



## CARE OF PATIENT WITH FOOT BOWEN'S DISEASE – A CASE REPORT

### Medical Surgical Nursing

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### ABSTRACT

Bowen's disease was first described by an American dermatologist, John T. Bowen in 1912. Bowen's disease is a squamous cell carcinoma in situ that may occur on the epidermal layer of skin. It occurs quiet commonly on areas exposed to sun's rays. Most often it goes unrecognized at the initial stage because its asymptomatic. The exact incidence of Bowen's disease is unknown but it has been reported that it occurs more frequently in males than females, among Caucasian individuals of age above 60years. The disease is diagnosed by biopsy. Bowen's disease has good prognosis when treated promptly.

### KEYWORDS

Bowen's disease, Skin cancer, Foot disorders, Squamous cell carcinoma

#### INTRODUCTION

Bowen's disease is a very rare skin disorder, a pre-cancerous lesion which has less than 10% chance of developing into a cancerous lesion. It was first described by an American dermatologist, John T. Bowen, 1912 (Morton CA., 2020).

#### *Incidence And Prevalence:*

Bowen's disease commonly occurs among Caucasians of age above 60 years, more prevalent in males than in females. (Morton CA., 2020)

#### *Risk factors:*

Prolonged exposure to sun's radiation, ageing, long term treatment with immunosuppressants, human papilloma virus infection and chronic exposure to arsenic, and heredity seems to be identified risk factors for developing Bowen's disease. (Lim David., 2024).

#### *Signs And Symptoms:*

The lesion may appear reddish-brown, dry, scaly, and occasionally itchy. It can appear anywhere on the body, sometimes it oozes pus. (Morton CA., 2020).

#### *Medical Management:*

Topical chemotherapy is used, such as, 5-Fluorouracil, Imiquimod and Ingenol mebutate.

#### *Surgical Management:*

curettage, electrocautery, excision and Mohs micrographic surgery. Other options are cryotherapy and phototherapy. (Lim David, 2024).



**Figure 1:** Bowen's Disease On Right Foot



**Figure 2:** Wide Local Excision

#### CASE REPORT

A 50-year-old gentleman from West Bengal came with the complaints of hypopigmented lesion over the trunk and right foot for the past three years. It was painless and insidious in onset. He was evaluated for the above-mentioned complaints and was diagnosed with chronic cutaneous arsenic toxicity and Bowen's disease of the right foot. He was known to have diabetes mellitus and hypertension, on regular medications. He also has a significant family history of his father having similar lesions on his palms and soles. On examination, there were multiple hypopigmented and greyish brown macules on the trunk and extremities. There was scaly hyperpigmented flat small plaques in the left side of the chest. There was a plaque of size measuring 4x2cms in the lateral aspect of the right foot. Has no popliteal and inguinal lymphadenopathy or metastasis on an ultrasound scan.

He underwent wide local excision of the lesion on right foot with split thickness skin grafting under general anesthesia. He was started on antibiotics post operatively and advised complete offloading of right foot and ambulation with walker. He was discharged after 5 days.

#### NURSING CARE

Nursing management of this patient with foot bowen's disease was planned using nursing process approach by NANDA.

**Nursing Assessment:** He underwent wide local excision in the right foot.

**Nursing Diagnosis:** Impaired skin integrity related to abnormal cell growth in skin.

**Expected Outcome:** Skin integrity will be maintained as evidenced by wound granulation, absence of signs of infection.

#### **Interventions:**

- Monitored for signs of infection.
- Alternate day dressing with Paraffin gauze was done.
- Maintained good nutritional status – rich in protein and vitamin C.
- Foot care teaching was given.

**Nursing Assessment:** He is diagnosed with Type 2 Diabetes mellitus and hypertension.

**Nursing Diagnosis:** Ineffective peripheral tissue perfusion related to impaired arterial circulation.

**Expected Outcome:** Tissue perfusion will be maintained as evidenced by enhanced wound healing, palpable pedal pulse, good capillary refill in toes.

#### **Interventions:**

- Monitored peripheral pulse - dorsalis pedis and posterior tibialis.
- Monitored capillary refill.
- Assessed for skin pallor at the right extremity.
- Assessed for pain.

- Encouraged active and passive exercise.
- Blood pressure was maintained at 130/80 mm Hg; administered antihypertensive drug – Tab. Olmesartan 20 mg once daily in the morning.

**Nursing Assessment:** He is diagnosed with diabetes mellitus type 2, glucose fasting is 178mg/dl and glucose 2hrs post food is 210 mg/dl.

**Nursing Diagnosis:** Risk for unstable blood glucose level related to insulin resistance.

**Expected Outcome:** Blood glucose level will be within normal limits as evidenced by normal GRBS value.

#### Interventions:

- Monitored for signs and symptoms of hypo/hyperglycemia.
- Fasting blood sugar was maintained less than 126mg/dl and post food to 180mg/dl.
- Advised to maintain HbA1c less than 7%
- Administered oral hypoglycemic agents – Tab. Metformin 1000 mg BD, Tab. Glimepiride 3mg once daily with breakfast,
- Tab. Glimepiride 1mg once daily with dinner, Tab. Pioglitazone 15mg once daily in the morning.
- He was on 1500 kcal diabetic diet.

**Nursing Assessment:** He has unstable blood sugars and he has undergone wide local excision surgery.

**Nursing Diagnosis:** Risk for infection related to poor glycemic control and surgery.

**Expected Outcome:** He will be free from signs of infection as evidenced by normal vital signs, WBC count within normal limits.

#### Interventions:

- Monitored vital signs.
- WBC count – 7500/cumm
- Administered Tab. Augmentin 1 gm twice daily for 5 days.
- Wound was cleaned with normal saline and dressing was done every alternate day using aseptic technique.
- Provided aseptic environment.
- Good nutritional status was maintained.

**Nursing Assessment:** Patient was planned for discharge.

**Nursing Diagnosis:** Deficient knowledge regarding home care management related to lack of information.

**Expected Outcome:** His learning needs will be met as evidenced verbalization of understanding what is being taught.

#### Interventions:

- Taught aseptic techniques while doing dressing.
- Taught signs and symptoms of infection.
- Reinforced diabetic foot care and diabetic diet.
- Advised to avoid sun exposure and arsenic exposure to prevent occurrence of skin cancer
- Advised on regular follow up visit and regular intake of medications.

#### Evaluation:

The patient was free of complications and infection at the time of discharge.

#### CONCLUSION

Early identification and prompt treatment of Bowen's disease can prevent malignant transformation. Due to its asymptomatic nature, treatment gets delayed, however if the person is not immunocompromised the prognosis is good. (P Vijayasankar, K Kaliaperumal., 2023).

#### Ethical Consideration

The patient provided written informed consent for capturing the wound image and for case discussion.

#### Conflict Of Interest:

All authors declare no conflict of interest.

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