



Breast Abscess: A Brief Communication

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ABSTRACT

Breast infections commonly affect women aged between 18 and 50 years and are categorized as lactational and non-lactational infections. The infection can affect the skin overlying the breast when it can be a primary event or, it may occur secondary to mastitis and/or, secondary to a lesion in the skin. The commoner clinical findings consist of a tender, hard breast mass with erythema of the overlying skin. Needle aspiration yields pus cultures of which yield the infecting microorganisms. In practice, treatment is usually empiric consisting of bed rest, frequent nursing, fluids, Acetaminophen for pain and fever and a course of antibiotics. The other common line of treatment for breast abscess consists of incision and drainage with primary and/or, secondary closure. This brief communication on breast abscess gives an overview of the possible etiologies, clinical signs and symptoms and the treatment lines for breast abscess.

Keywords: Breast abscess, Mastitis, Treatment

INTRODUCTION

Breast infections are occasionally seen in neonates but most commonly affect women aged between 18 and 50 years and are categorized as lactational and non-lactational infections. The infection can affect the skin overlying the breast when it can be a primary event or, it may occur secondary to mastitis and/or, secondary to a lesion in the skin [1].

Puerperal mastitis is an infection of the lactating breast most commonly caused by *Staphylococcus aureus* although *S. epidermis*, *Escherichia coli* or, *Streptococcus* species may, also, be involved. Symptoms can be non-focal and/or, generalized or, systemic consisting of chills, fever, fatigue and diffuse myalgia. A recent cohort study of breast-feeding women found a 2.9% incidence of mastitis in the first six weeks although some women develop it during the process of weaning. Mastitis was strongly associated with professional and managerial occupations in both parents and also, with having given birth in the unclean rooms rather than the sterilized labor rooms. Missed feedings, cracked nipples, skin abrasion and fatigue have, also, been associated with mastitis. Milk from breasts affected by mastitis contained more white blood cells and bacterial colonies per mL as was revealed in another study [2-5].

In general, the organisms causing sporadic mastitis are part of the oral flora of the nursing infant and therefore, continued nursing is presumed not to transmit infection to the infant. In several cases, bilateral mastitis has been reported to be caused by group B *Streptococcus* and associated with disease in the infant. Better maternal and infant hygiene and early treatment with antibiotics have considerably reduced the incidence of abscess formation during lactation. An abscess is defined as a collection of pus (dead neutrophils) that has accumulated in a cavity formed by the tissue in which the pus resides due to an infectious process (usually caused by bacteria or, parasites) and other foreign bodies. It is a defensive reaction of the tissue to prevent the spread of infectious materials to other parts of the body. The organisms or, foreign bodies kill the local cells resulting in the release of cytokines. These cytokines, then, trigger an inflammatory response which draws large numbers of white blood cells to the area and increases blood flow to the area. The final structure of the abscess is an abscess wall or, capsule that is formed by the adjacent healthy cells in an attempt to keep the pus from infecting neighboring structures; however, such encapsulation tends to prevent immune cells from attacking bacteria in the pus or, from reaching the causative organism and foreign bodies [6-10].

DISCUSSION

Breast abscess may occur with untreated mastitis or, mastitis complicating a blocked duct. It occurs in 5% to 10% of the cases of mastitis. The commoner clinical findings consist of a tender, hard breast mass with erythema of the overlying skin. The cardinal symptoms and signs of any kind of inflammatory process i.e., redness, heat, swelling, pain and loss of function are almost always present though to varying grades based on the acuity of the infection for whether the infection is acute or, chronic or, takes a sub-acute clinical course. Needle aspiration yields pus cultures of which yield the infecting microorganisms. In practice, treatment is usually empiric consisting of bed rest, frequent nursing, fluids, Acetaminophen for pain and fever and at least a 10-day course of antibiotics (Dicloxacillin or, Cephalexin) or, a change for penicillinase producing microorganisms, usually *Staphylococcus aureus*. Nursing on the unaffected side until let-down occurs is considered to be less painful. With the emergence of community-acquired Methicillin-resistant *Staphylococcus aureus* (MRSA), the conventional antibiotics might be ineffective. Alternative antibiotics effective against community - acquired MRSA often include Clindamycin, Trimethoprim- Sulfamethoxazole and Doxycycline in addition to topical mupirocin. Tetracycline, Ciprofloxacin, and Chloramphenicol are not advised routinely because of the probability of their getting excreted through breast milk with a propensity to harm the infant [11-15].

Historically, abscesses as well as boils and many other collections of pus have been treated via application of magnesium sulphate (Epsom salt) paste. This works by drawing the infected pus to the surface of the skin before rupturing and leaking-out. The other common line of treatment for breast abscess consists of incision and drainage, antibiotic therapy in combination with analgesics and continued emptying of the affected breast best accomplished by gentle mechanical pumping during the first few days while continuing to feed the infant from the opposite breast. Drainage of milk from the affected segment should be encouraged and is best achieved by continuing breast feeding [16].

Although mastitis and breast abscess are painful conditions, it is important to encourage the mother not to stop emptying the breasts while in either circumstance as drainage of milk from the affected segment is essential for the successful resolution of the infection. In case, an incision and drainage is planned, the abscess should be inspected to identify if foreign bodies are a cause which might require their surgical removal. Surgical drainage of the abscess is usually indicated once the abscess has developed from a harder serous inflammatory change to a softer pus stage. The other common indications include abscesses which are re-calcitrant to conventional treatments and cannot be treated with antibiotics alone and require surgical intervention, debridement and curettage [17,18].

CONCLUSION

Furthermore, cutaneous abscesses have traditionally been treated with incision and drainage followed by secondary healing. In many parts of the world, after drainage, an abscess cavity is often packed. However, there is no evidence to support this practice. Bilateral nursing can usually be resumed by the third or, fourth day following incision and drainage as the wound begins to heal and pain diminishes. A single large case series has, also, suggested that "stripping of the pus" by firm massage of mastitis breasts to reduce the incidence of breast abscess. Also, primary closure has, also, been found to successful when combined with curettage and antibiotics or, with curettage alone. Primary closure after incision and drainage is an alternative mode of therapy practiced in numerous parts of the world.

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