increase breast milk production. Research conducted in Pekanbaru examined the benefits of Torbangun leaves in breast milk production. This study used a one-group pretest-posttest design method in 28 breastfeeding mothers. The average milk production at the initial measurement was 70 ml, while the average increase in breast milk production after consuming Torbangun leaf soup was 189.6 ml. The Research concludes that Torbangun leaf soup can effectively increase breast milk production in breastfeeding mothers. The Torbangun plant is easy to grow all over the place, this plant is usually used as a family medicinal plant and can usually be grown in the yard of the house [8].

The use of local plants in Indonesia as galactagogue is carried out in West Lombok Regency. This study aims to find out the description of the use of local plants as breast milk boosters (galactagogue). This research method is



quantitative. The sample was all mothers who had babies aged 0-2 years as many as 123 people. The results showed that plants that are widely used to facilitate breast milk by the community are Katuk leaves, Moringa leaves, Turi leaves, and spinach. The local plant is processed by making it a clear vegetable. Local plants used by the community are proven to increase breast milk production. The use of a local plant as a galactagogue should be supported by comprehensive information regarding dosage form, dosage, duration of use, empirical benefits, and possible side effects. However, there is still a need for further research on the processing of these plants so that they can be more utilized optimally [9].

Papeda is one of the typical local foods originating from Papua, West Papua, Maluku, and several regions in Sulawesi. The basic ingredient of papeda is made from sago. Sago is a typical Papuan food that contains carbohydrates and has many health benefits. This study aims to see the combination of papeda and Katuk leaves to facilitate breast milk production. The research method uses Quasi-experimental research in experimental and control groups (n=20) with a Cluster Random Sampling technique in postpartum mothers for 3 days, breastfeeding more than 12 times a day and having no psychological disorders. The intervention is given as much as 2 times a day for 7 days. The study consult is that there is a significant influence of papeda and Katuk leaves on the smooth production of breast milk [10].

Sweet potato leaves are one of the foods that increase breast milk production because they contain Lactagogum. In addition, sweet potato leaves have low fat and cholesterol, high protein, calcium, niacin and iron, dietary fiber, provitamin A, Vitamin C, Thiamin, Riboflavin, Vitamin B6, Folate, magnesium, phosphorus, potassium, and manganese. This study examined the benefits of sweet potato leaves to increase breast milk production. This research was conducted in Tapung District, Kampar Regency. The research method used is Pre experimental with one group pre-test and post-test designs. The sample was 20 breastfeeding mothers with total sampling. The results showed that the frequency of breast milk production after being given sweet potato leaves increased from 75% to 90%. The average increase in breast milk production increased from 4.13 ml to 35.9 ml. There is an effect of sweet potato leaves on increasing breast milk production in postpartum mothers. This local food can be used as an alternative to breastfeeding mothers to increase breast milk production.[11][12]

4. DISCUSSION

Breast milk boosters are grouped into 2 categories, namely medicines and herbs. Drugs with breast milk booster benefits contain galactagogue. Boster breast milk of the drug type should not be taken without the instruction and supervision of the doctor. Milk booster from herbal natural ingredients. The most effective breast milk booster depends on its indications, efficacy, safety, and contraindications [13].

Galactagogue in the form of medicines can be given by an obstetrician doctor when a nursing mother needs medicines to increase breast milk production. The administration of these drugs shows an increase in the production of the hormone prolactin to stimulate the production of breast milk. The types of drugs that are often given are Metocloropramide, Domperidone, and Supride (Mark B. Landon MD, 2021).

Nursing mothers who have not succeeded in breastfeeding only with counseling alone or mothers who will do lactation induction can use galactagogues (pharmaceutical and herbal compounds to increase lactation). Research on the benefits of pharmaceutical and herbal galactagogue is still very scarce to prove high-quality clinical trials and the results are still mixed. Healthcare providers still face the challenge of prescribing or recommending galactagogues without utilizing strong or evidence-based evidence. Controlled trials and analyses to investigate the effects of galactagogues are still indispensable. Bazzano et al., 2016).

Research in Australia on the use of galactagogues showed that out of 1876 respondents, 1120 (60%) used one or more galactagogues. Galactagogues most commonly include cookie lactation (47%), brewer's yeast (32%), fenugreek (22%), and domperidone (11%). Most women start galactagogues within the first week of postpartum. The most felt effectiveness is highest in domperidone, more than 23% of domperidone users experience some side effects compared to women who use herbal galactagogues. More research is needed to present strong evidence on the efficacy and safety of galactagogues [16].

Domperidone is widely used as a galactagogue in mothers who have difficulties while breastfeeding. However, use in high doses may increase maternal depression, the risk of arrhythmias, and cardiac death. So the use of herbal plants as natural galactagogues is more trusted in increasing breast milk production [17].

The use of herbal plants that can function as galactagogues widely used by breastfeeding mothers to increase breast milk production, such as Katuk leaves (*Sauropus Androgynus* Lour), Moringa leaves (*Moringa Oleifera* Lamk), Bangun-bangun leaves (*Coleus Amboinensis* Lour), black cumin (*Nigella sativa*), young papaya (*Carica papaya*), long beans (*Vigna Sinensis* Lour) and many other herbal plants. These herbal plants can increase breast milk production because they are suspected to contain polyphenols and sterols. The compound can increase levels of the hormone prolactin and stimulate the production of the hormone oxytocin. These two hormones play a very important role in the production of breast milk and the maximum production of breast milk [18].

Nutrition is the most important thing to support the success of the breastfeeding process. The success of breastfeeding is influenced by several factors such as nutritional adequacy, psychological factors of the mother such as a sense of calm and comfort, confidence, support, and family and closest friends, factors of maternal knowledge about the correct and effective breastfeeding techniques or ways [19].

Breastfeeding is a very complex process, mothers are expected to have good knowledge of how breasts produce breast milk. This will greatly help mothers understand the work process of breastfeeding which can ultimately support the success of breastfeeding exclusively. Infant suction on the breast can stimulate the pituitary gland to produce prolactin. Prolactin will stimulate the breasts to produce breast milk. The principle of supply and demand is that the more breast milk is released, the more breast milk will be produced. Another important hormone is oxytocin, produced when the nerve ends around the breast are stimulated by the suction of the baby. Oxytocin will stimulate muscle contraction around the perimeter of the alveoli and squeeze the milk out with the suction of the baby. The hormone oxytocin can be maximally produced with good psychological from the mother such as feelings and outpourings of affection, self-confidence in the mother, and support of the husband and family in the upbringing of the baby. In addition, breastfeeding techniques such as position and attachment when breastfeeding are the key to successful breastfeeding and also strongly support the smooth breastfeeding process [20, 21].

5. CONCLUSION

From the results of a review of some related literature, it can be concluded that galactagogue or milk booster from medicines and herbal plants is effective in increasing breast milk production and facilitating the breastfeeding process. The use of galactagogue or milk booster can consume within reasonable limits to be more confident when breastfeeding. However, you should still pay attention to the efficacy and safety, and side effects of its use. Continue to consume food with balanced nutrition to meet the daily nutrition of the baby to support the baby's growth and development. The principle of supply and demand, effective and regular emptying of air should take precedence. Not all nursing mothers need an additional breast milk booster. The average mother produces breast milk that is sufficient according to the needs of her baby in mothers who breastfeed their milk directly and regularly breastfeed. However, the most effective is the sense of comfort and confidence of the mother. If consuming breast milk boosters can increase self-confidence, it can increase breast milk production. A mother's self-confidence is the most effective breast milk booster. If the mother breastfeeds confidently and happily, it will produce the hormone oxytocin. When the mother is happy the flow of breast milk will be smooth and the hormone prolactin will increase the production of breast milk.

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