Breast Disorders
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KEY POINTS

- There are very few true breast emergencies, and immediately life-threatening causes such as traumatic breast rupture or necrotizing fasciitis are exceedingly rare.
- Breast pain, particularly if cyclic, is common, and benign causes predominate.
- Breast cancer is a possible diagnosis in any patient with a chief complaint related to the breast, including breast pain or a mass, nipple discharge, or skin lesions.
- Most patients in whom breast cancer is diagnosed have no risk factors except age older than 50 years and female sex, and eight of nine patients have no family history of breast cancer.
- The emergency physician can play a role in reduction of the risk for lymphedema by early and aggressive treatment of even very minor infections and burns.
- Most medications are safe for use while breastfeeding, and the benefits of continuing breastfeeding generally outweigh the potential for harm.
- Few maternal infections, other than human immunodeficiency virus, present a significant risk to the breastfeeding infant.

EPIDEMIOLOGY

Approximately one half of visits to physicians for breast complaints are for pain. New, palpable masses represent another common breast-related complaint. Although a benign condition will be diagnosed in 9 of 10 premenopausal women with a palpable breast mass, a new mass in a 75-year-old woman is malignant up to 70% of the time. Breast cancer is the most common cause of cancer-related mortality in women worldwide and second only to lung cancer in women in the United States. In 2006, it accounted for one third of all cancer diagnoses in women in the United States.¹

Although there are few true breast-related emergencies, perioperative issues represent a second significant group of emergency department (ED) visits. Breast surgery is relatively common in the United States. In addition to the 90,000 mastectomies performed annually, approximately 100,000 cosmetic augmentations and 100,000 reduction mammoplasties take place each year.² Many patients undergoing breast augmentation, either for reconstruction or cosmesis, experience significant complications and require additional surgery.

PATHOPHYSIOLOGY

The unique anatomic structure of the breast contributes to the wide variety of pathologic conditions that may occur. Each breast contains approximately 20 glandular units (lobes) composed of glands and adipose tissue (Fig. 127.1). Each lobe drains into a lactiferous duct, which fuses with other ducts to form lactiferous sinuses just below the skin. The lactiferous sinuses store milk during lactation. Disruption (obstruction, infection, inflammation) of the glandular system may occur at any time during a female’s lifetime but predominates between menarche and menopause. The breast’s diffuse vascular network predisposes it to hematogenous spread of malignancy, as well as infection.

Virtually all breast conditions that occur in women are seen in men as well, including benign conditions such as fat necrosis, allergic and irritant dermatitis, mastitis and abscesses, and mammary tuberculosis. Malignant entities such as adenocarcinoma of the breast, Paget disease of the nipple, and lymphoma occur less frequently in men than in women. Breast cancer in men accounts for less than 1% of the total number of breast malignancies diagnosed in the United States. However, in other areas in the world (e.g., central Africa), male breast cancer is significantly more common. Men are at higher risk for the development of malignant melanoma and basal cell carcinoma of the breast. One condition, gynecomastia, occurs exclusively in men.

PRESENTING SIGNS AND SYMPTOMS

Similar to other sensitive or visible areas, ED visits for breast complaints are often precipitated by a change in appearance of the tissue. Discoloration, erythema, and engorgement are some of the more notable changes that may occur. It is very important to determine the context within which these changes are taking place. Patients with breast pain while lactating are clearly quite different from those whose pain is a result of an automobile accident. Patients can typically be segregated into

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Cyclic mastalgia occurs in premenopausal women, is associated with worsening symptoms in the late luteal phase of the menstrual cycle, and accounts for two thirds of patients with mastalgia. The typical pain of cyclic mastalgia is “achy” or “heavy” and bilateral. Resolution with the onset of menses is very reassuring.

Findings on physical examination may be normal, or tender nodularities may be detected. Fibrocystic breast conditions (the term fibrocystic breast disease has been replaced by the term fibrocystic breast condition to emphasize that it represents a spectrum of histologic entities) are not associated with axillary lymphadenopathy, skin thickening, edema or discoloration, or nipple abnormalities such as retraction or discharge. The presence of any of these findings raises the probability that the patient has another condition instead of or in addition to cyclic mastalgia.

Noncyclic mastalgia may be caused by a variety of conditions (Box 127.2). It may be constant or intermittent, but it is not associated with the menstrual cycle. Noncyclic mastalgia tends to be unilateral and localized to a discrete area. Women with noncyclic breast pain are generally older than 40 years, and the cause is likely to be related to an anatomic lesion in the breast. It is rare for breast cancer to have pain as the sole initial symptom.

Extramammary breast pain can arise from the chest wall or from other sources. Although most of the conditions that cause isolated breast pain are not immediately life-threatening, some emergency conditions, including acute coronary syndrome and pulmonary embolism, can be accompanied by pain that appears to be originating from the breast.

Mondor disease (Fig. 127.2) is a superficial phlebitis of the lateral thoracic, thoracoepigastric, or superior epigastric vein. It typically occurs in middle-aged women. The condition can be unilateral or bilateral. It is often idiopathic but may be associated with other conditions. The classic Mondor cord is 2 to 3 mm in diameter and typically red and tender, tracks from the lateral margin of the breast across the costal margin, and extends from 2 to 30 cm. Any tenderness should resolve within weeks, but the cord may remain palpable for up to 6 months. There is no risk for systemic embolization.

Dermatologic Changes and Discharge
A wide variety of skin conditions can affect the breast, nipple, or both; the most threatening and most common
are listed in Box 127.3 and are discussed in the following sections.

**Inflammatory Breast Cancer**

Inflammatory breast cancer is the breast malignancy most likely to be manifested with acute changes. It accounts for 4% of invasive breast cancers and typically develops from invasive ductal carcinoma. It is associated with particularly high mortality. Patients may have rapid, unilateral breast enlargement because infiltration of the dermal and intramammary lymphatics by tumor causes an inflammatory response. The breast typically exhibits tenderness, erythema, warmth, and the classic peau d’orange appearance. Nipple retraction or flattening is common. In one half of cases an underlying mass is detectable.

**Necrotizing Fasciitis**

Although patients with necrotizing fasciitis are usually found to be quite ill systemically on initial evaluation, examination of the breast may show only mild changes suggesting the location of the disease. Signs of inflammation with changes in skin color from red to dusky blue along with severe pain disproportionate to the findings on examination, particularly in a patient with significant systemic toxicity, should increase suspicion for necrotizing fasciitis.

Risk factors include advanced age, diabetes mellitus, peripheral vascular disease, acquired immunodeficiency syndrome (AIDS), and use of immunosuppressive medications, including steroids, cytotoxic agents, and antirejection medications.

**Dermatitis**

Dermatitis of the breast and nipple-areola complex is common and may be caused by a number of benign and malignant conditions. Frequently, the clinical history and physical examination will yield the probable diagnosis.

Nipple eczema is the most common manifestation of atopic dermatitis involving the breast. The patient typically complains of burning and itching. Examination of the breast may reveal erythema, erosions, weeping, crusting, fissures, or lichenification. The condition is often bilateral. In
breastfeeding women, nipple dermatitis tends to develop after initiating supplemental foods, probably as a result of an allergy to food residue in the infant’s mouth.

The signs and symptoms of allergic contact dermatitis of the breast are similar to those of atopic dermatitis. Triggers include soaps, shampoo, detergents, or body lotions. Most ointments available for use in lactation contain ingredients that can induce allergic contact dermatitis.

Irritant dermatitis of the nipple—“jogger’s nipple”—is common in long-distance runners; during a marathon, up to 15% of runners will experience this problem. The repetitive friction between the runner’s shirt and nipple can cause painful, erythematous, crusted erosions of the nipple and areola.

Candidal Breast Infections

Candida albicans intertrigo is a common skin condition, especially in the inframammary area. The nipple-areola complex may be involved as well, particularly in lactating women. The rash is often beefy red with typical satellite lesions. Pruritus and maceration are common.

Nonpuerperal Mastitis and Abscess

Recent evidence suggests that ductal ectasia and periductal mastitis are really two distinct inflammatory entities. Ductal ectasia is minimally inflammatory, generally asymptomatic, and characterized by normal aging and dilation of the subareolar ducts. Occasionally, a mass may be palpated. In contrast, periductal mastitis is a symptomatic inflammatory condition seen especially in middle-aged female smokers and has the following characteristics: fistular or erosive lesions in the periareolar area, erythema and peau d’orange appearance, axillary adenopathy, and nipple discharge.

Periductal mastitis may be confused with cellulitis, abscesses, or inflammatory breast cancer. Approximately 90% of nonpuerperal breast abscesses are subareolar.

Piercing-Related Infections

Infection within the first year following nipple piercing is common (incidence as high as 20%) and is of special concern in patients who are immunosuppressed. Other high-risk patients are those who have previously undergone breast augmentation or surgery for congenital heart defects. Nipple piercing, especially in these high-risk patients, can lead to endocarditis or sepsis.

Nipple Discharge

Discharge from the nipple is a common complaint. Nipple discharge is often categorized according to the following factors: color, unilateral versus bilateral, number of ducts involved, and whether the fluid requires pressure for expression. In the absence of a mass, most physiologic discharge is yellow, milky, or green; occurs bilaterally from multiple ducts; and is seen only with compression. Other types of physiologic discharge include persistent lactation in women for up to 3 months postpartum or for as long as 2 years after discontinuation of lactation.

Galactorrhea may be caused by hyperprolactinemia secondary to medications, medical conditions, or a pituitary adenoma. Nipple discharge that is spontaneous, unilateral, localized to a single duct, and either clear or bloody is pathologic and requires outpatient follow-up. The most common cause of bloody discharge from a single duct is a benign intraductal papilloma.

Mammary Paget Disease

Paget disease of the nipple (Fig. 127.3, A and B), first described by James Paget in 1874, is a neoplastic condition that accounts for 2% to 4% of breast malignancies. The lesion involves the nipple-areola complex and may spread to the surrounding skin. Patients with early disease may have only a burning and itching sensation around the nipple area. A central palpable breast mass is present in 60% of cases. Patients with mammary Paget disease usually undergo mastectomy with either lymph node dissection or sentinel node biopsy.

Skin Necrosis

Warfarin-induced skin necrosis is a rare complication of oral anticoagulant therapy that affects only 0.01% to 0.1% of patients who take the medication. The typical patient is a middle-aged, obese woman who recently initiated Coumadin therapy, although cases have been reported occurring well into a year of therapy.

The lesions can be single or multiple and are accompanied by intense pain.

MASSES

Although breast pain is the most common symptom causing women to seek medical care related to their breasts, a palpable breast mass is associated with significant anxiety and
Table 127.1  Benign Breast Tumors

<table>
<thead>
<tr>
<th>TUMOR</th>
<th>TISSUE</th>
<th>AGE</th>
<th>SIZE</th>
<th>CHARACTERISTICS</th>
<th>DIAGNOSTIC FINDINGS</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibroadenoma</td>
<td>Both glandular and stromal tissue elements; typically solitary</td>
<td>Common in women &lt; 40 yr; uncommon in those &gt; 50 yr</td>
<td>From microscopic to 5 cm</td>
<td>Tender premenstrually, often asymptomatic; complex fibroadenomas increase risk for malignancy</td>
<td>MF: poor (look the same as surrounding parenchyma); USF: well-circumscribed, homogeneous, hypoechoic lesions with edge shadowing; diagnosis depends on fine-needle, core, or surgical biopsy</td>
<td>Specialist evaluation and follow-up</td>
</tr>
<tr>
<td>Cyst</td>
<td>Lobular lesions; obstruction, involution, and aging of ducts produce loculations that enlarge as cysts</td>
<td>Common in women 40-50 yr but rare in postmenopausal women</td>
<td>Microscopic to several cm</td>
<td>Usually round, mobile; can be tender premenstrually</td>
<td>MF: poor; USF: typical simple cyst (well-defined round or oval anechoic lesions)</td>
<td>Ultrasoundography for benign cysts; biopsy for atypical cases</td>
</tr>
<tr>
<td>Phyllodes tumor</td>
<td>Glandular tissue and stromal tissue (mostly stromal)</td>
<td>Any age; median of 50-60 yr</td>
<td>5 cm average size; up to 30 cm seen</td>
<td>Rare; painless, rapidly growing; 5% are malignant</td>
<td>MF and USF similar to findings for fibroadenoma; definitive diagnosis depends on tissue sampling and biopsy</td>
<td>All tumors, including benign growths, are resected; high mortality at 3 yr</td>
</tr>
<tr>
<td>Intraductal papilloma</td>
<td>Wartlike growths of glandular and fibrovascular tissue within ducts</td>
<td>Typically 45-50 yr</td>
<td>Usually &lt; 1 cm</td>
<td>Single tumors involving large ducts near the nipple; clear or bloody discharge; may be felt as a small lump behind or adjacent to the nipple</td>
<td>Ductography is particularly helpful</td>
<td>Surgical treatment generally recommended; involves removal of papilloma and portion of the duct</td>
</tr>
</tbody>
</table>

MF, Mammography findings; USF, ultrasound findings.

Breast Cancer

Emergency physicians (EPs) are in a unique position to provide education about breast cancer and screening (Box 127.4) to many women who do not have other contact with the health care system, in particular, minority and lower socioeconomic groups, who have both higher mortality rates and decreased access to preventive services. A female born in the United States today has a 13% probability of breast cancer developing during her lifetime. Most women in whom breast cancer develops have only two risk factors (being female and age older than 50 years).

Complications of Breast Cancer  Patients undergoing treatment of breast cancer frequently visit the ED because of complications related to their disease or treatment. Breast cancer metastasis commonly includes local, regional, and distant sites: lung, pleura, pericardium, bone, and brain.
Fat Necrosis

The most common long-term complication after trauma to the breast is fat necrosis. Fat necrosis is an inflammatory condition that is typically a sequela of trauma, but it may also develop following surgery, infection, or radiation therapy. Women with pendulous breasts seem to be at higher risk for fat necrosis. The pathophysiology is multifactorial but primarily involves the breakdown of fat cells by blood and...
tissue lipases. Clinically, mammographically, and sonographically, the condition may mimic carcinoma of the breast. Usually, a firm, poorly mobile, nontender mass is present in the superficial subcutaneous tissues. The overlying skin may be erythematous, ecchymotic, or indurated. Axillary lymphadenopathy and nipple retraction may be present. Fat necrosis typically resolves spontaneously but requires biopsy to reliably differentiate it from malignancy.

**PERIOPERATIVE COMPLAINTS**

More than 2 million women in the United States have undergone breast augmentation. Although 80% of augmentations are performed purely for cosmetic reasons, the 20% representing reconstruction following mastectomy account for a disproportionate percentage of local complications. Roughly 30% will require additional surgeries within 5 years.

Postoperative pain can be prolonged; 30% to 40% of patients report significant pain 1 year after reduction or augmentation mammoplasty, and the number is higher after mastectomy with reconstruction. Phantom breast pain after mastectomy occurs in up to 12% of patients 1 year after surgery.

**Seroma or Hematoma**

The most common perioperative complication after any type of breast surgery is a seroma, or collection of serous fluid. On physical examination, the accumulation is manifested as a soft, movable mass with no evidence of infection and a “water bed” consistency when depressed and released. Seromas typically appear 7 to 10 days after surgery or 1 to 2 days after removal of a drain; in most cases they will resolve independently as the fluid is absorbed into surrounding tissues. A persistent, untreated seroma can lead to infection or skin flap necrosis. Hematomas may also occur after surgery, and management depends on multiple factors, including size and when they develop in relation to surgery.

**Galactorrhea**

In the first days of recovery from surgery, 1% of women will experience galactorrhea (inappropriate lactation). This figure is slightly higher in women who have previously breastfed.

**Capsular Contracture**

In capsular contracture, tightly woven collagen fibers form about an implant; they represent the body’s attempt to isolate the implant from endogenous tissue. In 15% of women, this capsule becomes hard and resistant, contracts around the implant, and causes pain, deformation, and rupture. The risk is greater in women who experienced perioperative seroma, hematoma, or infection and in those who opt for silicone implants or subglandular placement.

**Rupture**

The median life span of an implant is approximately 16 and 10 years for silicone gel and saline prosthetics, respectively. Although most ruptures do not result from ascertainable trauma, they have been reported following mammography, motor vehicle collisions, gunshots, falls, and surgical procedures in the chest, including central venous catheter insertion and thoracostomy. Clinical examination alone is unsatisfactory to identify most ruptures and should be supplemented with magnetic resonance imaging (90% accurate) or computed tomography (80% accurate).

**Infection**

Many surgeons advocate perioperative antibiotic prophylaxis. This precaution has decreased the rate of postoperative infections, which otherwise ranges from 2% to 4% within the first month. The highest risk for infection occurs in patients who choose reconstruction at the time of mastectomy. The most common pathogen is *Staphylococcus aureus* (75%), followed by *Staphylococcus epidermidis* (10%). Toxic shock syndrome has been reported in some patients after augmentation or explantation; patients exhibit sudden pyrexia (>102°F), swelling of the infected breast, vomiting, diarrhea, dizziness, and often a sunburnlike rash.

**LACTATION AND Puerperal CHANGES**

**Puerperal Mastitis**

Puerperal mastitis, or mastitis that develops while breastfeeding, is a common cause of premature cessation of lactation and results in voluntary discontinuation of breastfeeding in up to 25% of patients. It develops in about one third of nursing mothers. Eighty percent of cases occur in the first 3 months of lactation. Mastitis can rarely progress to abscess formation; this is significantly more common in the first 6 weeks after birth. Risk factors for puerperal mastitis include older age, primiparity, nipple damage, employment outside the home, ineffective nursing technique, and milk stasis.

Symptoms of puerperal mastitis include a painful, erythematous area or mass on the breast and systemic symptoms of fever, chills, malaise, and myalgia. The most common causative organism is *S. aureus*, although other organisms have been identified and infections may be polymicrobial. Fungal infection in the lactating breast is more common than was previously thought. *C. albicans* is the most frequently identified organism.

Differentiating between mastitis and abscess is important, and it is possible that the two conditions exist on a continuum. However, making the appropriate distinction is significant because the treatment for each is markedly different. Although an abscess is usually associated with significant fluctuance, it may appear as only a focal induration. Ultrasonography of the affected area should be performed to identify a subcutaneous fluid collection.

**Risks Associated with Lactation in Special Circumstances**

Breastfeeding is superior to manufactured infant formula for its nutritional, cognitive, emotional, and immunologic benefits. Not all medications contraindicated during pregnancy are similarly dangerous to the nursing infant. Inappropriate cross-referencing of drug information in pregnancy to lactation may result in early cessation of lactation. Similarly, not all maternal infections necessitate cessation of lactation (Table 127.2).

On average, 1% to 2% of a maternal dose of a drug is delivered to the infant, although the amount varies depending on the drug. Because the milk compartment is bidirectional, a drug that peaks in milk after 30 minutes may leave the milk compartment before the next feeding. It is therefore recommended that when possible, a nursing mother take medications immediately after a feeding to decrease the amount delivered to the infant in the next feeding. Little evidence-based data are available to determine which drugs are safe to use in lactation. EPs concerned about the safety of a particular
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medication in a lactating woman can consult the American Academy of Pediatrics Committee on Drugs.20

Administration of radioactive compounds to a lactating mother may require temporary cessation of breastfeeding (Table 127.3). Expression and discarding of milk for the duration of five half-lives are recommended. When ordering a nuclear medicine study for a lactating woman, the EP should speak directly to the nuclear medicine radiologist to determine whether a radionuclide with a shorter half-life could be used.

Table 127.3  Radioactive Drugs That Require Temporary Cessation of Breastfeeding

<table>
<thead>
<tr>
<th>DRUG</th>
<th>TIME OF CESATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gallium 67</td>
<td>14 days</td>
</tr>
<tr>
<td>Iodine 125</td>
<td>12 days</td>
</tr>
<tr>
<td>Iodine 131</td>
<td>2-14 days, depending on the study</td>
</tr>
<tr>
<td>Radioactive sodium</td>
<td>4 days</td>
</tr>
<tr>
<td>Copper 64</td>
<td>50 hr</td>
</tr>
<tr>
<td>Technetium 99m</td>
<td>15-36 hr</td>
</tr>
<tr>
<td>Iodine 123</td>
<td>36 hr</td>
</tr>
<tr>
<td>Indium 111</td>
<td>20 hr</td>
</tr>
</tbody>
</table>


TREATMENT

MASTALGIA

Most patients require only mild analgesics, such as acetaminophen or ibuprofen. Discomfort from Mondor disease can also be managed with warm compresses. A number of alternative potential treatment modalities are available to women with cyclic mastalgia21 (Box 127.5). Women with severe cyclic mastalgia, despite treatment with conservative measures, should be referred to an endocrinologist or reproductive specialist. All patients with mastalgia should receive follow-up care.

DERMATOLOGIC CHANGES AND DISCHARGE

All patients with new onset of a dermatologic breast condition require outpatient follow-up regardless of their ED course. In particular, patients who fail to respond to traditional therapy should receive prompt evaluation and work-up for possible inflammatory breast cancer.

Local infections such as mastitis may be managed with oral broad-spectrum antibiotics; amoxicillin–clavulanic acid or levofloxacin with metronidazole is an appropriate regimen. All but the simplest abscesses require the consultation of a breast surgeon, admission for parenteral antibiotics (appropriate choices include cephalexin, doxycycline, gentamicin, and trimethoprim-sulfamethoxazole), and definitive surgical care.
Patients with any findings suggestive of necrotizing fasciitis or skin necrosis require prompt surgical consultation. Broad-spectrum antibiotics and early, aggressive surgical débridement are necessary to minimize mortality in patients with necrotizing fasciitis. Emergency management of skin necrosis includes cessation of warfarin therapy, administration of vitamin K along with fresh frozen plasma, and initiation of heparin if anticoagulation is necessary.

Patients with dermatitis can typically be discharged safely. Management includes topical steroids, lubricants, friction-reducing agents, and avoidance of atopic triggers. Close outpatient follow-up of all patients is mandatory and may include short-term reevaluation of the response to treatment.

**MASSES**

A physical examination that demonstrates any of the following necessitates prompt surgical referral: axillary or supraclavicular lymphadenopathy, rash, ulceration or dimpling, and nipple changes or discharge. Women without these worrisome findings still need referral for outpatient evaluation and follow-up, although many can be managed in a primary care setting. All women older than 35 years with masses require triple testing in the outpatient setting, including clinical evaluation, mammography with or without ultrasonography, and biopsy.

**TRAUMA**

Simple hematomas can be managed conservatively with analgesics and instructions to wear a tight-fitting bra. Caution must be exercised in patients with an acute injury and an expanding hematoma, particularly those who have coagulopathies or are taking anticoagulant medication. Prompt reversal of anticoagulation should be considered. Patients initially seen more than 48 hours after sustaining an injury seldom have bleeding from a discrete vessel and only rarely are amenable to surgery.

Findings consistent with avulsion or transection require immediate surgical consultation. Further studies should be expedited to ascertain the true extent of the injuries. Patients will require admission for definitive care.

Hematomas occasionally occur spontaneously or in the setting of very minor trauma in women with breast cancer, and they may be the first symptom of occult malignancy. Breast trauma normally heals within 4 to 6 weeks. Symptoms that persist require evaluation for possible malignancy.

Penetrating trauma to the breast warrants careful scrutiny, and all but the most superficial injuries require consideration of intrathoracic penetration. Most wounds that penetrate the full dermis and all that affect the nipple should receive the attention of a breast surgeon.

Management strategies in patients with an infected hematoma include antibiotics and drainage (either open or guided by ultrasound). Appropriate antibiotics include first-generation cephalosporins or an antistaphylococcal penicillin.

**PERIOPERATIVE COMPLAINTS**

Local infections may be treated with first-generation cephalosporins. Toxic shock is clearly a more significant progression of the infection and requires immediate surgical removal of the prosthesis, surgical débridement of surrounding tissue, parenteral antibiotics, and admission to an intensive care unit.

Seromas, hematomas, contractures, and ruptured implants all require consultation with a breast surgeon for definitive treatment and assurance of appropriate follow-up care. Persistent or painful seromas or those that compromise surrounding tissue may require fine-needle aspiration. Because drainage may result in rupture of the prosthesis, aspiration is best performed by a plastic surgeon.

Hematomas seen within 48 hours of breast surgery may require additional surgery or drainage. Hematomas initially seen later than 48 hours after surgery are best managed conservatively with a cold compress or a compressive bra. Patients should avoid aspirin and ibuprofen because these medications can exacerbate the bleeding. As with seromas, there is a possibility of associated infection, and draining of the hematoma should be left to the discretion of the surgeon.

Galactorrhea is a benign symptom that should resolve spontaneously after a few days. Bromocriptine can be administered if the symptoms are persistent and bothersome.

In cases of capsular contracture in which notable breast hardness and distortion are present, surgery may be required to remove the implant via open capsulotomy. The patient should be counseled that manual manipulation of the breast to sever resistant fibrous capsules is not advised because it can lead to rupture.

Saline implant rupture rarely requires emergency intervention because the saline is quickly absorbed into surrounding tissue. Patients should be referred to a plastic surgeon for removal of the silicone lumen and cosmetic correction of breast deflation. Following rupture of a silicone gel–filled implant, however, extruded silicone may cause localized inflammation or silicone granulomas (siliconomas) that can migrate as far as the lower part of the back, groin, abdomen, and upper extremities.

**PUERPERAL mastitis**

If mastitis is suspected, a 10-day course of oral therapy with dicloxacillin (500 mg four times daily) or cephalaxin (500 mg four times daily) is indicated; either may be given as 1 g twice daily for increased compliance. Penicillin-allergic patients can be treated with clindamycin (300 mg four times daily) for 10 days. The patient should be instructed to continue breastfeeding, even on the affected side. If breastfeeding is painful, she should pump the affected breast frequently.

If an abscess is identified or suspected, oral or parenteral antibiotics may be prescribed, depending on the extent of tissue involvement, degree of systemic toxicity, and host...
factors. Parenteral choices include nafcillin (2 g intravenously [IV] every 6 hours), cefazolin (1 g IV every 8 hours), and vancomycin (1 g IV every 8 hours). Patients should pump and discard all milk until the abscess has healed to prevent transmission of the infection to the infant. Although aspiration with a 16-gauge needle may be performed, surgical consultation is required for definitive care.

Patients must have close follow-up and should be instructed to return to the ED if the symptoms worsen at any time or fail to improve within 48 hours. Additional management may include referral to a lactation specialist, if available.

Indications for possible inpatient admission include failure of outpatient therapy, infections in immunocompromised patients (AIDS, diabetes, therapy with cytotoxic agents or glucocorticoids), and patients with significant signs of systemic toxicity. Rarely, sepsis, gangrene, or necrotizing soft tissue infections can develop.

**PATIENT TEACHING TIPS**

Any new breast symptom requires evaluation by a physician:

- the patient should seek prompt reevaluation if initial treatment of a diagnosed condition is not effective.

Although most causes of breast lumps, skin changes, breast pain, and nipple discharge are benign, many conditions (including malignancy) appear similar on physical examination and even on imaging studies.

Making a definitive diagnosis of any breast condition may require several follow-up outpatient visits and tests.

Patients should be familiar with the American Cancer Society’s recommendations for breast cancer screening for their age group.

Most patients fail to appreciate the significance of the false-negative rate of mammography. Mammograms fail to diagnose breast cancer in up to 15% of cases; therefore, a recent “normal” screening mammogram should not falsely reassure a patient with a suspicious complaint. Tissue sampling is indicated in these situations.

Patients who have undergone surgery or radiation therapy (or both) for breast cancer are at high risk for the development of lymphedema. They should be instructed to avoid compression of the ipsilateral arm and should seek immediate medical care for the treatment of insect bites, burns, lacerations, and infections, all of which increase the risk for lymphedema.

**SUGGESTED READINGS**


**DOCUMENTATION**

Meticulous documentation of the physical examination, as well as all results, when evaluating a patient with a complaint related to the breast or when an abnormality is discovered incidentally is a necessity.

Documentation of the physical examination should include the appearance of the breasts, including the nipple-areola complex, with the patient sitting, with the arms raised, and supine. Results of palpating the breast with the patient supine and the ipsilateral hand under the head should be recorded, as well as the results of gentle nipple squeezing.

All abnormalities should be diagrammed and described. Size, mobility, consistency, and symmetry in comparison with the opposite breast are important to document. Lymph nodes should be noted in terms of number, size, consistency, and mobility.

Impeccable documentation is required in cases of suspected intimate partner violence or sexual assault.

When treating a lactating patient, all discussions about the advisability and possible risks associated with continuing breastfeeding should be documented, especially when diagnosing infectious conditions, prescribing medications, and ordering radionuclide imaging.

The history should include attention to current medications, as well as past hormonal therapy, menopausal status, reproductive and breastfeeding history, family history of cancer, radiation exposure, and previous breast problems.

An inclusive differential diagnosis should be documented, specifically listing cancer if it is a possibility. In these cases, documented discussions with the patient should include mention of the physician’s concerns and need for prompt follow-up.

Written discharge instructions should include follow-up plans and phone numbers for referral physicians. Special arrangements may be necessary to ensure timely specialist care. All such efforts should be documented.


**REFERENCES**

References can be found on Expert Consult @ www.expertconsult.com.
REFERENCES