

Original Article: Nursing for Skin and Burns



Hasan Ali Mansour

Associate Professor of Oral & Maxillofacial Pathology, Department of Oral and Maxillofacial Pathology, School of Dentistry, Luanda University of Medical Sciences, Luanda, Angola



Citation H. Ali Mansour., *Nursing for Skin and Burns*, *EJCMPR*. 2024; 3(4): 1142-1149.

<https://doi.org/EJCMPR/2244586>

Article info:

Received: 30 July 2024

Accepted: 27 September 2024

Available Online:

ID: EJCMPR-2409-1215

Checked for Plagiarism: Yes

Peer Reviewers Approved by:

Dr. Frank Rebout

Editor who Approved Publication:

Dr. Frank Rebout

Keywords:

Skin Cancer, Environmental Changes, BCC, SCC, Carcinoma

ABSTRACT

Skin cancer is the most common cancer in the United States. Due to the visibility of the skin, its cancer is easily identified and is the most successful treatment among cancers. The main cause of skin cancer is exposure to the sun and its occurrence depends on the total exposure and exposure to the sun. Sun damage is cumulative and can have severe side effects by the age of 20. The increase in skin cancer may be due to changes in people's lifestyles and a tendency to sunbathe and work out in the sun, given that environmental changes such as ozone depletion have also occurred. Different types of skin cancers have been identified depending on the type of cells involved. The three most common types are basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and malignant melanoma. More than 90% of skin cancers fall into the first two categories, and after initial treatment, 95% of them are completely cured.

Introduction

The cause of skin cancer is well known. Frequent, intermittent or continuous exposure to the sun's ultraviolet rays, especially if it leads to sunburn and blisters [1-3], plays a key role in the onset of skin cancer, especially malignant melanoma.

Most non-melanoma skin cancers occur in open areas of the body that are not covered by clothing (face, neck, forearms, and back of the hands) and in people who are exposed to a significant amount of sun exposure [4-6]. Everyone is at risk for skin cancer (regardless of skin tone and hair color), although some people are at higher risk than others. In

general, people with red hair or light golden and brown hair with light freckles of Scandinavian or Celtic descent are more prone to skin cancer [7-9].

Blacks and Asians are less likely to get it. All clients should be taught how to look for new moles or new lesions and evaluate them for signs of cancer [10].

Danger signs in moles are

- ✓ Any change in color, especially red, white or blue, sudden blurring, brown or black streaks.
- ✓ Changes in the area of the mole, especially the irregularities around the mole.

*Corresponding Author: **Hasan Ali Mansour** (hasan.perof@yahoo.com)

- ✓ Changes in the consistency of the mole, especially the term and fragility of the mole [11].
- ✓ Changes in the surface characteristics of the mole, especially scaling, scratching, discharge, scabs, bleeding, sores and spread.
- ✓ Fast lesion level.
- ✓ Changes in symptoms, especially itching.
- ✓ Change in the shape, especially the irregular protrusion of the mole compared to the previous smooth surface [12-14].
- ✓ Changes in the skin around the lesion, especially the leakage of lesion color into the surrounding tissue or lesions.
- ✓ Color satellite.

Basal cell carcinoma (BCC)

Basal cell carcinoma, the most common type of skin cancer, is a malignant epithelial tumor of the skin that originates from the basal cells of the skin in the epidermis. The tumor is usually painless and grows slowly and usually appears in areas exposed to the sun (face, ears, head, neck and hands). Occasionally, basal cell carcinoma develops in the trunk, especially in the upper back and chest. The majority of cases are due to excessive and chronic exposure to ultraviolet light, and in the least cases due to exposure to arsenic, burns, scars, and exposure to radiation and genetic factors.

The incidence of this cancer is directly related to the patient's age (average 60 years) and the amount of exposure to sunlight and inversely related to the amount of melanin pigments in the skin. Histological and clinical signs are used to diagnose the tumor. The most common clinical manifestation of basal cell carcinoma is a nodular lesion. The lesion is a dome-shaped papule with a prominent pearly margin. Basal cell carcinoma has a shiny, pearly appearance because it is not keratinized.

Telangiectasia vessels cover the lesion. As the lesion enlarges, the center of the lesion becomes flatter and more injured, but its margin becomes more prominent and creates the appearance of a reversible edge. Although basal cell carcinomas almost never metastasize, they can cause local destruction and tissue invasion [15].

This is especially true if the lesion has the power to invade the underlying tissues and cause loss of eyes or ears and nose. If left untreated, the tumor can invade bone and brain. If the tumor is diagnosed and treated quickly, it is usually treated with local resection and even destruction of the lesion without it. Clients with basal cell carcinoma are also at risk for developing basal cell carcinoma in other parts of the body. Recurrence of treated basal cell carcinoma is possible but uncommon. Recurrence should usually be noted within 2 years after the lesion is removed or treated [16].

Squamous cell carcinoma (SCC)

Squamous cell carcinoma is the second most common skin cancer in whites. This tumor affects the keratin cells of the epidermis and rarely occurs in blacks. It is most often seen in exposed areas of the skin that are exposed to sunlight, especially the edges of the ears, face, lips, mouth, and back of the hands. Squamous cell carcinoma is more difficult to diagnose than basal cell carcinoma.

This tumor has no definite margin. The edge of the tumor often sinks into the damaged skin around the tumor. Squamous cell carcinoma may present as a sore, flat red area, calluses or hard plaque, or hyperkeratotic papules and nodules. It often appears as red papules or skin color with varying amounts of scabs. These lesions grow much faster than basal cell carcinoma [17].

These tumors are implicitly dangerous because they can invade nearby structures and metastasize to the lymph nodes, leading to death.

Treatment: The primary goal is complete removal of the tumor. The best way to maintain beauty is to have a surgical incision along the natural lines of skin stretch and the path of the anatomical lines of the body, which makes the effect of the wounds less obvious. The size of the incision depends on the size and location of the tumor, but is usually 3 to 1 in length to width. If the tumor is large, reconstructive surgery may be performed using a skin graft or skin flap. Better beauty is created by surgical incision and bringing the layers closer together. A pressure bandage is applied to protect the wound. If aseptic procedures are used correctly during surgery, infection after a simple incision is usually not common [18].

Mohs micrographic surgery: This surgery is the most accurate method and is performed in the best way to maintain healthy tissues. In this procedure, the tumor is removed layer by layer. The first layer to be removed contains all the visible parts of the tumor and a small margin of the seemingly natural tissues around it. The sample should be frozen and examined to determine if all of the tumor has been removed. If it is not removed, cut more layers until all the margins of the tissue are free from the tumor. By doing this, only the tumor and parts of the healthy margin of tissue that need to be removed to be removed are removed. Therefore, this method is recommended to maintain as much healthy tissue as possible. This surgical procedure is the most effective way to remove tumors around the eyes, nose, upper lip, ears and around it [19].

Electrical surgery: This method means the destruction or removal of tissue using electrical

energy so that the current is converted into heat and transmitted to the tissue by a cold electrode. The tissue of the affected area may be shaved before this procedure. To do this, the surface of the skin tumor is shaved with a curette and then, using electricity, they stop the bleeding and burn the malignant cells left in the wound floor or its edges. This method is useful for small lesions. This method takes advantage of the fact that the tumor is always softer than the surrounding tissues and therefore the size can be felt and determined with Kurt. After shaving, the wound is burned, and the procedure is repeated twice, usually within a month [20].

Freezing surgery: In this method, the tumor is destroyed by severe freezing of the tissue. By inserting a thermocouple needle into the skin and sending liquid nitrogen directly to the center of the tumor to bring the temperature at the base of the tumor to 40 to 60 degrees Celsius. The advantage of liquid nitrogen is that it has the lowest boiling point compared to other freezers, is cheap and easy to prepare. In this procedure, the tumor tissue is first frozen and allowed to thaw, and then re-frozen. With this operation, it melts and becomes gelatinous and then heals on its own. Swelling and edema develop following freezing. The resulting lesion has a different appearance. Natural recovery may take 4 to 6 weeks and is faster in areas with good blood flow [21].

Radiation therapy: Radiation therapy is often used for cancers of the eyelid, tip of the nose and areas close to vital structures such as the facial nerve. This method is used for the elderly, because the changes caused by X-rays after 5 to 10 years and the resulting malignant changes in the wounds may appear after 15 to 30 years. The patient should be aware of the possibility of blistering and redness of the skin. A skin emollient ointment can be used to relieve

discomfort with a doctor's prescription. The patient should be warned not to be in the sun [22].

Nursing care

Self-care training for patients: If the lesion is around the mouth, the patient is told to drink fluids with a straw and restrict facial movement and speech. Teeth should not be used until the area is completely healed. After removing the stitches, an emollient cream may be used to reduce dryness. If the patient spends their time outdoors, the use of sunscreen on the wound is recommended to prevent the pigments from growing in the operated position. Follow-up examinations should be performed at regular intervals (usually every 3 months to 1 year) and the lymph nodes adjacent to the operation site should be touched at each examination. The patient should also be told to treat any gap that is exposed to constant irritation and contact and to be aware of possible signs of malignancy [23].

Education on how to prevent: Regular and daily use of sunscreen with an SPF of at least 15 can reduce the recurrence of skin cancers by 40%. This material should be rubbed on the head, neck and hands half an hour before leaving the house and repeated every 2-3 hours. Educate the patient that up to 50% of ultraviolet rays can penetrate loose-fitting clothing. These rays can also pass-through clouds. Avoid exposure to sunlight, especially between 10 am and 3 pm, use effective sunscreen, and if you sweat profusely, use a water-resistant type. Even use lipsticks in the sun. Wear protective clothing such as wide-brimmed hats and long-sleeved clothing. Patients should also be instructed to avoid tanning lamps for indoor tanning and commercial tanning canopies [24].

Malignant melanoma

Melanoma is a malignant neoplasm in which abnormal pigment cells appear in the epidermis and dermis. Melanoma is the deadliest skin cancer. Melanoma is multifactorial and appears to be associated with a number of risk factors, including whiteness, excessive sun exposure, especially in childhood, the number of deformed and acquired moles, a family history of melanoma, and the presence of altered moles on the skin.

Clinical manifestations

The main clinical manifestations of melanoma are changes in any skin lesion over months. If the lesion grows rapidly and doubles in size within 10 days, it is usually an inflammatory lesion. If the changes in the skin lesion are slow so that neither the client nor his family will notice the change, the lesion is usually benign. Changes related to melanoma under the name of changes A, B, C, D, E. The spots are classified as:

- A) Asymmetry.
- B) Bordernotching.
- C) Color variation with black, brown, red and white stripes (Color Variegation) [25].
- D) Diameter.
- E) Enlargement.

Other changes include doubling the size of the lesion in 3 to 6 months, bleeding, itching, soreness and discoloration, and the appearance of a palpable lymph node.

Features of melanoma

- ✓ Melanomas usually have the following characteristics:
- ✓ Various brown, black, blue streaks within a lesion.
- ✓ Irregular raised surface.
- ✓ Irregular borders.
- ✓ Injury of the lesion surface [26].
- ✓ دلمه.

Types of melanomas

Melanoma with superficial diffusion: is the most common type of melanoma and the lesions slowly change. The deeper area of the lesion consists of a brown spot, which is usually flat and symmetrical. As the lesion grows, color changes may occur, ranging from amber black to dark blue, light gray, or white. The lesions may have colorless areas. It usually reaches a width of 2 cm [27].

Nodular melanoma: It is more invasive than the previous type, its onset of clinical symptoms is faster and shorter. It is common in the trunk, head and neck. Usually, its diameter is 1-2 cm. It usually begins on normal skin and is dark and monochromatic on a previous lesion, resembling a blood blister or hemangioma and dome-shaped with sharp edges [28].

Lentigo melanoma melanoma: It is relatively uncommon and usually occurs in white women. Occurs over a long period of time (15.5 years). It is usually a large, flat lesion that looks like a skin blemish. It mainly appears in brown color. The risk of metastasis is low.

Acral lentigo melanoma: It usually occurs in the elderly and especially in dark-skinned people and may take months to years to appear. It appears in areas that have not been exposed to the sun and in areas where there are no hair follicles. These areas include the palms of the hands, the soles of the feet, the nail bed, and the mucous membranes. A large lesion approximately 3 cm in diameter and flat tan or brown that is often confused with callus. Injury to the lesion is common and there is a possibility of metastasis [29].

Treatment: Melanoma treatment depends on the severity of the invasion and the depth of the lesion. Surgical removal of the lesion is the

method of choice for superficial and small lesions. Deeper lesions require more extensive surgery at the mitral valve site, after which skin grafting may be necessary. A lymph node is usually removed from the affected site to rule out metastasis [30].

Although new surgical approaches involve biopsy of a specific part of the lymph node. In this method, a sample of glands close to the tumor is removed and if the result is negative, the patient is saved from extensive lymph node resection and its long-term consequences. The success of immunotherapy has varied. This method modifies the function of the immune system and other biological responses to cancer. Regional melanoma can be used when melanoma is in one of the organs. In this procedure, a chemotherapy drug is injected directly into the area where the melanoma is. In this way, it is possible to deliver high concentrations of anti-cellulite drugs without their general toxic effects. In this method, the limb is treated for one hour by a perfusion pump with high concentrations of the drug at a temperature of 40-39 ° C. The use of high heat increases the effect of chemotherapy and therefore a smaller amount of medication can be used [31].

Nursing care: The most important goals of nursing care for a patient with melanoma are: relieving pain and discomfort, reducing anxiety and depression, increasing awareness of the early symptoms of melanoma and the absence of complications [32].

Pressure ulcers

Acute ulcer is a skin lesion that is caused by constant pressure on the skin and damage to the subcutaneous tissue. Compression sores commonly occur in areas under pressure on bony prominences [33].

References

- [1] Chitsazi, M. T., Fattahi, E., Zadeh Farahani, R. M., & Fattahi, S. Helicobacter pylori in the dental plaque: is it of diagnostic value for gastric infection?. *Medicina Oral, Patología Oral y Cirugía Bucal* (Internet), **2006**;11(4), 325-328. [[PMC free article](#)] [[Crossref](#)] [[Google Scholar](#)]
- [2] Fattahi, S., Vosoughhosseini, S., Khiavi, M. M., Mostafazadeh, S., & Gheisar, A. Consistency rates of clinical diagnosis and histopathological reports of oral lesions: a retrospective study. *Journal of dental research, dental clinics, dental prospects*, **2014**; 8(2), 111. [[PMC free article](#)] [[Crossref](#)] [[Google Scholar](#)]
- [3] Ezirmik N., Yildiz K. A study on the complications of surgical treatment for bilateral developmental dysplasia of the hip and a comparison of two osteotomy techniques. *The Eurasian Journal of Medicine*. **2011**;43(3):162-168. [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
- [4] Hadavand Mirzaei, K et al., Application of Robotic Instruments in Hip Arthroplasty Surgery Based on Practical Tips a Systematic Review, *Eurasian Journal of Chemical, Medicinal and Petroleum Research*, **2024**, 3 (2), 593-609 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [5] Soubhak, S, Nursing actions in patients undergoing laryngectomy in relation to reducing anxiety and depression, *Eurasian Journal of Chemical, Medicinal and Petroleum Research*, **2024**, 3 (2), 530-542 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [6] Soubkari, S., *Covid CT Chest Finding*, *Eurasian Journal of Chemical, Medicinal and Petroleum Research (EJCMPR)*, **2024**, 3(2), 563-576 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [7] Sourili, S., What are the radiological criteria for identifying the Corona virus in CT scan images?, *Eurasian Journal of Chemical, Medicinal and Petroleum Research (EJCMPR)*, **2024**, 3(2), 577-593 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [8] FB AH Jalali, S Hassani, A Zare, T Ziaadini., Systematic investigation of cardio vascular & clinical problem in patients with covid-19 with Neurological and Pathological point, *The seybold Report Journal*, **2023**; 18 (04), 1634-1653 [[Google Scholar](#)], [[Publisher](#)]
- [9] H Zakeri, et al., Pain Management strategies in Intensive care unit: challenges and Best Practice, *GMJ*, **2024**;13: 3264: 1-8 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [10] M Naghdipour, et al., The effect of pelvic floor muscle fatigue on stress urinary incontinence: A systematic review, **2021**, 24(7) [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [11] M Naghdipour Mirsadeghi, et al., Pain Perception at Birth depending on the Personality of the Parturient Women, **2022**, 7(6): 543-547 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [12] S.A Ashkan Mousavi Chashmi et al, A Systematic Review of Gastrointestinal problem in women with diabetes and HTN based on Endoscopic & Pathology findings with evaluation of wound healing, *International Neurourology Journal*. **2024**, 28(1): 765-772 [[Google Scholar](#)], [[Publisher](#)]
- [13] F Hosseinzadegan et al. Cardiovascular Diseases and Relationship with Mortality and Severe COVID-19 in Patients with COVID- 19: A Systematic Review and Meta-Analysis. *International Journal of special education*, **2022**.37(3); 12609-12617 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [14] SH AH Maleki, A Gholami, M Mohammadi, A Farhiudian., Investigation of medical services in patients with diabetes, cardio-vascular and Rheumatology disease in ICU., *Journal of pharmaceutical Negative Results*, **2022**; 13 (10), 4137-4158 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

- [15] A Jalali, S Hassani, S Albuzyad, A Moaddab, M Rajabzadeh., Investigation of Cardiopulmonary Complications in Patients with Infection and Prevalence of Intubation in ICU with Radiological Point, Pakistan Heart Journal, **2023**; 56 (2), 906-919 [[Google Scholar](#)], [[Publisher](#)]
- [16] V Tajiknia, S Hassani, H Seifmanesh, A Afrasiabi, H Hosseinpour., Role of MRI in Pre-operative Assessment of patients with Advanced ovarian cancer candidate for cytoreductive surgery, A Brief Review., J. Obstetrics Gynecology and Reproductive Sciences., **2021**; 5 (9) [[Google Scholar](#)], [[Publisher](#)]
- [17] MK Hossein Tahernia, Mohammad Ghasemian, Fatemeh Rostami, Sara Hassani., Imaging Methods Applicable in the Diagnostics of Alzheimers Disease, Considering the Involvement of Insulin Resistance with Clinical Pharmacological Point., Pakistan Heart Journal, **2023**; 56 (3) [[Google Scholar](#)], [[Publisher](#)]
- [18] SAK AH Jalali, AH Maleki, S Hassani, E Khoshdel., Memory System Intraction and Cardiopulmonary Problem in Autism Spectrum Disorder and Prevalence of Intubation in ICU with Radiological Images., The seybold Report Journal, **2023**; 18 (05), 999-1022 [[Google Scholar](#)], [[Publisher](#)]
- [19] M Jafari, KH Mirzaei, M Shojaei, M Saboury., A Systematic Review: The Relation Between Vitamin D and Short Chain Fatty Acid in Serum Plasma with Protein Recombination in VDR in Multiple Sclerosis Patients (MS)., Eurasian Journal of Chemical, Medicinal and Petroleum Research., **2024** 3 (3), 819-840 [[Google Scholar](#)], [[Publisher](#)]
- [20] M Jafari, M Saboury, M Shojaei, KH Mirzaei., Methylation and Demethylation Gene Pathway Bio Chemistry Signaling in Fat and Athlete Adults with Point of Dopaminergic Points, Eurasian Journal of Chemical, Medicinal and Petroleum Research., **2024** 3 (3), 841-861 [[Google Scholar](#)], [[Publisher](#)]
- [21] M Keyhanifard, et al., Systematic Examination of Neurological disease such as Guillian-barre and MG with Renal problem in cancer fat Patients with Radiological and clinical points., International Neurourology Journal., **2024** [[Google Scholar](#)], [[Publisher](#)]
- [22] K Hadavand Mirzaei, et al., A systematic Review of medical care & investigation Rate of stroke in cancer fat patients with Bariatric and Radiological clinical points., International Neurourology Journal., **2024** [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [23] K Hadavand Mirzaei, et al., A systematic Review Treatment and diagnosis of Neurological disease in fat patients with bariatric & Radiological points., International Neurourology Journal., **2024** [[Google Scholar](#)], [[Publisher](#)]
- [24] KH Mirzaei., Comprehensive Book of General and Bariatric Surgery with Regard to Surgical and Non-Surgical Points., Globeedit, Europe., **2024** 1, 141 [[Google Scholar](#)], [[Publisher](#)]
- [25] KH Mirzaei., A Comprehensive Review of Bariatric Surgery and Laparoscopy Based on Surgical Tips., Globeedit, Europe., **2024** 1, 109 [[Google Scholar](#)], [[Publisher](#)]
- [26] H Najdsepas, et al., Comparison of Catheter Functionality and Post-Procedural Consequences in Vascular Access Through Saphenofemoral Cutdown and Percutaneous Jugu-lar Vein Catheterization., Eurasian Journal of Science and Technology., **2022** 2 (3): 181-189 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [27] HR Alizadeh Otaghvar et al., medical evaluation of the effectiveness and outcome of regional anesthesia in burn populations to reduce drug use: a systematic review and meta-analysis. Eurasian Chemical Communications. Sami Publishing Company

(SPC).**2022**; 4(6): 473-480 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[28] K Hadavand Mizaei et al. Application of Robotic Instruments in Hip Arthroplasty surgery based on practical Tips: A systematic Review.Eurasian journal of chemical, medical and petroleum Research. **2024** 3(2): 593-609 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[29] M Milani Fard, AM Milani Fard., Modeling Drug Release., Eurasian Journal of Science and Technology., **2022** 2 (1):14-33 [[Google Scholar](#)], [[Publisher](#)]

[30] M Shojaei. A Systematic Review of the Effect and Safety of Alendronate on Bone Density in Patients with Chronic Kidney Disease. Eurasian Journal of Chemical,

Medicinal and Petroleum Research. **2024** 3(2): 434-442 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[31] M Shojaei. Alternative Systematic Review of Insulin Resistance and the Role of Sex Steroids on Leptin Levels. Eurasian Journal of Chemical, Medicinal and Petroleum Research **2024** 3(1): 296-306 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[32] M Shojaei. CHAT-GPT and artificial intelligence in Medical Endocrine System and interventions. Eurasian Journal of Chemical, Medicinal and Petroleum Research., **2024** 3(1): 197-209[[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

This journal is a double-blind peer-reviewed journal covering all areas in Chemistry, Medicinal and Petroleum. EJCMPR is published quarterly (4 issues per year) online and in print. Copyright © **2024** by ASC which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.