

Original Research Article

To Compare the Results of Ultrasound Guided Aspiration and Incision and Drainage in the Management of Breast Abscess

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Abstract: Breast abscess is less common in developed countries due to improved puerperal hygiene, nutrition, early administration of antibiotics and standard of living, breast abscess remains a morbid condition among lactating women in developing countries. Breast abscess is a most common cause of morbidity in puerperal women. Breast abscess ranges from mastitis to deep abscess. The Incidence of lactation breast abscess is high in India. The aim of this study is to compare the results of ultrasound guided aspiration and incision and drainage in the management of breast abscess. This is a comparative study between ultrasound guided aspiration and incision and drainage consist of 50 patients who underwent both the treatment alternatively. Even though recurrence rate is slightly high in USG guided aspiration when compared to incision and drainage, USG guided aspiration is effective method of treatment in breast abscess with good patient satisfaction. Even though recurrence rate is slightly high in USG guided aspiration when compared to incision and drainage, USG guided aspiration is effective method of treatment in breast abscess with good patient satisfaction.

Keywords:Breast abscess, USG guided aspiration, hypoechoic lesion.

INTRODUCTION:

Breast abscess is defined as accumulation of pus within the breast, due to untreated mastitis or complication of mastitis. Breast abscess is less common in developed countries due to improved puerperal hygiene, nutrition, early administration of antibiotics and standard of living, breast abscess remains a morbid condition among lactating women in developing countries[1]. Non lactation breast abscess are uncommon in India, when compared to western countries. Early diagnosis and treatment of mastitis will prevent the complications of breast abscess like milk fistula, scarring, etc[2]. In infective mastitis, Staphylococcus aureus is the most common pathogen. Less commonly, Streptococcus (such as Group A or Group B streptococcus) or Escherichia coli[3]. Community-acquired methicillin-resistant S. aureus (MRSA) is increasingly being identified as the causative agent. USG breast is very much useful in the diagnosis of breast abscesses, guiding needle placement during aspiration and also enables visualization of multiple abscess loculation and thus useful in needle aspiration of breast abscesses[4]. This procedure is successful in many place where efficient radiologist

available and is associated with less complications, less postoperative stay, early postoperative recovery, excellent cosmetic result. The important points in the management of breast abscess are symptom management like simple analgesia, warm and cold applications, antibiotics and encouraging continued milk flow from the affected breast[5]. The surgeon should tell the patient that antibiotics and pain killers will not affect her baby. The patient should be reassured to continue breastfeeding, and to drink plenty of fluids. Close monitoring is needed to ensure that the infection resolves[6]. The infant must be examined to look for adequate growth and hydration. Examination of the baby's mouth to look for any candida infection which is defined as a white filmy layer adherent to the buccal mucosa and to look for anatomical conditions like cleft palate or tongue-tie these are all the factors interfere with the baby attachment to the nipple. Observation of breastfeeding also plays important role, as this will give the poor placement of baby to the nipple and areola complex. So the aim of my study is to compare these two modalities of puerperal breast abscess treatment[7].

Aims and Objectives:

The aim of this study is to compare the results of ultrasound guided aspiration and incision and drainage in the management of breast abscess

MATERIALS AND METHODS:

This is a comparative study between ultrasound guided aspiration and incision and drainage consist of 50 patients who underwent both the treatment alternatively in our institution, Govt. Stanley medical college hospital, Chennai-1 during 2013 – 2015. All women with clinically and radiologically diagnosed breast abscess were included in the study. Patients with immunosuppression, recurrent abscess, necrotic skin overlying the abscess, old age, very large abscess were excluded from the study. Period of study was around 2 years. Comparison study (cross sectional) Population included patients with breast abscess who are

undergoing treatment in Govt. Stanley medical college. Patients will be selected in an alternative basis for both procedures and explained about the procedure with consent. For one group of patients, under short General anesthesia with aseptic precautions, incision and drainage done with 11 blade and abscess cavity packed with Wick gauze. For other group of patients, under Local anesthesia with Ultrasound guidance, aspiration done with 16G needle with Compressive bandage done. In USG guided aspiration, Patients will be followed up in 7th and 14 th day following the procedure.

RESULTS

In our study overall 50 patients, all patients complaints of pain and tenderness 46 patients complaints of swelling, 38 patients have fever and 36 patients have erythema.

Table-1: Data of clinical features breast abscess patients in the study

CLINICAL FEATURES	FREQUENCY	PERCENTAGE
PAIN	50	100%
SWELLING	46	92.85%
FEVER	38	75.71%
TENDERNESS	50	100%
ERYTHEMA	36	72.85%

Breast abscess patients must be examined clinically as well by radiological investigations to look for any other abscess within the same breast and also

for axillary lymphadenopathy which is usually tender and mark the site for incisional drainage.

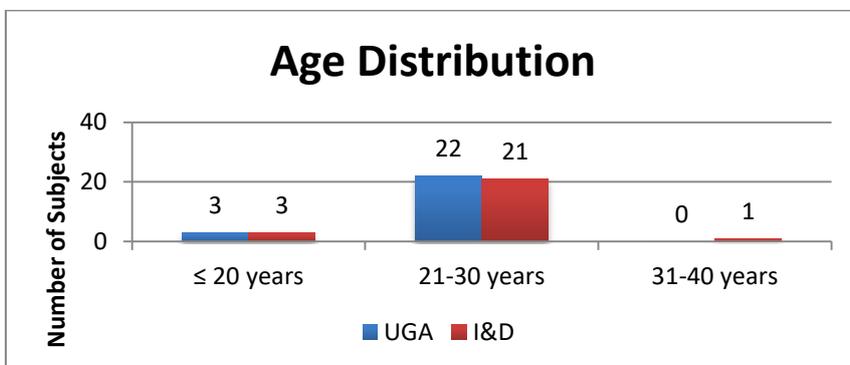


Fig-1: Shows the age distribution among the patients

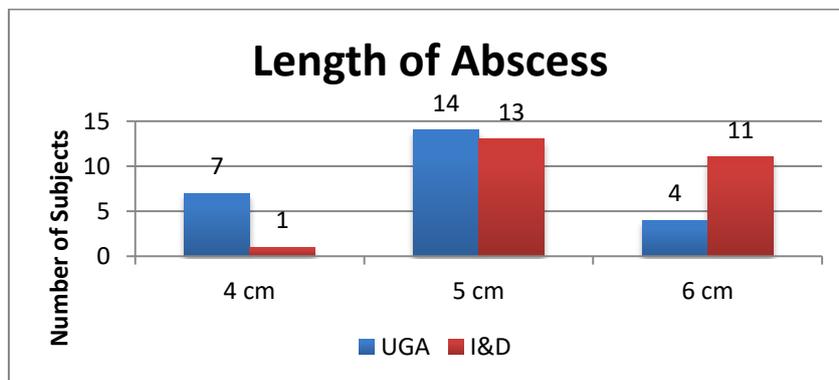


Fig-2: Shows the length of abscess among the patients

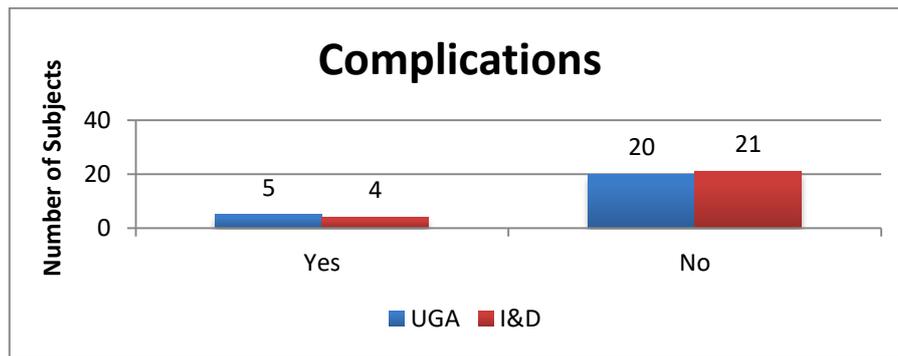


Fig-3: Shows the complications among both the groups

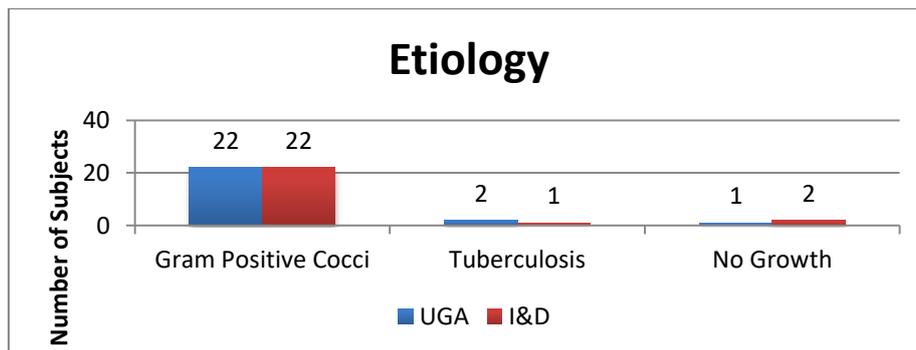


Fig-4: Shows the organism growth on both the groups

DISCUSSION

Traditionally, the breast abscess management involves incision and drainage. But this is associated with need for general anesthesia, prolonged healing time, regular dressing, difficulty in breast feeding, and possible unsatisfactory cosmetic outcome [8]. The important points in the management of breast abscess are symptom management like simple analgesia, warm and cold applications, antibiotics and encouraging continued milk flow from the affected breast. The surgeon should tell the patient that antibiotics and pain killers will not affect her baby[9]. The patient should be reassured to continue breastfeeding, and to drink plenty of fluids. Close monitoring is needed to ensure that the infection resolves. Dieter *et al* [7] also observed similar findings in their study. In our study swelling, pain over swelling, tenderness and raised local temperature was present in all patients of breast abscess in both groups i.e. in incised group and in USG aspirated group[10]. All patients in incised group had swelling, erythema, increased local temperature and tenderness. Alphonse *Bet al* [11] also observed similar signs and symptoms in their study. Among the USG guided aspiration patients, the cure rate was 88% whereas patients managed by incision and drainage procedure with cure rate of 96%. Dixon *JMet al* [3] reported success rate of 84%. Faisal *Elagili et al*[9] reported success rate of 83.3% with USG guided aspiration of breast abscess. Alphonse *et al* [11] observed cure rate of 93.1% in ultrasound guided aspiration. In our study recurrence rate of USG guided aspiration was 12% which correlates with study conducted by Francisco *Leborgne et al.*[13]. Out of 25

patients managed by incision and drainage one patients 4% developed recurrent breast abscess within four months of primary surgery The mean healing time in USG guided aspiration group was 15.5 days while in incision-drainage group was 24.4 days. Three patients (%) in 12% incision drainage group had developed milk fistulas which correlate with the study by Dr. SairaSaleem *et al*[14].Milk fistula healed spontaneously after by interruption of breast feeding in these three patients. While there was no milk fistula noted in USG guided aspirated group. In the present study 88.58% patients continued breast feeding in USG guided aspiration while in all lactating females managed by incision-drainage group breast feeding was interrupted which correlate with the study of Dr. Saira Saleem *et al.*[14] satisfaction in patients treated by USG guided aspiration was 88% and in incision- drainage group was 68% and the findings were in correlation with the study of Dieter *et al* [7] and SairaSaleem *et al.*[14] Cosmetic results in incision-drainage group were unsatisfactory while there were no cosmetic problems in USG guided aspiration.

CONCLUSION

The patient acceptance was good in USG guided aspiration of breast abscess when compared to I & D. In case of recurrent abscess, especially in non lactating women always suspect TB. USG guided aspiration of breast abscess with simultaneous oral antibiotic Management of lactational breast abscesses as an op procedure is safe, easy and effective. This method should become the GOLD STANDARD treatment of

breast abscess here after for the management of all lactation breast abscesses in selected patients.

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