# Introduction

Basal cell carcinoma (rodent ulcer or basal cell epithelioma) is a malignancy derived from the keratinocytes and stroma of the pilosebaceousfollicle **(Shrivastava et al,2007).**

Basal cell carcinoma is the most common malignancy in white people. It accounts for approximately 75% of all non melanoma skin cancers and almost one fourth of all body cancers (**lear et al**,**1997).**

People who have this condition are at high risk of developing further basal cell carcinoma and other malignancies **( Miller ,1995).**

Exposure to the sun is the main causative factor in the pathogenesis of basal cell carcinoma**(Zanetti et al,1996).**

Men are slightly affected more than women ,basal cell carcinoma become more common in younger individuals although they are rare befor the age of 50 years **(Leffell and Brash ,1996).**

A positive family history of skin cancer seems to be a predictor of development of basal cell carcinoma, ionising radiation, high dietary energy (especially fat), low intake of vitamins, and various chemicals and dust as Arsenic . Exposure to arsenic predisposes to multiple basal cell carcinomas Patients on immunosuppressive treatment also have an increased risk of basal cell carcinoma. A study in the Netherlands showed that the incidence of basal cell carcinoma in transplant recipients was 10 times higher than in the general population. Several genetic conditions are associated with the risk of developing basal cell carcinoma. These include

albinism, xeroderma pigmentosa, Bazex's syndrome, and the naevoid basal cell carcinoma syndrome (Gorlin's syndrome)**( Wong et al,2003).**

The pathogenesis of basal cell carcinoma most commonly involve exposure to ultra violet light which triggers mutations in tumor supressor gene**(Ingham ,1998).**

Other factors that appear to be involved in the pathogenesis including mutations in regulatory genes and exposure to ionizing radiation(**Bedlow,1999).**

There are six clinico-pathological subtypes of basal cell carcinoma, namely nodular, pigmented, cystic, morphoeic (sclerosing), superficial and linear basal cell carcinoma**( Shrivastava et al ,2007)**.

Pigmented basal cell carcinomas are less common and are easily confused with melanoma. In melanoma or pigmented basal cell carcinomas, treatment is based on tissue diagnosis(**Daniel et al , 2004**).

Various surgical and non-surgical therapies are available for the treatment of BCC. Medical history of the patient, age, tumour localization and size, physical condition, histological outcomes and cosmetic aspects will eventually determine the choice of therapy **(Tilli et al , 2005).**

**Surgical treatment of basal cell carcinoma:**

**Surgical excision:**

This method requires that normal tissue surrounding the tumor margins be removed in addition to diseased tissue to ensure that the tumor has been fully excised**( Thissen et al , 1999).**

Primary closure is used in small lesions while other reconstructive methods are used for larger tumors which leave large defects and these methods include either skin graft( full thickness or split thickness graft) or flaps. Flaps include local flaps or distant flaps,local flaps are divided into two groups;those that rotate around a fixed point(e.g. rotational flap ,transposition flap or interpolated flap)and advancement flaps(e.g. single pedicle advancement flap, bipedicle advancement flap, and V-Y advancement flap).Distant flaps are required after resection of more extensive lesions leaving a wide raw area for coverage after excision(e.g. deltopectoral flap, trapezius flap, latissimus dorsi flap, and pectoralis major flap) **(Jackson , 1997).**

**Other choices for treatment include:**

**Curettage and electrodesiccation:**

In which after the tumor is scraped with a curette,the area is then treated with electro-surgery (electrodesiccation or coagulation) to control bleeding and eradicate cancer cells remaining around the wound margins and circumference **( Roger et al,2006).**

**Mohs micrographic surgery:**

Mohs micrographic surgery is commonly used for patients who present with large (>2 cm)tumors( **Haller et al,2000)**.

**Cryosurgery:**

Using a liquid nitrogen spray or probe to induce cell necrosis by exposing tissue to low temperatures**( Thissen et al, 1999)**.

**Non surgical Treatments in Basal Cell Carcinoma:**

**Radiation therapy:**

Radiation therapy has been a useful alternative to surgical treatments**( Roger et al ,2006).**

**Photodynamic therapy:**

Topical application of δ-aminolevulinic acid (ALA) **( Soler et al,2001).**

**Pharmacologic Treatments in Basal Cell Carcinoma:**

**Topical 5-Fluorouracil:**

5-Fluorouracil (5-FU)is a chemical ablative agent that inhibits DNA synthesis,prevents cell proliferation, and causes tumor necrosis **(Shumack et al,2002).**