
Original Article

A study of surgical profile of mastitis in postnatal women

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Abstract:

Background: Mastitis caused by staphylococcus aureus in postnatal and lactating women is quite common problem, especially in women of rural background and women from areas where there is lack of counseling regarding lactation.

Objectives: To study the predisposing factors, incidence rate & management options among postnatal women with mastitis.

Methods: This cross sectional study was conducted at MediCiti Institute of Medical Sciences, Ghanpur, Medchal. The study documents 50 clinically diagnosed cases of mastitis in postnatal & lactating women up to 2 years.

Results: Incidence of mastitis was 0.9%. Out of 50 patients, 34% patients were managed conservatively, 24% required aspiration under local anesthesia & 42% required incision and drainage under general anesthesia.

Conclusion: In our study, lack of lactational counseling was major predisposing factors for mastitis. Majority of cases were cured by incision & drainage.

Key words: Mastitis; Abscess; Aspiration; Incision & drainage.

INTRODUCTION:

Mastitis is an inflammatory condition of breast, which is more often seen in postnatal women during lactation. Mastitis can occur in non lactating period and even post menopausal women. Mastitis can be non-infective or infective. The cause for non-infective mastitis is not fully understood, however it has been attributed to inflammatory response to cytokines secreted by mother. Infective mastitis can occur as a sequel to non-infective mastitis and secondary infection of stagnant milk.

In non-pregnant women infective mastitis occurs due to periductal fibrosis or duct ectasia¹. Mastitis in lactating women causes emotional trauma to mother as she is unable to feed the baby due to pain and misconceptions of feeding the baby during mastitis.

This is a cross sectional study, in which the incidence of postnatal mastitis in patients referred to surgical outpatient department as well as patients admitted in maternity ward in MediCiti Hospital were taken. Predisposing factors if any were identified by taking a detailed history of patients. Management was based on the stage of mastitis. We have given only antibiotics in few, some underwent aspiration under local anesthesia and rest underwent incision and drainage under general anesthesia.

Apart from the treatment given, adequate counselling was done regarding prevention of further episodes of mastitis since most of them had not received counselling regarding correct way of breastfeeding and care of the breast.

MATERIAL AND METHODS

Study Type: Cross sectional study

Study Place: Department of Surgery, MediCiti Institute of Medical sciences, Ghanpur

Study Period: November 2011 to June 2013

Inclusion criteria: All postnatal and lactating mothers up to 2 years.

Exclusions criteria: Breast Malignancy and cutaneous infections.

Follow up: 3 months

METHODOLOGY:

Data was tabulated by preformed questionnaires, results were analyzed and percentages calculated, by using Microsoft excel.

Detailed history was obtained and local examination was carried out.

5562 patients were seen from November 2011 to June 2013, patients with lactational mastitis who attended surgery outpatient department and patients of obstetrics who

delivered babies and were lactating. 50 patients were affected with mastitis in our study.

After obtaining written, valid and informed consent from patients, investigations and management were undertaken. Data collected using a Proforma which included detailed history, complete clinical examination, and imaging.

Patients with signs of inflammation like local rise of temperature, tenderness, erythema, and with ultrasound findings showing dilated ducts were subjected to conservative treatment by giving amoxicillin for 7-10 days.

Patients who had signs of skin involvement, ulceration, palpable lymph nodes and ultrasound showing collection of < 5 cm suggestive of either abscess or galactocele, were subjected to aspiration by using wide bore needle. Pus was sent for culture and antibiotic sensitivity.

21 patients had all the signs of inflammation and ultrasound showed collection > 5 cm. In these patients Incision and Drainage were carried out. 19 samples of Pus and 2 samples of milk were sent for culture and antibiotic sensitivity.

Steps of Incision and drainage:

1. The incision was made in Langer's lines
2. Adequate surgical drainage was done with digital breaking down of loculi.
3. Wound was loosely packed.
4. Healing by secondary intention.

RESULTS & DISCUSSION

The present study was carried out at Mediciti Institute of Medical Sciences, Ghanpur, Medchal, as cross sectional study. Duration of study was November 2011 to June 2013. All the post natal women and mothers lactating up to 2 years, who attended postnatal ward and surgery OPD were included. The patients were from all socioeconomic groups and their age ranged from 19 years to 30 years.

Table 1: Comparison of incidence

Study	WHO review ²	Clark S I et al ³	Our study
Incidence	<10%	3.6%	0.9%

In the present study, incidence rate of mastitis in Mediciti hospital is 0.9%. Out of 5562 mothers 50 had mastitis. Study by Clark S I et al³ had an incidence of 3.6%, Whereas WHO review² said incidence of mastitis was < 10%.

Our study showed that the mean age was lower than other two studies. This could probably be explained by the fact that the girls in rural area get married in younger age.

Table 2: Comparison of mean age

Study	Lee I W et al ⁴	Gojen Singh et al ⁵	Our study
Mean age	29.2 years	32 years	23.6years

Predisposing Factors were studied. We found lactation counseling in the form of advice on proper feeding, cleaning of the nipple and areola before and after feeding, and taking care of cracked nipple, time of feeding, complete expression of breast milk to prevent stasis and subsequent infection. We found that 52% of patients had not received lactational counseling.

In 22% of patients cracked nipples were found in lactating mothers, in our study. Study of Foxman et al⁶ showed increased incidence of 36 %.

Cleft lip and palate were found in only 2 babies, so it was not a very significant contributing factor.

Previous history of mastitis was found in 8% of our patient. This was less in compared to 18% in study conducted by Scott et al¹⁰.

Table 3: Comparison of patients affected with mastitis in first 3 months of lactation

Study	Scott JA et al	Foxman et al	Clark SI et al	Present study
% patients affected in first 3 months	53%	9.5%	27.08%	50%

Incidence of mastitis was studied in four groups, ranging from 0-3 months (50%), 3-6 months (14%), 6 -12 months (28%), 1- 2 years (8%).

Majority of the cases occurred in the first 3 months in our study. When compared to other studies similar results were seen in those done by Scott JA et al⁷ 53%. In studies by Foxman et al⁶, 9.5% and by Clark S I et al (27.08%)³.

Based on the clinical examination findings and ultrasound results management was planned. In 17 patients only antibiotics were given to which patients responded. No further treatment was required. 12 patients were treated by aspiration and antibiotics. 5 of these patients needed re-aspiration and were cured. 21 patients needed incision and drainage, which were curative.

In our study out of 50 patients 42% underwent incision and drainage, 24% underwent aspiration, and 34% received only antibiotics. Similar findings were seen by Lee I.W, MD et al⁷. Out of 127 patients 59.84% underwent incision and drainage, 3.14% underwent aspiration, and 37 % received only antibiotics.

Out of 50 patient's pus samples, 33 samples were sent for culture and sensitivity. On culture and sensitivity report, it was found that the most predominant organism was Staphylococcus aureus in 22 (66.66%) patients, followed by Coagulase Negative Staphylococcus aureus in 9 (27.27%) patients, Methicillin resistant Staphylococcus

aureus in 2 (6.06%) patients.

In studies done by Lee I W et al⁴, out of 127 patients, they found that staphylococcus aureus was present in 56 (44.09%) cases, Coagulase negative staphylococcus aureus in 13 (10.23%) patients, methicillin resistant staphylococcus aureus in 26 (20.47%) patients, and they found other organisms in 32 (25.19%) cases. Raveendar Hegde et al³ reported that out of 323 sample of mastitis, staphylococcus aureus was present in 95 (29.41%) samples, coagulase negative staphylococcus aureus was present in 95 (29.41%) samples, and Ecoli was found in 48 (14.86%) samples, whereas streptococci were found in 85 (26.31%) cases.

CONCLUSION:

From the present study the following conclusion were drawn:

Incidence was 0.9%. Lack of lactational counselling was major predisposing factors for mastitis in this study. 50% of them suffered from mastitis in first 3 months of lactation. Clinical examination, ultrasound and culture and sensitivity helped for the diagnosis and treatment. 100 % Patients were cured by I & D and antibiotics. But 10% had recurrence and required re-aspiration.

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