

# Does diabetic mastopathy exist in north-eastern Nigeria?

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## Introduction

Diabetic mastopathy is a unique form of breast lump, which occurs in patients with long-standing insulin diabetes mellitus.<sup>1</sup> Clinically it is not distinguishable from breast malignancy, and for diagnosis the patient must fulfil certain stringent requirements:<sup>2</sup>

- long history of diabetes;
- one or more breast masses;
- mass hard, irregular, movable, and painless;
- strong ultrasound acoustic shadowing;
- radiographically dense;
- resistance to movement with biopsy needle.

The incidence of breast cancer is increasing worldwide, so any disease that resembles breast cancer must be treated with caution. With the knowledge that a patient with long-standing diabetes may develop a breast lump, unnecessary open biopsies and psychological trauma to patients will be markedly reduced if diabetic mastopathy can be diagnosed.

A review of the literature has shown that diabetic mastopathy has been documented in Caucasians but there are no reports from Nigeria (to the knowledge of the authors), which has thus led to the present study.

## Patients and methods

A prospective study of clinical examination and sonographic imaging was carried out amongst insulin-treated type 2 diabetic patients at the Federal Medical Centre Azare, in the north-eastern region of Nigeria. The study period was 3 years, between February 2004 and February 2007. All patients were seen by a consultant physician for thorough clinical examination of the breasts. Patients were then scanned by a radiologist (HU) using a 7.5 MHz linear transducer of Sonoace 3200 version 1.3. A total of 144 patients were seen.

## Results

The mean age of the 144 patients was 43 years (range

19–70 years), mean diabetes duration 9 years, and mean fasting blood glucose (FBG) 8.0 mmol/L (range 4.5–14.4 mmol/L).

Two patients with confirmed discrete, non-tender, and mobile masses in the breasts on physical examination were 60 and 70 years old respectively. Their fasting blood sugar levels were 11.4 and 10.6 mmol/L respectively. Ultrasonography showed benign characteristics (BRADS 2 category) with no need for biopsy. Follow-up ultrasonography 6 months later did not show any change.

## Discussion

Diabetic mastopathy was first described in 1984 by Soler and Khardori<sup>3</sup> as a benign breast mass of unknown condition affecting women with a long-standing type 2 diabetes. Recently, males have been reported to have the condition.<sup>4</sup> There is usually an association with other complications of diabetes, such as retinopathy or nephropathy. Diabetic mastopathy is a stromal proliferation of breast tissue in patients with diabetes, thought to be related to an increased resistance of collagen to normal degradation.<sup>5</sup>

The reported duration of diabetes in mastopathy cases ranged from 6 to 37 years at the time of diagnosis.<sup>1</sup> In two males it was at 21 and 23 years of age, respectively.<sup>4</sup> In our study, only 6 patients had diabetes for more than 20 years, which might be responsible for the negative finding of mastopathy in our area. Studies have shown that duration of diabetes plays a vital role in the causation of mastopathy.<sup>3</sup>

In conclusion, diabetic mastopathy was not documented in this series of patients with type 2 diabetes from north-eastern Nigeria. Surveillance of a longer duration is suggested to confirm or refute the present findings. Despite the negative finding, it is important for the carers of patients with diabetes to be aware of the existence of diabetic mastopathy.

## References

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