

Foreign Bodies in the Breast

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Foreign bodies in the breast are relatively rare. Most of them are an incidental finding during a routine mammogram. They can be divided into two major groups: *iatrogenic* and *noniatrogenic*. The iatrogenic group includes all those cases of retained wires in the breast associated with preoperative localization of masses. (The whole wire might migrate into the breast or a transection of the wire tip might occur.) Retained draining catheters as well as surgical sponges are also included in this group.

The noniatrogenic group includes cases in which in one way or another a foreign body penetrated through the breast's skin. In most cases the woman does not recall the event and the foreign body in the breast is an incidental finding during routine screening mammography. Included in this group are sewing needles, glass fragments, and pencil points.

A third group associated with foreign bodies in the breast is related to self-inflicted injuries due to psychiatric disorders. Three patients with foreign bodies in the breast are presented in this article. All patients were asymptomatic and the foreign body was an incidental finding. In two patients the foreign bodies were transected drains related to previous surgical procedures. The third patient had a broken sewing needle.

Introduction

A foreign body in the breast is usually an incidental finding in a routine screening mammography. The occurrence is relatively rare. In most of the patients the foreign bodies are associated with previous interventional procedures, but occasionally they are the result of an incidental (and unnoticeable) penetration of the foreign body through the breast skin. Presented herein are three patients in whom a foreign body was found in a breast during routine mammography.

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Figure 1. Right breast mammogram. A broken sewing needle is identified within the parenchyma.

Case 1

Figure 1 is a mammogram of the left breast of a 68-year-old woman. A broken needle can be identified within the breast parenchyma. The woman had no idea how and when this sewing needle got into the breast; however, she claimed that in her far past history she had been a seamstress.

Case 2

Figure 2 is the mammogram of the left breast of a 70-year-old woman. She had had an abscess about 15 years ago in that breast. At that time a surgical plastic catheter was inserted into the breast to drain the lesion. The patient recovered well and did not feel any pain or discomfort during the 15 years between the surgical intervention and the discovery of this retained plastic drain.

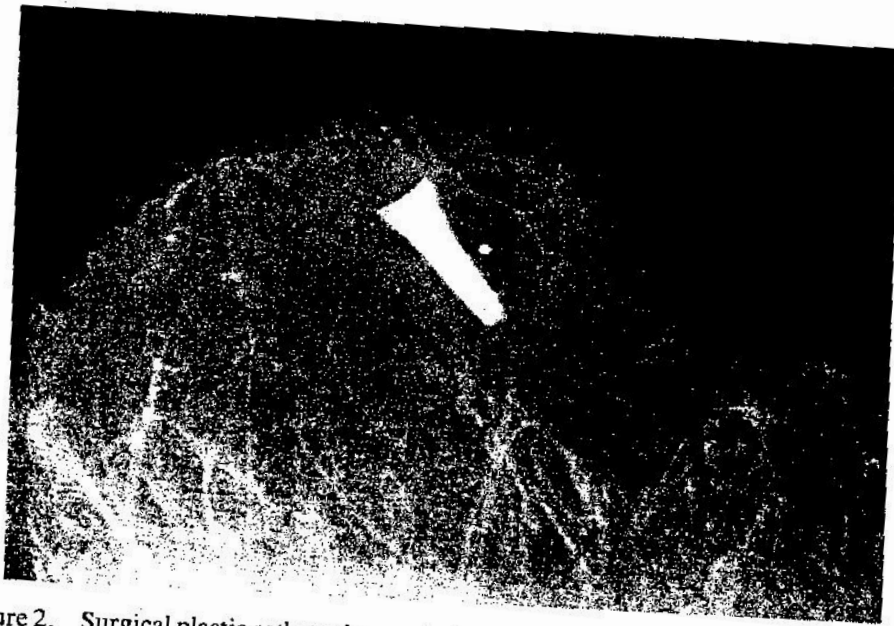


Figure 2. Surgical plastic catheter is seen in this right breast mammogram. Patient underwent a surgical drainage of a breast abscess 15 years prior to this mammogram and was asymptomatic since then.

Case 3

This 28-year-old woman was biopsied due to a mass in her right breast. The biopsy revealed adenocarcinoma. The patient had a lumpectomy and axillary lymph nodes dissection. Figure 3 is a mammogram of her right breast performed a month after surgery. A broken catheter tip is identified within the breast.

Discussion

Foreign bodies in the breast can be divided into two major groups: iatrogenic and noniatrogenic. A third group consists of self-inflicted injuries to the breast.

The iatrogenic group includes all those patients in whom the foreign body is a direct result of a previous surgical intervention. Silicone implants were excluded from that group. Included in this group are migrating wires associated with needle localization procedures.

Owen and Kumar [1] described three patients in whom the whole wire, inserted to guide the surgeon toward a nonpalpable mammographically detected lesion, migrated into the subcutaneous tissues of the breast. The authors recommend that a wire inserted into the breast for localization purposes should be long enough and should be externally secured to prevent these undesirable events. A fracture of the localizing wire tip is another cause for an iatrogenic foreign body in the breast. O'Doherty [2] described a 62-year-old woman who was referred for needle localization prior to intended surgical resection of a suspected tumor. After the wire was inserted a routine mammo-



Figure 3. Retained broken catheter tip in the breast identified incidentally on a routine mammogram 1 month postlumpectomy due to adenocarcinoma.

gram clearly showed the separation of the wire tip from the rest of the wire. In that case, a second wire was inserted and while performing the surgical resection, the surgeon retrieved the broken tip in the biopsy specimen.

Homer [3] described a similar case; however, in his report, the wire was transected intraoperatively, during the breast biopsy. Postsurgical retained foreign bodies include transected draining catheters, as in two of our three cases. A search through the English literature did not reveal any previous description regarding that occurrence.

Fornage [4] reported a case of a retained surgical sponge in the breast. The patient, a 50-year-old woman, was operated on for adenocarcinoma of her left breast. One year postsurgery a mass was palpated at the surgery site. Mammography as well as sonography revealed the existence of a surgical sponge at the site of the previous surgery.

In this category of iatrogenic foreign bodies one should include a report by Zwaan and Borgis [5] describing a case of a respiratory pacemaker sensor displaced into the breast.

The noniatrogenic group of foreign bodies in the breast includes those patients in whom, in one way or another, a foreign body found its way to penetrate through the breast's skin. In most cases the woman does not recall the event and the foreign body in the breast is actually an incidental finding during routine screening mammography. According to Kopans [6], the reason for this is the fact that the breast parenchyma is relatively insensitive to a puncture-type injury.

Kupic [7] has published a case in which a fragment of glass was found during a routine screening mammogram of a 61-year-old woman. The woman could not remember any event in her past that might be associated with the penetration of this glass fragment into her breast. However, a detailed and thorough questioning revealed a car accident in which the patient was involved at age 2. In that accident she was thrown through the windshield of a car during the collision. The authors postulate that during that event a piece of glass entered the skin in the breast region and was embedded there until its removal 59 years later.

Apart from glass, other foreign bodies such as pencil points and sewing needles were described [6].

A third group, associated with the finding of foreign bodies in the breast, consists

of patients with psychiatric disorders. Schwartz et al. [8] described a female patient who used to insert sharp objects into her nipple. She was admitted to the hospital as the result of a deep insertion of a hair pin into the breast that she could not retrieve. The authors mention a previous report by Sampson [9] regarding the insertion of stones, gravel, and sand through a sinus tract that was formed after breast biopsy.

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