

# Treatment of insufficient lactation is often not evidence-based

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## ABSTRACT

**INTRODUCTION:** Breast milk has many advantages over formula for infants in developed and developing countries alike. Despite intentions of breastfeeding, some women develop insufficient lactation. Treatment options traditionally include breastfeeding education and pharmacotherapy.

**MATERIAL AND METHODS:** An electronic questionnaire regarding treatment of insufficient lactation was sent to all obstetric departments (n = 21) and neonatal wards (n = 17) in Denmark. Three main questions were included which focused on: breastfeeding education for women, use of pharmacotherapy and availability of local guidelines.

**RESULTS:** In all, 30 out of a total of 38 departments participated; and among those, 93% offered some form of breastfeeding education. 50% used either metoclopramide or syntocinon to promote lactation. None used domperidone. 73% had a local clinical guideline. 77% offered sessions with a lactation consultant.

**CONCLUSION:** Despite lack of evidence, half of the Danish obstetric departments and neonatal wards use metoclopramide and syntocinon for insufficient lactation. Domperidone might provide an alternative, but no departments reported its use. Management of insufficient lactation should always be initiated by counselling and education. Only when these treatment options are exhausted should pharmacotherapy with a suitable medication be considered.

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The World Health Organization recommends breast milk as the exclusive source of nutrition for the first six months and “with continued breastfeeding along with appropriate complementary foods up to two years of age or beyond” [1]. There are many reasons for recommending breast milk over formula to babies in industrialised countries. Breast milk has been shown to reduce the number of infections; to lower the risk of diabetes, obesity, asthma and atopic eczema; along with reducing the number of admissions to hospitals [2]. Despite intentions to breastfeed, some women develop insufficient lactation. Efforts to help these women have traditionally focused on providing information, instructions on correct breastfeeding techniques and pharmacotherapy. The aim of this survey was to explore and discuss the current management and treatment strategies for insuf-

ficient lactation employed at departments of obstetrics and neonatal wards in Denmark.

## MATERIAL AND METHODS

An electronic questionnaire regarding treatment of insufficient lactation was sent to all obstetric departments (n = 21) and neonatal wards (n = 17) in Denmark. The questionnaire was sent to the clinical director, but could be forwarded to the consultant primarily responsible for this area if such a position existed. The questionnaire was sent on 20 February 2013, and departments that had not answered in the course of three weeks were sent an e-mail reminder. The questionnaire (**Figure 1**) included questions on what treatment options were available for women with insufficient lactation at each respective department, e.g. group education, informational pamphlets or sessions with a lactation consultant. Information on the use of pharmacotherapy in the form of metoclopramide, syntocinon or domperidone was also obtained. Furthermore, we asked if the departments had formal local clinical guidelines with respect to lactation deficiency (**Figure 2**). There were five questions in total: three focused on treatment of insufficient lactation, two of these were multiple choice questions, except one was a yes or no-question. There was also an option to comment on the answers and to provide further information. The last two questions identified the department. The participants were informed that the answers would be published anonymously.

*Trial registration:* not relevant.

## RESULTS

A total of 16 obstetric wards and 14 neonatal wards answered the questionnaire, which corresponds to a 79% response rate (Figure 1). All departments, except for two, offered one form or another of lactation education (93%). At 73% of the departments, there was a local clinical guideline on the management of insufficient lactation: nine out of 14 (64%) neonatal wards and 13 out of 16 (81%) obstetric wards. Seven departments (23%) used metoclopramide and nine departments (30%) used oxytocin. One department used both medications. None of the 30 departments who answered the questionnaire used domperidone.

## ORIGINAL ARTICLE

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 FIGURE 1

An English version of the Danish questionnaire sent to all obstetric departments and neonatal wards in Denmark. Participants were given the opportunity to comment on the answers given.

**1. If a patient develops insufficient lactation, what treatment options are available at your department?**

- Group education with a nurse/midwife/certified lactation specialist
- Information pamphlet on breastfeeding
- Personal consultation with a lactation specialist (e.g. at an outpatient ward)

**2. If a patient develops insufficient lactation, do you prescribe any of the following medicine to increase milk production at your department?**

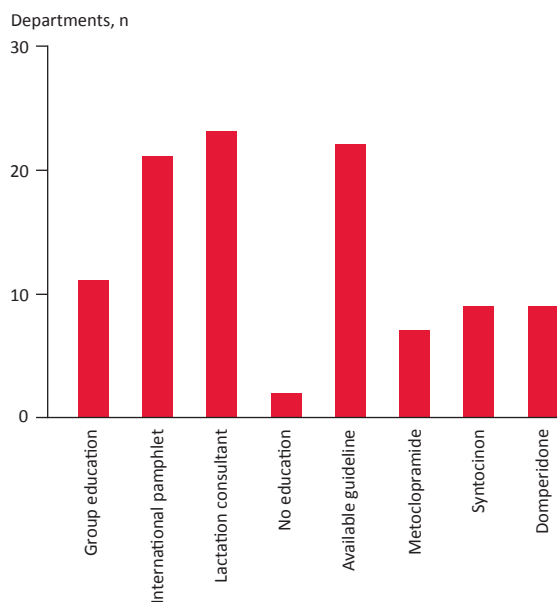
- Oxytocin/Syntocinon
- Metoclopramid/Primperan/Emperal/Gastro-Timelets
- Domperidon/Motilium

**3. Does the department have a local guideline on treatment of insufficient lactation?**

- Yes
- No

 FIGURE 2

Results of the survey. Thirty out of 38 departments responded.



Half of the departments used medication for treatment of insufficient lactation either in the form of metoclopramide or oxytocin. Five of the 15 departments commented that the use of pharmacotherapy was rare.

One department noted that they also offered acupuncture as a treatment alternative.

Two out of the eight departments that did not have a local clinical guideline commented that guidelines would be available soon. Four out of the seven departments that did not offer sessions with a lactation consultant noted that the personnel at the ward helped women with insufficient lactation. One department commented that they also offered breastfeeding education in the form of a video.

## DISCUSSION

The quality of the breastfeeding education may vary between departments, and this difference is not addressed by the present survey. There is no apparent evidence that a specific form of education is superior; however, breastfeeding education in general is considered to have a positive effect on insufficient lactation according to a Cochrane review from 2012 [3].

The education of midwives, nurses and doctors does not generally extend to breastfeeding techniques; and their advice to women can therefore be inconsistent and coloured by their own experiences [4-7]. The staff of various professions, such as midwives and nurses, who provide advice for women on breastfeeding, can take a standardised European test to qualify for the title of International Board Certified Lactation Consultant [8]. Studies have shown that ward personnel can have difficulties in providing advice on insufficient lactation and that personnel at neonatal wards have a tendency to recommend formula when the infants are not gaining enough weight [9]. The fact that seven out of 30 departments had no lactation consultant on staff and that four of those answered that the regular staff could provide assistance may indicate that the departments lack focus on educating their staff.

Our results indicate that half of Danish obstetric and neonatal wards use pharmacotherapy intermittently for insufficient lactation. It is important to be aware that poor breastfeeding techniques, soar nipples and skin sores are common causes of insufficient lactation that will not be solved by pharmacotherapy. Pharmacotherapy always carries the risk of side-effects. With off-label prescriptions for insufficient lactation, the patient has to be made especially aware of the possible side-effects. Doctors in Denmark should also be able to justify their off-label prescriptions [10].

Several reviews of the pharmacological treatment of insufficient lactation have recently been published. One review found no effect of metoclopramide, and the effect of syntocinon and domperidone was doubtful due to a lack of studies [2]. A Cochrane review from 2012 limited to preterm infants found a moderate effect of domperidone on milk production, but no long-term effect on breastfeeding [11]. Another review of the same studies of domperidone that were included in the Cochrane review also found significant effect on milk production [12].

In an Australian audit from 2013 [12] of domperidone use at a Women's and Children's Hospital, there was an increase in domperidone use from less than 0.5% to over 5% of all women over a ten-year period. 60% had not been seen by a lactation counsellor. This trend is to be avoided in Denmark given the scarce evidence for the efficacy of pharmacotherapy. However, the trend



Lactation education provided for the mother of a neonate. (Copyright: The AV Department, Hospital of North Zealand, Hillerød)

towards increased domperidone use may also be caused by an apparent effectiveness of the drug witnessed by clinicians. There is a large study on domperidone underway that is expected to be concluded in 2015 [13].

It is of interest that there are so few studies available on the subject of pharmacotherapy for insufficient lactation in the industrialised part of the world. There is growing awareness of the importance of breastfeeding in the less developed parts of the world, where breast milk is often the main source of nutrients for the infants. Breastfeeding in industrialised countries is perhaps merely seen as good for the infant, but not as being life-essential [13]. The lack of high-quality studies may reflect this view. Further research is required, preferably in the form of randomised studies of the effectiveness of various treatment options and formalised education of staff.

To achieve a high response rate, we decided to keep the questionnaire simple and easy to answer. Multiple choice questions can limit the information we gain from the answers given, but the participants in the survey were able to comment on any question. We did not ask specifically about the frequency of use of pharmacotherapy as we could not be sure of the accuracy of the information.

## CONCLUSION

Breastfeeding education, advice and the support of ward personnel is offered to women in case of insufficient lactation at most Danish departments of obstetrics and neonatal wards. At half of the departments, pharmacotherapy is used in the form of either metoclopramide or

syntocinon, even though there is no evidence to support their effect. Management of insufficient lactation should always be initiated by counselling and education; only when these treatment options are exhausted should pharmacotherapy with a suitable medication be considered.

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