

**Breast-axillary complex in HIV/AIDS patients**

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**Abstract**

**Background:** HIV/AIDS have not only increased the health care burden especially in developing countries, it equally complicates the presentation of many diseases. Some well known disease entities now occur in fulminant complexities not previously described or known as such. The objective of this article is to report an unusual presentation of HIV/AIDS patients to the surgeon with Axillary and ipsilateral breast swelling.

**Method:** This is a report of three cases seen and managed by the authors.

**Results:** Three adult female patients presented with progressively increasing axillary and ipsilateral breast swellings. They also had associated fevers and weight loss. Their main concern had been development of breast cancer. One of the patients was a known retroviral positive on Highly Active Anti-Retroviral Therapy (HAART). Examination revealed axillary abscess and ipsilateral breast oedema in two cases. The patient on HAART had a hard breast-axillary mass complex. Biopsy (FNAB) revealed inflammatory cells and no malignancy in all three cases. HIV screening was positive in all cases. One of the patients had excision of breast-axillary mass complex, and the histology showed features of chronic inflammation, with no malignant cells. The other two had incision and drainage of their axillary abscess.

**Conclusion:** This shows the ubiquitous presentation of HIV/AIDS in our environment and surgeons should be aware of the breast axillary complex in HIV/AIDS. Medical practitioners should be careful to obtain accurate diagnosis before embarking on treatment especially mutilating surgical procedures.

**Key Words:** Breast- Axillary complex, HIV/AIDS, Breast cancer, Biopsy, HIV screening.

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**Introduction**

HIV/AIDS have not only increased the health care burden especially in developing countries<sup>1-2</sup>, it equally complicates the presentation of many diseases. As an immune paralyzing phenomenon, HIV infection has led to

the resurgence of old diseases hitherto at the verge of total elimination (e.g. Tuberculosis), and the emergence of new ones often presenting as part of the HIV/AIDS syndrome<sup>3</sup>. Some well known disease entities now occur in fulminant complexities not previously described or known as such. They constitute diagnostic puzzle, requiring meticulous clinical assessment for accurate diagnosis and appropriate treatment. Fulminant suppurating axillary lymphadenitis with associated ipsilateral breast oedema in HIV/AIDS patients as seen in our centre is a case in point.

**Methods**

Three cases observed in our practice are presented.

**Case 1:**

AMI is a 40 year old widow who presented with 2 months history of painful left axillary mass which rapidly increased in size, and one month history of generalized left breast swelling that was also painful. There was neither associated nipple discharge nor ulceration. She was anorexic with progressive weight loss and malaise. She had also suffered recurrent diarrhea over the previous 2 months. She had first presented at a Saudi hospital with her problems and had been told she had breast cancer requiring surgery. She then sought a second opinion in our hospital. She had gynaecological surgery in Saudi Arabia 6 years previously for ovarian cancer. She denied history of blood transfusion.

On examination, she was anxious and acutely ill looking, febrile, dyspnoeic, dehydrated and with oral thrush. Her pulse was rapid but regular. The right breast was normal. However, the left breast was grossly enlarged, with scaly dermatosis, warm, tender and with pitting oedema. There was no definite palpable mass in the breast. There was a large left axillary mass about 12 x 10cm in the pectoral region, the overlying skin was hyperaemic, warm and tender with brawny indurations (figure1). The chest was clear. Heart sounds were normal. An impression of septicemia with background immune depression and suppurating left axillary lymphadenitis associated with oedema of the left breast was made.

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Aspiration of the left axillary mass yielded frank pus. Biopsy (FNAB) of the breast swelling showed no malignant cells. PCV (17%) and WBC total ( $1.9 \times 10^9/L$ ) were low; the ESR (35mm/hr) was elevated. Electrolyte showed hypokalaemia (2.5 mmol/L), hyponatraemia (120mmol/L),  $Cl^-$  92mmol/L, low bicarbonate (15mmol/L), hypocalcaemia (1.1mmol/L), hypoalbuminaemia (18g/L), Urea 3.9mmol/L. Urinalysis was normal. Culture of pus aspirate yielded *Staphylococcus aureus*. Blood culture was negative for micro-organism. RVS and confirmatory tests were positive. The patient was rehydrated; electrolyte imbalance and anaemia were corrected. She had 3 units of blood transfused. Incision and drainage of the axillary abscess was done and patient received appropriate antibiotics according to sensitivity. However, the patient succumbed to septicemia on the 10th day of admission.

### Case 2:

HST was a 30 year old housewife who presented with 3 weeks history of right axillary swelling associated with pain and 3 days history of ipsilateral breast swelling. There was associated high grade fever with chills and rigors. Fever had been recurrent, associated with progressive weight loss. She had no cough and her bowel habit was normal. There was no history of blood transfusion.

Examination showed a young woman in painful distress and febrile (temperature =39°C), with some dehydration. She was anicteric and not pale. The left breast was normal. However, the right breast was grossly enlarged, warm and tender with pitting oedema. There was no definite palpable mass within the breast. There was an obvious ipsilateral axillary mass about 10x8cm, warm, tender and fluctuant. She was tachycardic. The chest was clinically clear. An impression of right Axillary abscess with ipsilateral breast oedema and septicaemia was made. Aspiration of the axillary mass yielded frank pus. FNAB of the breast swelling yielded no malignant cells. The PCV was 34%, WBC total =  $10.2 \times 10^9/L$ ; electrolytes showed  $Na^+$  128mmol/L,  $K^+$  3.0mmol/L,  $Cl^-$  90mmol/L,  $HCO_3^-$  18mmol/L; urea 3.0mmol/L; urinalysis showed ketone +; ESR 130/hr. Mantoux test was negative. RVS and confirmatory tests were positive. The blood culture showed no growth. The aspirate grew *Staphylococcus aureus*. She was re-hydrated and placed on appropriate antibiotics based on sensitivity. Incision and drainage of the axillary abscess was done. The wound healed and the breast swelling resolved. The patient was then referred to the infectious disease unit for further evaluation and management of retroviral infection (RVI).

### Case 3:

HUU was a 57 year old widow. She was diagnosed RVI positive 3 years previously, and had been on HAART for 2 years. She presented with left axillary swelling for six months and ipsilateral breast swelling for two months. Initially painless, but later became painful in the axillary region. The axillary mass ruptured spontaneously and discharged pus three days prior to presentation to the surgical clinic. There was associated weight loss, anorexia and fever. There was neither cough nor drenching night sweat. There was no family history of breast disease. She was nulliparous. Her husband died thirty years previously of unknown disease. She was ten years post menopausal. There was no history of blood transfusion.

Examination showed a middle aged woman, chronically ill looking. Her vital signs were within normal. Her right breast was normal. Her left breast was grossly swollen, warm and tender, with pitting oedema. There was a definite mass in the axillary tail of the breast, extending to the axilla proper. The mass measured 10 x 8cm, hard in consistency. There was a 3 x 2cm ulcer over the mass, with necrotic slough on the floor, discharging frank pus. There was a separate ipsilateral axillary node 6x4, tender, firm and mobile. An impression of chronic left breast abscess, to rule out inflammatory breast carcinoma was made. The swab culture yielded no bacterial growth; mantoux test was negative. Her Chest X-Ray was normal. CD4 count was 600 cells/ml. FNAB showed inflammatory cells. Excision biopsy of the mass as well as ipsilateral axillary lymph node showed chronic non-specific inflammation, with no evidence of malignancy. The wound healed satisfactorily and the patient discharged in 14 days to outpatient follow-up.

### Discussion

The three patients presented with suppurating axillary lymphadenitis and ipsilateral breast oedema. Their main concern had been the development of breast cancer, and one of them was indeed misdiagnosed elsewhere as carcinoma of the breast with metastasis to the axilla. The axilla is particularly prone to infection especially in the immune-compromised, with its rich hair follicles and sweat glands, in the presence of constant frictional movement and poor aeration. This infection may be life threatening especially when complicated by fatal septicaemia as in the first case. A study by Stein and colleagues showed that bacterial infections were the leading cause of death in HIV infected patients in Rhode Island over a two and half year period<sup>4</sup>. Meticulous hygiene practice is therefore necessary and

should be advised in immune-deficient persons to stem the incidence of such virulent pyogenic infections with its attendant complications such as sepsis.

HIV positive persons may present to the surgeon with surgical problems not related to HIV infection. However, it is the management of HIV/AIDS related surgical problems that have tremendously expanded the surgeons' repertoire. These include infections, malignancies and acute abdomen requiring surgical management<sup>5,6,7</sup>.

Malignant conditions that are obviously on the upsurge in retroviral positive patients and shown to be associated with immune suppression include Kaposi sarcoma, ano-rectal carcinoma, lymphoma (including abdominal lymphoma, notably the lymphocyte depletion and mixed cellularity subtypes), lip carcinoma, testicular seminoma, lung and penile cancers<sup>8</sup>. This is due to suppression of the immune surveillance in such infected individuals. However, the association of HIV infection with breast cancer remains unclear. Oluwole et al<sup>9</sup>, in their

study of five cases, did not observe any peculiar characteristics of carcinoma of the breast in patients with HIV/AIDS. This therefore calls for more study.

Other commonly encountered surgical conditions in AIDS patients here are perineal warts and ulcers. The ulcers may be bacterial, viral or mycotic in aetiology promoted in the background of immune suppression from HIV/AIDS<sup>10</sup>.

These diseases often present in a bizarre fulminant nature, constituting a diagnostic puzzle. Such unusual presentations should be screened for retroviral disease.

## Conclusion

This shows the ubiquitous presentation of HIV/AIDS in our environment and surgeons should be aware of the Breast-Axillary complex in HIV/AIDS. Medical practitioners should be careful to obtain accurate diagnosis before embarking on treatment especially mutilating surgical procedures.

**Figure 1: Axillary abscess with ipsilateral breast oedema**



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