



## EFFECT OF HOFFMAN'S TECHNIQUE ON FLAT NIPPLE OVER NIPPLE TYPE AND QUALITY OF BREAST FEEDING AMONG POST-NATAL MOTHERS

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### ABSTRACT

In women who are pregnant for the first time it is very common for the nipple to not protrude fully. Flat nipples may be difficult to baby to grasp. In order to improve the breast feeding effectively, the Hoffman's technique is applied. Effect of Hoffman's technique on flat nipple over nipple type and quality of breast feeding among immediate post-natal mothers – Case Report. Study type was case series, Inclusion criteria female those who are breast feeding, 45 days from delivery, primipara and multipara women, Both normal delivery and ceasarean, Age between 25 to 35 years. 2 Subjects were selected according to inclusion and exclusion criteria. Outcome measure were pinch test and breast feeding satisfaction. In case 1, the pinch test is positive for pretest and negative for post test and the quality of breast feeding is improved after the Hoffman's technique is applied. In Case 2, the pretest is positive and post test is negative for pinch test and due to the effect of Hoffman's technique and the quality of breast feeding is also improved. This study concludes that Hoffman's technique have an effect of nipple type and Quality of breast feeding and can be used among postnatal and Antenatal mothers to improve the Quality of Breast Feeding.

**KEYWORDS:** Hoffman's technique, Flat Nipple, Breast Feeding., Post natal, Antenatal, Quality of breast feeding.



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## INTRODUCTION

The breast consists of 15 to 20 sections called lobes, with in each lobe there are smaller structures called lobules, where milk is produced. The milk travels through a network of tiny tubes called ducts. The ducts connect and come together into larger ducts, which eventually exit the skin in the nipple. The dark area of skin surrounding the nipple is called the areola.<sup>1</sup> Breasts are of different shapes and sizes and so exists different types of nipples.<sup>2</sup> The most common types were everted nipples that are raised a few millimeters above the surface of the areola and points out. Flat nipple is flat and blends into the areola whereas Inverted nipple retracts inwards.<sup>3</sup> Breast feeding has number of benefits to both mother and baby. Mother is benefited with less hemorrhage, less risk of Breast and Uterine cancer, promotes emotional bonding with the baby. Human milk meets the need of the growing baby, lowers the risk of asthma, diarrhoea etc, helps in nervous system development, improves their immune system. All these benefits make the Breastfeeding as mandatory and exclusive for the first six months in the infant's life.<sup>4</sup> When the infant begins to breast feed its suckling stimulates the nerves inside the nipple to send a message to brain which in turn signals pituitary gland to release two hormones Oxytocin and Prolactin .Prolactin helps in production of milk whereas the Oxytocin causes the release of milk.<sup>5-6</sup> This sudden release of milk from the breast is called the let-down reflex or milk – ejection reflex. It may take several seconds or several minutes for this release of milk to occur. The more milk is removed from the breasts, through breast feeding or milk expression the more milk is made. For effective removal of milk from the breast, the baby must be positioned correctly on the breast and be able to coordinate suckling, swallowing and breathing.<sup>7,8,9</sup> Nipples that protrude are easy for the baby to grasp, and stretch them forward and backward against the roof of her mouth. Flat or inverted nipples make it difficult for the baby to nurse easily and effectively thus influencing the quality of breastfeeding. When enough milk collects in the baby's mouth, a swallow occurs. Swallowing is one sign of milk transfer. Milk transfer is the key to effective breast feeding. For quite a long period, there evolves a belief that the breast size affects the milk production ability but the real fact is the size and shape of the nipple do influence the breastfeeding. As the baby will be unable to grasp the breast and maintain a good latch which is very essential component in Breast Feeding. The need of this study was to improve the breast feeding effectively. The Hoffman's Technique is a manual exercise that helps to treat inverted and flat nipples. It was introduced by Dr. J Brooks Hoffman.<sup>8,9</sup> As there are very few studies to check the Hoffman's technique effectiveness for flat nipple in immediate post-natal mothers. Also inability to feed properly may also add up to postnatal depression and hamper the Quality of Life. Thus the aim of the study was to determine the effect of Hoffman's technique on flat nipple over nipple type and quality of breast feeding among immediate post-natal mothers. The purpose of this case series is to

describe the conservative approach to manage with flat nipple and to give an evidence for physiotherapists for managing flat nipple conditions.

## METHODOLOGY

This is a case series study, pretest-posttest type. Convenient sampling was done from Department of Obstetrics and Gynaecology, SRM Medical College Hospital and Research center, Kattankulathur. Subjects aged between 25 to 35 years, Who are in puerperium period, participants who had undergone vaginal delivery or Lower segmental Cesarean section, primipara and multipara were included in the study and subjects with hypertension, still birth, postpartum hemorrhage were excluded from the study The procedure and importance of this technique and study were explained in detail and informed consent was obtained. 5 postnatal women according to the inclusion criteria and exclusion criteria were identified with the chief complaint of feeding difficulty to the baby, General assessment was done following which pinch test was done to them, The pinch test helps to decide whether the nipples are normal, flat or inverted. This test will be done by placing the thumb and index finger at the base of the nipple near the edge of the areola, then press the thumb and index finger together. A normal nipple will protrude or come out, In case of flat nipple, the nipple will retract or sink in. Out of 5, two subjects proved positive for pinch test, following which they were treated with Hoffman's technique which was applied thrice continuously and then the effect of which was assessed immediately. The Hoffman's technique was applied by placing the index and thumb fingers on either side of the nipple and gently stretching the areola in each direction. Then press the fingers firmly into breast tissue then pull the nipple gently apart from the areola. After this technique is applied the mother is asked about her breastfeeding satisfaction with questions like swallowing, baby suckle swallowing reflex ahe subject was advised to continue the stretch, post evaluation was done after a week on quality of breast feeding which include baby urination, stools passing, swallowing, suckle swallowing reflex.

### Case Description

In Case1, the mother age was about 25 years, she had undergone Lower Segmental Cesarean Section and it was her first delivery, her major complaints were that the milk production is proper but the baby has difficulty to grasp and take milk..Breast examination was done following general assessment, there was no tenderness, warmth on palpation following which pinch test was done. Immediate documentation of swallowing and suckle swallow reflex was done to find out the immediate effects. For better results and follow up, breast feeding satisfaction components like swallowing, suckle swallowing reflex , frequency of baby urination or passing stools were enquired and documented immediately. Then the subject was treated with Hoffman's technique three times continuously following which pinch test and breast feeding satisfaction questions were reviewed (Table-1).

**Table 1**  
**Pretest and Posttest values of Pinch test, Swallowing and Suckle swallowing reflex post Hoffman's technique.**

S.No	Outcome measures	Pre-test	Post-test
1	Pinch test	Positive	Negative
2	Swallowing	Not able to identify	Positive
3	Suckle swallowing reflex	Not able to identify	Positive

In Case 2, the mother age was 26 years, she had a miscarriage previously when she was three months pregnant. After 2 years she got pregnant and now she had a Labour Normal/vaginal delivery. Her chief complaint is difficulty during breast feeding and she complains that the baby was unable to grasp the nipple properly. A general assessment was done and then in Breast examination. there was no tenderness and warmth, then pinch test was done. Breast feeding satisfaction components were enquired and

documented. Then the subject was treated with Hoffman's technique three times continuously following which pinch test and breast feeding satisfaction questions about swallowing and suckle swallow reflex were enquired and immediate documentation was done. For better results and follow up the breast feeding satisfaction questions about the frequency of stools and urine passed, swallowing and suckle swallow reflex were reviewed. (Table-2)

**Table 2**  
**Pretest and Posttest values of Pinch test, Swallowing and Suckle swallowing reflex post Hoffman's technique.**

S.No	Outcome measures	Pre-test	Post-test
1	Pinch test	Positive	Negative
2	Swallowing	Not able to identify	Positive
3	Suckle swallowing reflex	Not able to identify	Positive

## DISCUSSION

This case series documented the clinical presentation and the management of Flat nipple. Because of the lack of awareness of Flat nipple among physiotherapist and lack of the research evidence made the foundation for this study. Case 1, reported negative pinch test and a positive improvement in the swallowing and suckle swallow reflex immediately whereas post one week number of urination by the baby increased from 4-5 times/day to 7 times/day and number of stools passing by baby increased from 2 times/day to 3-4 times/day following the treatment with Hoffman's Technique which shows a good improvement in the quality of breast feeding (Table-1). The Hoffman technique helps to break the grip at the base of the nipples that keep them inverted. They may help to stretch and loosen the adhesions at the base of the nipple and thus make the nipple everted and facilitate breast feeding Case 2 also reported a negative pinch test and improvement in swallowing, suckle swallowing reflex immediately whereas post one week number of urination by the baby increased from 5 times/day to 6-7 times/day and number of stools passing by baby increased from 1-2 times/day to 3 times/day following the treatment with Hoffman's Technique which shows a good improvement in the quality of breast feeding. Usually women who are pregnant for the first time experience flat or inverted nipples. But as the skin becomes elastic during pregnancy, the nipples protrude out. Only about ten percent of women have some degree of inversion by the time the baby is born<sup>1,2</sup> Because flat nipples can cause problems with breast feeding, it is necessary for the women to know that whether they have it during

pregnancy so that they can begin the treatment from their late pregnancy that will help them to ensure a quality breast feeding. Exercise can be continued even after the baby is born to ensure effective breastfeeding.<sup>3,5</sup> Antenatal preparation provides important emotional benefits too, Handling the breasts, checking the nipples, Breast feeding classes gains its importance during pregnancy. Few evidence supports that unwanted nipple stimulation triggers uterine contraction in late pregnancy.<sup>4</sup> Future research has to be done to find the evidence of it. The limitations being the small sample size and lack of follow up and inverted nipples were not included in the study. Studies with control group and effect of Hoffman's training during antenatal period over its postnatal breast feeding can be done. Thus this study concludes that the Hoffman's technique can be used in the treatment of flat nipple among postnatal women.

## CONCLUSION

This study concluded that Hoffman's technique was effective in improving the nipple type and Quality of breast feeding among immediate post-natal mothers. Hoffman's technique can be practiced well in antenatal period if flat nipple was present to improve the Quality of breast feeding and also it may provide psychological support to the postnatal women.

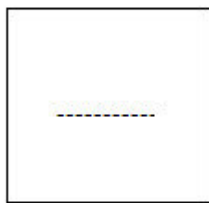
## CONFLICT OF INTEREST

Conflict of interest declared none.

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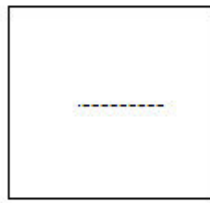
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