A case of subareolar abscess in the male breast: Usefulness of magnetic resonance imaging scan for diagnosis

Takaaki Fujii, Keiko Yanai, Shoko Tokuda, Yuko Nakazawa, Sasagu Kurozumi, Sayaka Obayashi, Reina Yajima, Tomoko Hirakata, Hiroyuki Kuwano

ABSTRACT

Introduction: Subareolar abscess in the male breast is extremely rare. The main concern with this condition is performing the differential diagnosis, since clinically it often resembles breast cancer.

Case Report: A 30-year-old Japanese male presented with pain and swelling of the left breast. Physical examination revealed a 3.0x3.0 cm palpable lump with redness of the skin in the left subareolar region. Magnetic resonance imaging (MRI) scan showed a ring-enhancing mass without wash out with central necrosis below the left nipple, suggesting subareolar abscess. A core needle biopsy was performed, and histological findings revealed granulation tissue with the infiltration of numerous neutrophils, a finding that was compatible with subareolar abscess.

Conclusion: Male subareolar abscess is quite a rare disease, however, awareness of how to perform differential diagnosis of subareolar abscess and the use of MRI scan may help in making a definitive diagnosis of subareolar abscess in the male breast and might aid in the proper management of the condition.

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CASE REPORT

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Keywords: Breast cancer, Male breast, Pain and swelling of present, Subareolar abscess

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INTRODUCTION

Benign nonneoplastic entities may occur in the male breast, including intramammary lymph node, sebaceous cyst, diabetic mastopathy hematoma, fat necrosis, and subareolar abscess [1, 2]. However, subareolar abscess is known to occur more often in women than men [3], and in males it is extremely rare [1–5]. We herein report a rare case of subareolar abscess in male breast. The main concern with subareolar abscess in male breast is performing the differential diagnosis, since clinically it often resembles breast cancer. In our case, magnetic resonance imaging (MRI) scan was useful for the differential diagnosis between subareolar abscess and malignancy.

CASE REPORT

A 30-year-old Japanese male presented with pain and swelling of the left breast of seven days duration. There was no past history of similar complaints or any other

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relevant medical history. Physical examination revealed a 3.0x3.0 cm palpable lump with redness of the skin in the left subareolar region (Figure 1). There was no abnormal nipple discharge. Sonography revealed a complex, hypoechoic subareolar mass with a heterogeneous hypoechoic internal echo containing complex fluid and internal vascularity (Figure 2). Magnetic resonance imaging showed a ring-enhancing mass without wash out with central necrosis below the left nipple (Figure 3), suggesting subareolar abscess. A core needle biopsy was performed, and histological findings revealed granulation tissue with the infiltration of numerous neutrophils, a finding that was compatible subareolar abscess (Figure 4). Ultrasound-guided drainage and antibiotic therapy (cefcapene pivoxil) were prescribed. Culture showed the growth of *Propionibacterium acnes*. The patients required incisional drainage through subareolar incision. No recurrence has been seen for sixteen months.

DISCUSSION

We report herein an extremely rare case of subareolar abscess in the male breast. Male subareolar abscess

Figure 3: Magnetic resonance imaging revealed a ring-enhancing mass without wash out below the left nipple as characteristic finding in cases of subareolar abscess.

Figure 4: (A, B) Histological evaluation revealed granulation tissue with the infiltration of numerous neutrophils, a finding that was compatible subareolar abscess.

Figure 1: A 30-year-old Japanese male presented with pain and swelling of the left breast. Physical examination revealed a 3.0x3.0 cm palpable lump with redness of the skin in the left subareolar region.

Figure 2: Sonography revealed a complex, hypoechoic subareolar mass with a heterogeneous hypoechoic internal echo containing complex fluid (A) and internal vascularity (B).

is a localized infection secondary to ductal ectasia, chronic obstruction, and inflammation [1, 6]. Smoking is recognized as an aggravation factor, and almost 70% of patients smoked more than 10 cigarettes a day [6,

7]. In this case, the patient was a smoker. Common clinical features include pain, nipple swelling, and nipple discharge [1]. On sonography, the abscess usually appears as an incompletely circumscribed mass containing complex fluid (Figure 1). Doppler imaging often shows accentuation of peripheral vascularity with sparse-to-absent internal flow. However, occasionally abscesses may have accentuated internal flow, making the diagnosis of infection less certain and therefore requiring tissue sampling. In our case, core needle biopsy was performed [1]. However, MRI scan may be useful for reaching a differential diagnosis of subareolar abscess. MRI scan revealed a ring-enhancing mass without wash out below the left nipple, which is a characteristic finding in cases of abscess. This case indicates the importance of MRI in differentiating between subareolar abscess and malignancy in the male breast. Familiarity with the features of the male subareolar abscess including MRI findings allows for accurate imaging and make it possible to avoid unnecessary and often invasive treatment.

CONCLUSION

In conclusion, we report here a rare case of subareolar abscess in the male breast. Male subareolar abscess is quite rare; however, awareness of how to perform the differential diagnosis of subareolar abscess and the use of magnetic resonance imaging scan may help in making a definitive diagnosis of subareolar abscess in the male breast and might aid in the proper management of the condition.

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Author Contributions

Takaaki Fujii – Substantial contributions to conception and design, Acquisition of data, Drafting the article, Final approval of the version to be published

Keiko Yanai – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Shoko Tokuda – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Yuko Nakazawa – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

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Tomoko Hirakata – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

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Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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