## **English abstract for paper**

Fenugreek seed poultice versus cold cabbage leaves compresses for relieving breast engorgement: An interventional comparative study

#### Abstract:

Background: Breast engorgement is an uncomfortable and painful condition affecting a large slid of mothers in their early postpartum period. Several approaches have been explored for pharmacological or non-pharmacological interventions applied to the treatment of breast engorgement. Some of the non-medical interventions include Fenugreek seed poultice and cold cabbage leaves compresses. Aim: Study the impact of nursing intervention on relieves of breast engorgement among puerperal breastfeeding women and compare Fenugreek seed poultice versus could cabbage leaves compresses as two different nursing care approaches of on relieving of breast-engorgement. Methods: Setting: Postnatal unit and outpatient clinic of Beni-Suef and El-Fayoum University Hospital. Design: A quasiexperimental comparative study. Subjects: A purposive sample of a total of 100 puerperal mothers; 50 in the Fenugreek group & 50 in the cold Cabbage group. Tools: A specialized designed structured interview schedule and Breast Engorgement Assessment Scale (Numerical rating scale, Modified Reeda Scale, Six-points engorgement scale, Fever Chart, and LATCH breastfeeding charting scale). Results: A significant improvement of breast condition after intervention for both groups regardless of the applied measure was found; however, the improvement was better and shorter time among Fenugreek group than Cabbage group (p < .05). Conclusions: For the management of breast engorgement, both Fenugreek seed poultice and cold Cabbage leaves were effective. However, Fenugreek seed was more highly effective where breast engorgement was alleviated in a shorter time than cold Cabbage leaves. **Recommendations**: Further randomized controlled trials with possible placebo treatment should be carried out to elucidate the non-specific effects of Fenugreek seed poultice and cold Cabbage leaves application.

KeyWords: Breast-engorgement, Nursing intervention, Fenugreek seed poultice, Cabbage leaves compresses

توقيع مقدم البحث مقدم البحث مقدم البحث أم.د/ شربات ثابت حسنين

## **English summary for paper (3)**

# Fenugreek seed poultice versus cold cabbage leaves compresses for relieving breast engorgement: An interventional comparative study

المشاركون في البحث: أ.م.د/ حنان الزبلاوى حسن 
$$^{(1)}$$
، د/ إيمان علي عبد المعطى شيحه  $^{(2)}$  المشاركون في البحث: أ.م.د/ شربات ثابت حسنين  $^{(2)}$ ، د/ وفاء مصطفى أحمد جميل  $^{(3)}$ 

## **Introduction:**

Breast engorgement is an uncomfortable, unpleasant, and painful condition that affects a number of women in their early postpartum period. The reported incidence of breast engorgement ranged from 20.0% to 77.0% between studies. Poor management of breast-engorgement may lead to failure of milk production; leading to early cessation of breastfeeding and premature weaning. If this condition isn't handled effectively, mastitis/breast abscess may be noticed. The main aim of management of breast-engorgement is to attain, sustain, and maintain of breast-milk flow, successfully, and empty the breast-milk, effectively, through the baby to avoid engorgement.

## Aim of the study:

The research was, therefore, conducted to study the effect of nursing intervention on breast engorgement relief among puerperal breastfeeding women and to compare Fenugreek seed poultice versus cold cabbage leaves compresses as two different approaches to breast engorgement relief nursing.

## **Subjects and Methods:**

**Research design:** This study is an interventional comparative study.

**Settings:** postnatal unit and outpatient clinic of Beni-Suef and El-Fayoum University Hospital.

**Sample:** A purposive sampling, of 100 postnatal women with breast-engorgement were recruited

**Tool of Data Collection:** - Two tools were used as the following:

## **Tool (1): A specialized designed structured interview schedule:**

It included the participants' socio-demographic data and their general characteristics and clinical data.

## **Tool (2): Breast Engorgement Assessment Scale (BEAS):**

This tool was specially designed to provide the baseline data of the subjects regarding their signs and symptoms of the engorged breast. The outcomes assessed included the primary outcome of pain severity, and secondary outcomes of redness, breast hardness, body temperature, and charting scale for breastfeeding (LATCH). It consists of 5 parts as the following mention:

Part (A): Numerical rating scale (NRS).

Part (B): Modified Reeda Scale (MRS)

Part (C): Six-points engorgement scale (6-PES)

Part (D): Fever Chart

Part (E): LATCH breastfeeding charting scale.

#### **Results:**

## The study results revealed the following:

- The results of the current study reveal that the mean age of both studied groups (Fenugreek group; group A and Cabbage group; group B) were 24.14±5.99 & 23.22±10.49, respectively. There was no significant difference in the participants' age and breastfeeding and newborns' characteristics which displayed homogeneity of the two groups.
- Breast engorgement was more prevalent among women with caesarian section delivery, within 4 to 7 days postpartum, primiparous.
- Concerning baseline signs & symptoms of breast engorgement among two groups, before application of nursing measures; the results illustrated that redness was the most frequent observable breast-engorgement sign, 1.1 to 9.2 cm of redness it documented by 60.0% & 50.0% of the studied groups (A&B, respectively). Additionally fever (38.0 to 38.4) was recorded by 50.0% & 62.0% of each group, respectively. Numerical rating scale scored 7-10 point for 50.0% & 44.0%. Firm, hard, and tender breasts are reported by 26.0% & 30.0% of the groups with level 4 & 5 of engorgement. The two studied groups weren't differ significantly in all items of baseline signs & symptoms of breast engorgement which displayed homogeneity of the two groups.
- There are statistically significant differences between the two groups of the pain score (NRS), Redness (REEDA Scale; MRS) and hardness of the breast (6-PES), body temperature, and LATCH breastfeeding charting scale for the Fenugreek group & Cabbage group, respectively, throughout the follow-up visits; 12 h, 24 h, 36h, and 48 hours (p < .05).
- There was a significant improvement in breast condition; however, the improvement in Fenugreek group was better and in a shorter time than Cabbage group (p < .05).
- The results of the present study reveal the complete recovery from (pain, redness, hardness, pyrexia & improving LATCH score) for the studied groups throughout follow up visits were at the postpartum 4 visits. For the

Fenugreek group, the complete recovery from pain, pyrexia and improving LATCH score took place within 24 hours while redness and hardness completely alleviated 36 hours post-intervention. On the other hand, for the cold Cabbage group, the complete recovery from hardness, pain, redness, and pyrexia took place within 48 hours; while improving LATCH score completely alleviated 24 hours post-intervention.

• Finally, the results of the present study reveal the effectiveness of the two methods used to relieve breast engorgement; however, Fenugreek seed was more effective and scored better recovery in a shorter time.

### **Conclusion:**

For the management of breast engorgement, both Fenugreek seed poultice and cold Cabbage leaves were effective. Fenugreek seed was more highly effective where breast engorgement was alleviated in a shorter time than cold Cabbage.

## **Recommendations:**

- This research area requires more efforts to expand the evidence base on the different approaches to breast engorgement reduction in nursing care.
- Further researches are needed to clarify the magnitude of the breast engorgement problem in Egypt as a whole and compare between rural and urban areas to find out a suitable solution for it.

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