BI-RADS, QUALITY IMPROVEMENT, AND GRANULOMATOUS MASTITIS: SEARCHING FOR A CROSSROADS
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INTRODUCTION

• **Granulomatous mastitis (GM) is:**
  • A rare and benign inflammatory disease
  • An idiopathic condition that has been described since 1972
  • Not well understood pathophysiologically

• The majority of the literature is comprised of case reports and small series

• There is no agreed upon diagnostic or treatment algorithm
PURPOSE

• **BI-RADS Atlas 2013 has become the reference radiologists rely on for...**
  • Breast disease descriptors
  • Report structure
  • Diagnoses

• **Our study sought to delineate BI-RADS guidance on granulomatous mastitis**
MATERIALS & METHODS

- **Detailed analysis of BI-RADS 2013 to find all uses of the terms “granulomatous” and “granuloma”**

- **Both bound and electronic versions searched by 3 separate examiners**
  - Revisions to BI-RADS included in search

- **Concurrent retrospective chart review of 49 patients with biopsy proven GM 2006-2017 to correlate demographics, care delivery, and outcomes**
RESULTS

• **In 811 pages of BI-RADS, 3 authors found…**
  
  • 1 DESCRIPTION OF “CHRONIC GRANULOMATOUS ABSCESS”
  
  • 1 DESCRIPTION OF “GRANULOMATOUS MASTITIS”
    
    • **Both descriptions were isolated to captions of figures in the Ultrasound section**

• **The text itself is devoid of descriptions of GM**
The only 2 mentions of “granulomatous” in all of BI-RADS 2013

Figure 20 — IMAGE QUALITY: WIDE FOV, VOLUMETRIC ACQUISITION. Images of the right breast at 12:00 in a 29-year-old woman with chronic, sterile abscesses. Wide FOV B-mode transverse acquisition is illustrated above with coronal (lower left) and sagittal (lower right) images. The yellow square indicates location of the image and the crosshairs are placed over a purulent collection shown in the orthogonal planes. Histopathology: granulomatous mastitis.

Figure 71 — ECHO PATTERN: COMPLEX CYSTIC AND SOLID. Irregular shape parallel to the rib, cystic and solid components, in a 19-year-old woman. Core biopsy histopathology: chronic granulomatous abscess.
RESULTS

• GM is not listed in the Data Dictionary, MRI section, Mammography section, or in the revisions
• GM is not included as a descriptor in Ultrasound Section II – Breast Imaging Lexicon
CONCLUSIONS

• The 5th edition of BI-RADS lacks sufficient information on granulomatous mastitis

• Patients with GM are sometimes assigned BI-RADS 4 or 5, resulting in inappropriate care algorithms

• We propose preventing errors and improving quality of GM management by
  • 1. Including GM as a diagnosis in the Data Dictionary in a revision in BI-RADS
  • 2. Describing GM as a diagnosis in the text of the next edition of BI-RADS
  • 3. Providing imaging examples in the Mammography, US, and MRI sections
REFERENCES