

Clinical Study of Breast Abscess by Repeated Aspiration and Antibiotics in Rural Population

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Abstract

Background: Traditional treatment of breast disease abscesses involves incision and drainage, with or without ultrasound guidance. This study is conducted to determine whether needle aspiration of breast abscesses with antibiotics was an effective modality. **Materials and Methods:** This prospective study included 70 patients with breast abscesses were treated by needle aspiration of abscess and antibiotics. All were treated out patients basis in Department of Surgery, Gadag Institute of Medical Sciences, Gadag. **Results:** A total of 40 patients (57.14%) out of 70 belonged to age group between 20-40yrs. Study showed 41 patients (58.57%) were lactating and 29 (41.42%) were non lactating. This study also shows 59 (72.85%) patients were treated successfully with aspiration and antibiotics and treatment failure in 19 (27.14%) patients went for surgical drainage. **Conclusion:** Antibiotic with needle aspiration is an effective treatment for breast abscesses in rural population.

Keywords: Breast Abscess; Lactating; Needle Aspiration.

Introduction

Breast abscesses are related to lactation and occur within the first few weeks of breastfeeding. The incidence of breast abscess ranges from 0.4 to 11% of all lactating mothers¹. Surgical incision and drainage in all patients not required and some studies suggests

the role of the needle aspiration and antibiotics drastically reduced surgical drainage [3]. Breast abscesses are typically seen in staphylococcal infections and present with point tenderness, erythema, and hyperthermia [2].

In women who are not lactating, a chronic relapsing form of infection may develop in the subareolar ducts of the breast that is variously known as *periductal mastitis* or *duct ectasia*. Subareolar infections presents with subareolar pain and mild erythema. Oral antibiotics may be effective this stage. Antibiotic treatment generally requires coverage for aerobic and anaerobic organisms. If an abscess has developed, aspiration with oral antibiotics required. The present study carried out to study the treatment of breast abscess by repeated aspiration and antibiotics.

Materials and Methods

This prospective clinical study was conducted in department of general surgery, Gadag institute medical science Gadag from November 2016 to November 2017. Total 70 patients were studied of these, 41 patients (58%) were lactating and 29 patients (41.42%) were non lactating.

Diagnosis was made by clinical presentation like point tenderness, erythema, and hyperthermia [2]. Abscess was treated with immediate aspiration and antibiotics. The procedure was performed in the surgery OPD. Aspirated pus was sent to culture and sensitivity. Abscess not resolved after repeated aspiration and antibiotics termed as failure and failure patients treated with incision and drainage. Affected breast emptying, through nursing or pumping and breast feeding encouraged from unaffected breast. Follow up was performed in all cases weekly for a month.

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Result and Observation

The total 70 patients with breast abscesses were included in this study. 40 patients (57.14%) out of 70 belonged to age group between 20-40yrs. So most common age group is 20-40 [Table 1].

Study also shows 41 patients (58.57%) were lactating and 29 (41.42%) were non lactating [Table 2].

All patients presented with a firm, tender, palpable mass or masses in the breast. Twenty nine (41.42%) patients erythema and two patient having a thick discharge from the nipple [Table 3].

Abscesses situated centrally in the retro-areolar space in 10% of patients while in 90% of patients the abscesses situated in peripheral sectors of the breast [Table 4].

This study also shows 59 (72.85%) patients were treated successfully with aspiration and antibiotics and treatment failure in 19 (27.14%) patients later subjected to surgical drainage. 48.57% patients successfully treated with single aspiration and 8.87% needed more than two aspiration [Table 5].

Several studies reports Infections are most often caused by *Staphylococcus aureus* and may be manifested as cellulitis with breast parenchymal inflammation and swelling, termed *mastitis*, or as abscesses.

Our study also Fifty six (80%) patients positive culture with *Staphylococcus aureus* in 45 (64.42%), and sterile culture in 20% patients [Table 6]. No complications were observed in all patients who successfully treated with aspiration and antibiotics.

Table 1: Distribution of age

Age in Years	No. of Cases	Percentage
10-20	06	8.57
20-40	40	57.14
41-60	14	20
>60	10	14.28
Total	70	100

Table 2: Incidence of breast abscess

Breast abscess	Number	Percentage
Lactating	41	58.57
Non lactating	29	41.42
Total	70	100

Table 3: Clinical presentation of patients

Symptoms	No. of Cases	Percentage
Discharge	2	2.85
Tender lump	70	100
Fever	14	20
Erythema	29	41.42

Table 4: Topography of breast abscesses

Site	No. of cases	Percentage
Central	07	10
Peripheral	63	90
Total	70	100

Table 5: Treatment of patients by aspiration

Profile of treatment	No of Cases	Percentage
One aspiration	34	48.57
Two aspiration	11	15.71
More than two aspiration	6	8.87
Treatment failure	19	27.14
Total	70	100

Table 6: Bacteriology of pus from 70 patients with breast abscess

Organisms	No. of Cases	Percentage
Staphylococcus aureus	45	64.28
Escherichia coli	6	8.57
Klebsiella	4	5.71
Pseudomonas	1	1.42
Sterile culture	14	20
Total	70	100

Discussion

Breast abscesses can be classified according to clinical presentation, location, or pathogenic organism. Most abscesses result from second-ary bacterial infection from skin contamination. In the current study, patient's age range has some similarity with the result of Dixon JM who demonstrated that breast abscesses most commonly affects women aged 18 -50 years [4]. Lactational breast abscesses are more common than non lactational breast abscesses. In our study shows 41 (58%) cases were lactational and 29 (41%) cases were non lactational breast abscess. Similar comparable study in the series of Schwarz et al [5]. With 83% (lactational) and 17% (non lactational). *S. aureus* was the most common pathogen isolated in this study in 45 (64.28%) cases which is comparable with findings by Elagili et al [5] Ulitzsch et al [6] and Dixon et al [7]. The success rate by needle aspiration without resorting to surgical drainage was 72%. These findings were in consistent with the reports of Schwarz et al and Hansen et al [8]. Cloxacillin 500mg is first-line antibiotic used in our study for 7 days or 500 mg of cefazolin administered four times daily. Some studies shows metronidazole addition has good effect [9].

Conclusion

Our study shows majority of the breast abscess can be effectively treated without surgery on an outpatient

basis, by a combination of needle aspiration and antibiotics. Needle aspiration with antibiotic is an effective treatment for breast abscesses.

References

1. Dener C, Inan A. Breast abscesses in lactating women. *World J Surg* 2003;27(2):130-133.
2. Garrison RN, Fry DE. Surgical infection. In: Lawrence PF, editor. *Essential of General Surgery*. 3rd ed. Philadelphia: Lippincott Williams and Wilkins; 2000. p.123-39.
3. Berens PD. Prenatal, intrapartum, and postpartum support of the lactating mother. *Pediatr Clin North Am* 2001;48(2):365-375.
4. Dixon JM. Outpatient treatment of non-lactational breast abscesses. *Br J Sur*. 1992;79:56-5.
5. Schwarz RJ, Shrestha R. Needle aspiration of breast abscesses. *Am J Surg* 2001;182:117 9.
6. Elagili F, Abdullah N, Fong L, Pei T. Aspiration of breast abscess under ultrasound guidance: Outcome obtained and factors affecting success. *Asian J Surg* 2007;30:40 4.
7. Ulitzsch D, Nyman MK, Carlson RA. Breast abscess in lactating women: US guided treatment. *Radiology* 2004;232:904 9.
8. Hansen PB, Axelsson CK. Treatment of breast abscess. An analysis of patient material and implementation of recommendations. *Ugeskr Laeger* 2003;165:128 31.
9. Versluijs-Ossewaarde FN, Roumen RM, Goris RJ. Subareolar breast abscesses: characteristics and results of surgical treatment. *Breast J* 2005;11(3):179-182.