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“A study to evaluate the effectiveness of cabbage leaves application on breast engorgement among post-natal mothers in Sultaniya Hospital, Bhopal”.

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Abstract: Introduction: Motherhood-The only act that manifests in human form the cosmic wonder of creation. Child birth is a process beautifully designed by nature and the care following the birth of the baby also essential for the maintenance of health of both mother and child. Child birth is a transcendent event with meaning far beyond the actual physiologic process. The common breast complications are breast engorgement, cracked and retracted nipple leading to difficulty in breast feeding, mastitis, breast abscess and lactation failure. Breast engorgement and infection are responsible for puerperal pyrexia. Breast fullness is a normal part of lactation which nearly all women experience when their milk comes in’ 2 – 5 days after birth. This feeling of fullness, which may be accompanied by a feeling of heaviness, tenderness, and warmth, is caused by swelling of the breast tissue as blood, lymphatic fluid, and milk collect in the ducts as the process of milk production begins. With this normal fullness, the breast tissue is compressible, and generally feel well

Need for The Study: Personal experience of the research in taking care of postnatal mothers and thinking about the serious side effects of the drugs used in treatment of breast engorgement, the investigator is motivated to analyze the effectiveness of cabbage leaves as a non-pharmacological method in prevention and relief of breast engorgement. There are many pharmacological and non-pharmacological measures for treating engorgement. Although the pharmacological measures are widely used many medications like bromocriptine is found to have serious side effects like suppression of lactation, strokes, seizures, cerebral edema and heart attack. Thus, pharmacological cessation of lactation has been discouraged. The use of cabbage leaf compresses has the advantage of being disposable, inexpensive and convenient. Breast feeding should be initiated within an hour of birth instead of waiting several hours as is often customary. Although there is little milk at that time, it helps to establish feeding and a close mother-child relationship is known as bonding.

Supportive Research Finding: The purposive experimental study was conducted to evaluate the effectiveness of cabbage leaves versus alternate breast engorgement in the post-natal ward of All India Institute of Medical Sciences (AIIMS), New Delhi. The sample size was 60 mothers; 30 in the experimental group and the 30 in the control group. The

experimental group received cabbage leaf treatment for relieving breast engorgement. The pre and post-test scores of breast engorgement and pain were recorded. Both the treatment that is compresses and cabbage leaves were effective in decreasing breast engorgement and pain in post-natal mothers. **2.** A comparative study was done to assess the effectiveness of three non-pharmacologic measures-compression binder, standardized support bra, and fluid limitation-and one widely used pharmacologic preparation-bromocriptine mesylate-in preventing and controlling postpartum breast engorgement by using the convenient sampling technique. Women receiving bromocriptine mesylate experienced less breast engorgement, pain, and leaking of colostrum’s and milk than did women in any of the non-pharmacologic treatment groups ($P \leq .05$). The study concluded that women using a compression binder experienced less leaking than women using the bra or fluid limitation. There was no significant difference in the incidence of reported pain between the three non-pharmacologic groups.

Objectives: 1. Assess the level of breast engorgement among post-natal mothers before the application of cabbage leaves application in experimental and control group. 2. To evaluate the effectiveness of cabbage leave application in experimental group. 3. To compare the level of breast engorgement among post-natal mother in experimental and control group by post test score. 4. To find out the associate between the selected demographic variables and effectiveness of cabbage leaves in experimental and control group.

Operational Definitions: Effectiveness: refers to the ability to prevent and to bring relief of symptoms of breast engorgement after application of cabbage leaves as manifested by significant difference between pre-test and post-test assessment scores measured by using structured rating scale. **Cabbage Leaves Application:** Fresh cabbage leaves with crushed veins with a hole in center for the nipple and areola that is applied over the breast for a period of 2 hours. **Breast Engorgement:** refers to the sense of breast fullness experienced by postnatal women which will be assessed in terms of characters such as swelling, tenderness, warmth, throbbing, low-grade fever and hardness of breast tissue, heaviness etc. **Post-natal mother:** In this study postnatal mothers refers to mothers who have delivered a

baby within three days of postnatal period and have the evidence of breast engorgement. **Hypotheses: H₁:** There will be a significant association between mean post-test and pre-test level of breast engorgement in experimental and control group. **H₂:** There will be significant association between pre-test in the level of breast engorgement among post-natal mothers with their selected demographic variables.

Research Methodology: Research design: Quasi experiment with Two group experimental group control group. **Experimental group- pre- test → intervention- → post test, Control group----- → post test** **Research approach:** Experimental research approach. **Dependent variable:** Breast engorgement during post-natal period. **Independent variable:-** Application of cabbage leaves. **External variables:** It consist of baseline characteristics of post-natal mothers such as age, religion, education, occupation, income, type of family, parity, type of delivery and previous occurrence of breast engorgement.

Setting: The study will be conducted in post-natal wards of sultaniya hospitals, Bhopal. **Population:** All the post-natal mothers with breast engorgement. **Sample size:** Post-natal mothers who fulfil the inclusion criteria will be considered as a sample, and the sample size is 60. The age group of postnatal mothers is 18- 35 year. Researcher selected sample by ran-dam chit-method. 30 experimental, 30 control. **Sample-technique:** Purposive sampling method Group I– Samples who will receive the intervention of cabbage leaves application. Procedure: Time-30min. Duration-3 days **Sample Criteria: Inclusion criteria:** 1. Post-natal mothers with breast engorgement. 2. Post-natal mothers within 3 days of post-natal period. 3. Post-natal mothers who are available at the time of data collection. **Exclusion criteria:** 1. Post-natal mothers who are already getting some treatment for breast engorgement. 2. Post-natal mothers who not having breast engorgement. 3. Post-natal mothers who are not willing to participate in the study.

Intervention: 1. Take one cabbage leaves and steam by the hot water at last 5mint and after that apply the cabbage leaves on engorgement present. 2. Application of cabbage leaves will be given to the postnatal mothers for an interval of 30 minutes thrice a day. 3. Researcher will take per day 6 sample, 3experimental, 3 control. On per sample the researcher will be spend 1¹/₂ hrs. /day. **Data collection procedure:** Obtain permission from the concerned authority and informed consent from the respondents, the investigator personally, assess the effectiveness of application of cabbage leaves .2. Samples who will receive the intervention of cabbage leaves application. 3. Cabbage leaves will be applied to the breast for 30 minutes with 3 applications at 30 minutes interval. 4. 3rd application of cabbage leaves breast engorgement will be assessed using the same. Duration of data collection-4 weeks per day 3 sample of experimental and 3 sample of control group.

Plan for data analysis: The data collected will be analyzed by means of descriptive and inferential statistics. **Major Finding:** Pilot study confirm partibility and provided confidence to the research for the main study. After the pilot study the tool was to found to be feasible partible and acceptable. There will be significant difference between pre

and post test. At the level or $p > 0.005$. 1.13 which is highly significant. There will be no significant association with demographic variable. There will be significant difference between pre test and post test level of pain scale or breast engorgement scale of day-1st and day-3rd. **Pain scale mean** Day1st mean= 4.5 experimental group and control group day 1st mean= 5, After the giving intervention day 2nd mean= 3.5 and control group day 2nd= 4.5 **Breast engorgement scale (n-36)** Day1st mean= 25.75 experimental group and control group day 1st mean= 30, After the giving intervention day 2nd mean= 21 and control group day 2nd= 16.5 **Pain scale standard deviation** Day1st S.D= 2.70 experimental group and control group day 1st S.D= 2, After the giving intervention day 2nd S.D= 1.49 and control group day 2nd= 2.66 **Breast engorgement scale standard deviation (n-36),** Day1st S.D= 5.3 experimental group and control group day 1st S.D= 19.7, After the giving intervention day 2nd S.D= 1.4 and control group day 2nd= 10.8. **Pain scale mean:** Day 3rd mean is 1.5 experimental group and control group mean is 3.5. **Pain scale standard deviation:** Day 3rd standard deviation is 1.41 experimental group and control group S. D= 2. **Breast engorgement scale standard deviation (n-36).** Day 3rd S.D is 6 experimental group and control group S.D is 10.6. **Descriptive statistics:** Frequency, percentage distribution will be used to describe the distribution of demographic variables. Mean, range and standard deviation will be used to assess the level of breast engorgement before and after the intervention. **Inferential statistics:** T-test will be used to compare the post-test level of breast engorgement between group I and group II. Chi-square will be used to analyze the association of level of breast engorgement among post-natal mothers with their selected demographic variables.

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