SKIN MALIGNANCIES IN DUHOK CITY; SINGLE-CENTER EXPERIENCE

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Submitted 1 June 2022; accepted 28 June 2022

ABSTRACT

Background: skin cancer is one of the most frequent cancers worldwide. There has been a significant increase in the incidence of skin cancer over recent years.

Aim of the study: is to determine the pattern of skin cancer in our locality and to emphasize the importance of complete excision of skin cancer with a safety margin to prevent recurrences.

Patients and method: this is a retrospective cross-sectional study that included 679 patients was done in Azadi Teaching Hospital in Duhok by retrieving and reviewing the histopathological reports of patients who proved to have skin cancer from the central lab of Duhok city for 10 years from January 2011 till January 2020.

The parameters sought included age, gender, symptoms, site of the lesion, type of the lesion, safety margins, and the histopathological type. The parameters were expressed in percentages and frequencies.

Result: The mean age of the involved patients was 60.44% years, with slight male predominance. The majority of patients had ulcerated type of lesions 52.7% and the majority of them were in the regions of head and neck 88.36%.

In most of the patient the symptoms not reported 89.5%. Non-healing ulcer was the most common symptom 4.6% The mean size of the lesions was less than 2 cm. Basal cell carcinoma was the most common pathological type 61%, and majority of the lesions were completely excised 61.9%

Conclusion: basal cell carcinoma is the commonest skin malignancy in our locality, Complete excision of skin malignancies from all margins and from the depth of the lesion is mandatory to prevent recurrence of the cancer.

Duhok Med J 2022; 16 (1): 38-47.

Keywords: Skin, Basal cell, Squamous cell

Skin cancer is one of the most frequent cancer type in human. The skin has the highest variety of different types of tumors from all other body organs because of its large size, complex structure, and exposed nature to different physical factors like different types of lights and radiations.[1, 2]

Skin cancer incidences shows a great racial and geographical variability. Australia reports the highest incidence of primary skin malignancy, while the incidence is lowest between black people and Asians.[3] The most important cause of skin cancer is exposure to ultraviolet radiation, the rate of skin malignancies tends to be higher in the immune-compromised patients such as those with organ transplantation and those on immune suppressive therapy. Some genetic factors also play important role in

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the causation of these types of tumors. Other possible causes of skin cancer include ionizing radiation, pesticides, some particulates in air pollution, some toxins, and some viruses like polyomavirus and human papillomavirus.[2, 4, 5]

Skin malignancies are a major source of morbidity and mortality, early diagnosis is very important to improve the outcome and decrease the death rate.[6]

Basal cell carcinoma (BCC) is the commonest type of skin malignancy, it originated from the basal layer of the epidermis, and the non-pigmented BCC is much commoner than the pigmented type. Other types of skin cancer are frequently seen with less frequency such as Merkel cell tumor, lymphomas, epithelioid hemangioendothelioma, dermatofibrosarcoma, malignant pilar tumors and other rare types.[7, 8]

The diagnosis of skin cancer relies on clinical examination by inspecting the skin lesions, palpation, dermoscopy, followed by tissue biopsy either excisional or incisional biopsy. Recently some authors used high frequency ultrasounds which can give information about the size of the mass and the depth of invasion. [9]

The best management consists of timely diagnosis, good surgical excision with normal surgical margins, and some patients will require regional lymph node dissection. Some patients may require radiotherapy, chemotherapy or some types of immune therapy. As the main cause of skin cancer is exposure to ultraviolet light, so it is preventable in many cases with appropriate protection. The assessment of the surgical margins is assessed by histopathological examination, this may be sometimes slow and results in inadequate tissue sampling and inaccurate assessment of the tissue margins, multimodal confocal mosaicing microscopy is used in some centers to assess a real time and rapid screening for the surgical margins on a fresh tissue sample.[10-13]

Sun protection is recommended for all people in general and for those at risk specially, and vitamins supplementation especiسally vitamin D is recommended by some studies.[14]

Patients and method: this is a retrospective cross sectional study that included 679 patients was done in Azadi Teaching Hospital in Duhok by retrieving and reviewing the histopathological reports of patients who proved to have skin cancer from the central lab of Duhok city for 10 years from January 2011 till January 2020. The patient privacy was maintained by giving a code for each patient.The parameters sought included age, gender, symptoms, site of the lesion, type of the lesion, safety margins, and the histopathological type. The parameters results were expressed in percentages and frequencies.

RESULTS:

The mean age of the involved patients was 60.44 years, with slight male predominance, the majority of patients had ulcerated type of lesions 52.7% followed by nodular type 37.7% and most lesions were found in the regions of head and neck 88.36% Table 1.

Table 1. Showing the charecteristics of the ivolved patients.

Main category	Subcategory	Frequency	Percentage
Age (M;SD: Range: 4-108		60.44	14.848
Sex	Male	382	56.259
	Female	297	43.740
Lesion type	Ulcerated	358	52.7
	Nodular	256	37.7
	Pigmented	30	4.4
	Cutaneous horn	1	.1
	Erythematous	5	.7
	Fungating	21	3.1
	Ulcerated old burn scar	8	1.2
Site of the lesion	Nose	194	28.6
	Cheek	153	22.5
	Scalp	57	8.4
	Forehead	71	10.5
	Upper lip	12	1.8
	Ear lobe	33	4.9
	Lower lip	17	2.5
	Eye lid	46	6.8
	Dorsum of hand	27	4.0
	Neck	6	.9
	Back	12	1.8
	Fore arm	10	1.5
	Chin	4	.6
	Parotid region	7	1.0
	Anal verge	2	.3
	Foot	10	1.5
	Abdomen	1	.1
	Chest wall	4	.6
	Axilla	2	.3
	Shoulder	2	.3
	Inguinal region	5	.7
	Leg	2	.3
	Labia majora	1	.1
	Breast	1	.1

In the majority of the involved patients the symptoms were not reported 89.5% non-healing ulcer were the most common symptoms 4.6% the mean size of the lesions was less than 2 cm. table 2.

Table 2. Showing the types of the clinical presentations.

Main category	Subcategories	Frequency	Percentage
Symptoms	Not reported	608	89.5
	Itching	12	1.8
	Bleeding	11	1.6
	Infection (pain + discharge)	9	1.3
	Increase in size		1.2
	Non-healing ulcer 31	8	4.6
Recurrence pattern	Non-recurrent	610	89.8
	Recurrent	69	10.2
Lesion dimensions in mm (M;SD)	Length	20.56	14.134
	Width	13.43	9.793
	Depth	7.33	4.888

Basal cell carcinoma was the most common pathological type 61% followed by squamous cell carcinoma 31.2% other less frequent types of lesions were diagnosed in order of decreasing frequency. Tables 3.

Table 3. Showing the different histopathological subtypes of the lesions.

Type of the lesion	Frequency	Percent
Squamous cell carcinoma	212	31.2
Basal cell carcinoma	414	61.0
Baso-squamous carcinoma	9	1.3
Malignant melanoma	12	1.8
Granulocytic sarcoma	1	.1
Merkel cell carcinoma	2	.3
Hodgkin lymphoma	3	.4
Adenoid cystic carcinoma from parotid gland	2	.3
Kaposi sarcoma	2	.3
Anaplastic large cell lymphoma	2	.3
Meibomian Gland Adenocarcinoma	1	.1
Diffuse large B cell lymphoma	1	.1
Diffuse epitheliod melanocytoma	1	.1
Sebaceous gland carcinoma	1	.1
Skin adnexial tumor	1	.1
Dermatofibrosarcoma protuberans	6	.9
Malignant pilar tumor	3	.4
Plexiform fibrohistiocytic tumor	1	.1
Malignant peripheral nerve sheath tumor	1	.1
Malignant fibrohistiocytoma (Pleomorphic sarcoma)	1	.1
Leukemia cutis (Malignant cutaneous infiltrate)	1	.1
Atypical squamous epithelium	1	.1
Eccrine carcinoma (Malignant sweat gland tumor)	1	.1

The majority of the lesions were completely excised 61.9% while around 38.1% of the lesions showed incomplete excision. Figure 1.

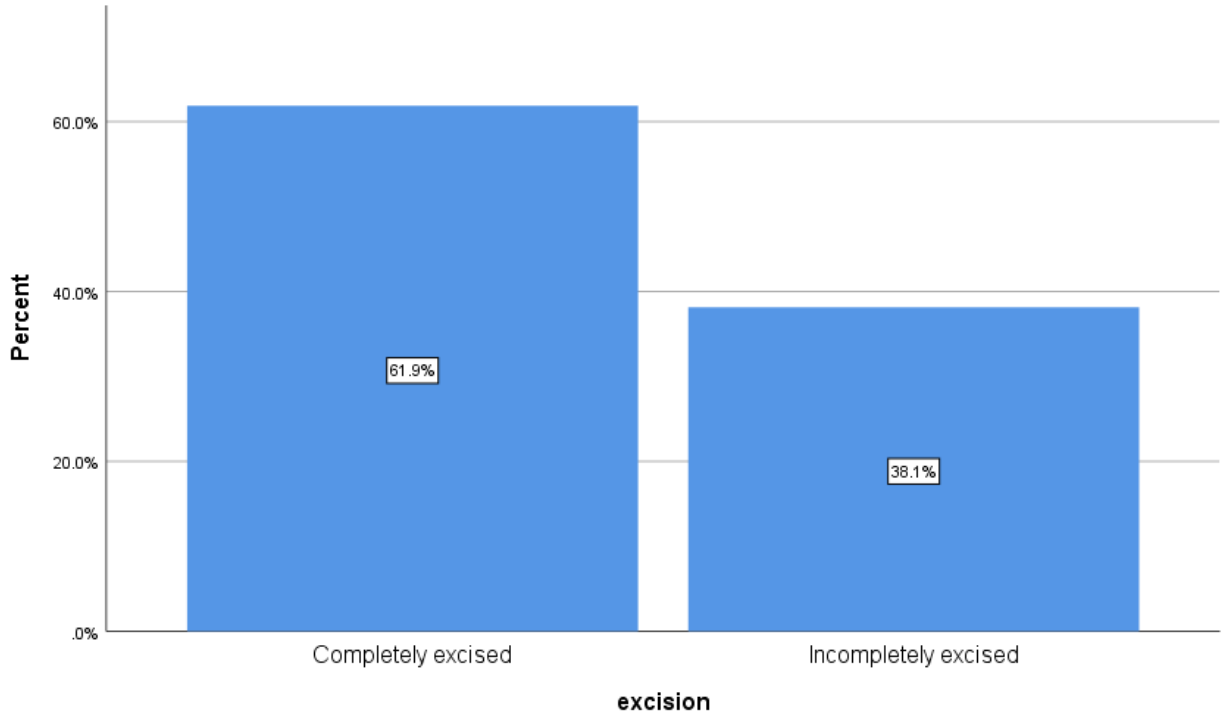

Figure 1: A simple bar chart showing the extent of excisions of the lesions.

All the margins were negative in more than 60% of the patients, while in the remaining percentage of patients at least one of the margins was involved. Figure 2.

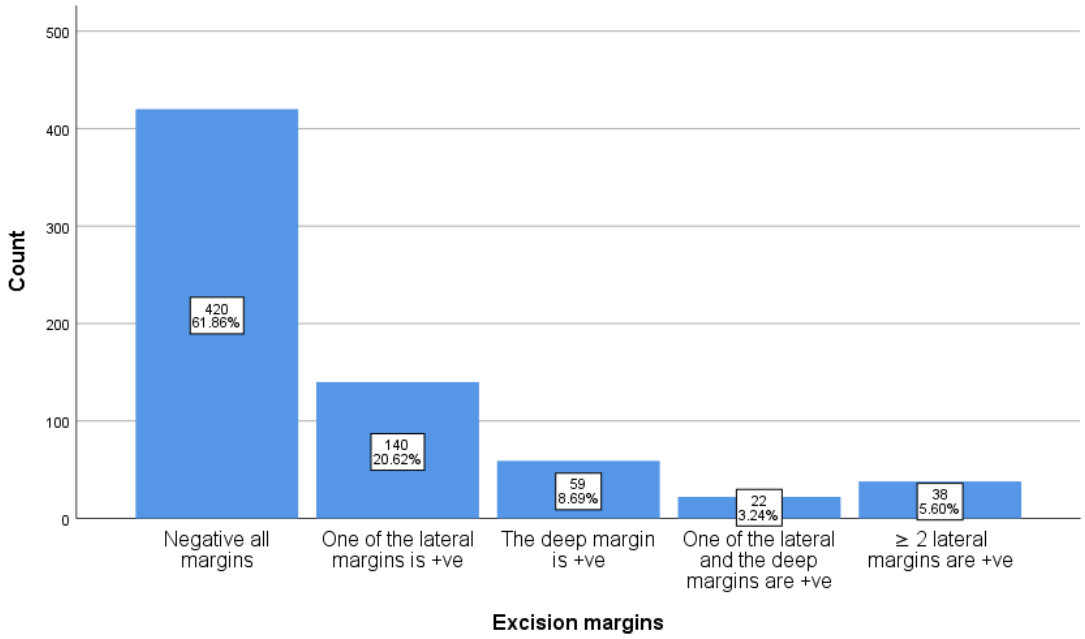

Figure 2: A simple bar chart showing the involvement of the excision margins.

DISCUSSION:

Squamous cell cancer and basal cell cancer are the most common non melanotic skin cancers worldwide and there incidence is increasing. If the lesions are left untreated, it will lead to local tissue destruction and metastatic disease.[12]

Basal cell cancer constitutes the main type of non melanotic skin cancer, in our study BCC constituted about 61% while SCC constituted about 31.2%, these results are compatible with most published articles which show approximate data. Basal cell cancer cause low mortality with high morbidity in some patients, risk factors include exposure to UV light, freckles in childhood, family history of BCC. The established standard management for BCC is very effective for the majority of patients, however Vismodegib may be used for locally advanced cases when surgery is not suitable.[1, 15, 16]

Ultraviolet light is considered as a complete carcinogen i.e. it is both a mutagen and a non-specific damaging agent and has properties of both a tumor initiator and a tumor promoter. Although ultraviolet light has many beneficial effects for the human body such as vitamin D synthesis and endorphins synthesis in the skin, but excessive exposure has damaging effects to the skin and increase the risk of the most common skin cancer types such as BCC, SCC, and malignant melanoma.[17]

In our study the mean age of the affected patients was 60.44 years, with slight male predominance (56.25%) when compared to females (43.74 %). World data showed that there is slight female predominance of skin malignancies with female to male ration of 1.4:1, and the mean age of the diseases in most of the published articles is in the 4th and the 5th decades of life.[3]

In our study, other types of skin included Merkel skin cancer (0.3%), lymphoma (0.4%), dermatofibrosarcoma protuberans (0.9%), and malignant pilar tumor (0.4%). These types of tumors are rare type of cancers of the skin, most patients present with localized lesions, others patients may present with locally advanced disease with lymph node metastasis which makes the management more difficult.[18]

Data shows that the leg and the foot are the most common affected sites, followed by the face and neck regions, and the trunk. This is the contrary in our study which showed that the face is the commonest site of affection, followed by the upper limb. Other sites like the trunk, the leg and the foot were infrequently affected.[3]

The main form of treatment is complete surgical excision or Mohs surgery, the majority of patients have no loco-regional recurrence, some patients have bad prognostic features like close margins or positive margins, tumor size greater than 2 cm, poor tumor differentiation, peri-neural invasion, depth of invasion, and immune-compromised patients. In our study the majority of patients have non-recurrent tumor (89.8%), and the mean tumor dimensions were 20 mm in length, 13 mm in width, and 7 mm in depth. The majority of patients (61.9%) have complete tumor excision, and the rest of the patients have incompetently excised tumors. In around 8.69% the deep margin was involved, and in around 8.8% more than one margin was involved. Complete surgical excision is the most important management step, small lesions don’t require any form of reconstruction, however for larger lesions

some forms of flaps are usually required, the most common type of flaps are advancement flaps followed by rotational flaps, patients with involvement of one of the surgical margins require re-excision until negative margins achieved, however a study was done for patients with involvement of the surgical margins who underwent re-excision, they found that around half of the patients who have positive margins and underwent re-excision have no malignant cell in the second sample.[9, 19, 20]

There are some recommendation to reduce the rate of skin cancer occurrence such as clothing, the use of hats, skin examination for early diagnosis of premalignant conditions or lesions at an early stage, daily use of sunscreens with SPF of 30 or greater, the use of sunglasses with UV light absorbing lenses, avoiding tanning booths, closely monitoring pigmented skin moles for any change, hyper-keratotic lesions and non-healing ulcers especially in the immuno-compromised patients.[21-23]

In conclusion skin cancers especially nonmelanotic are common in our locality, so we should pay attention to the preventive measures because in the majority of cases thy are preventable, and the surgeons should emphasize on the importance of safety margins to prevent recurrences.

Conflict of interest: The authors declare that there is no conflict of interest.

Acknowledgment: Great thanks and appreciation for the pathologists and staff of central lab of Duhok for their kind help in retrieving this research data.

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پوختە

پەنجەشێرا پیستی

پێشینە: پەنجەشێرا پیستی دهێتە هژمارتن ئێک ژ بەر بەڵاقترین پەنجەشێر ل جیهانێ، و زێدەبوونەکا بەرچاڤ د حالەتێن تووشبونێ دا چێ بوویە دڤان ساڵێن دوماهیێ دا.

ئارمانج :

ژبو دیارکرنا شێوازێ پەنجەشێرا پیستێ ل وارێ مە و دووپاتکرن لسەر گرنگیا لادانا یەکجاری یا پەنجەشێرا پیستی دگەل دڵنیایا کناری دا کو نەخوشی دووبارە نەبێتن.

نەخوش و شێواز:

ئەڤە ڤەکوڵینەکا کۆنخواز و پانەبڕگە کو 715 نەخوشان بخووڤە دگریتن ل نەخوشخانا ئازادی یا فێرکرنێ هاتیە ئەنجام دان لدهوکێ، پێداچوون د ریپورتێن نەخوشەزانی بێن نەخوشان دا هاتیە کرن ل تاقیکەها مەڵبەندی یا باژێرێ دهوکێ دماوێ دەھ ساڵان دا هەر ژ کانینا دوویێ 2011تا کانینا دوویێ 2020

پیڤەرێن پشکنی کری ئەڤەنە: ژی ، رەگەز، نیشان، جهێ گرێیا پیستێ ، جورێ وێ، دڵنیا کناری و جورێ نەخوشەزانی. پیڤەر هاتنە دەربرین ب رێژا سەدی و دووباربونێ.

ئەنجام :

تێکرا ژیێ نەخوشێن بەژدار 60.44ساڵ بوو، پیچەک زورینەیا رەگەزێ نێر. رێژا هەرە زور ژ جورێ برینێ بوون 52.7% و زورینەیا وان ل سەروچاڤێن نەخوشان بوون.

زوربەی ڤان پەنجەشێران دبێ نیشان بوون 89.5% و ئەوێن نیشان ژیک هەین برێژا هەرە زور ئەو بوو برینێن نە چاک بووی. تێکرا قەباریێ نیشانێ ژ دوو سەنتیمەتران کێمتر بوو. پەنجەشێرا خانێن بنچینەی ژ هەمی جوران پتر بوو ب رێژا 61% و زوربەیا وان پەنجەشێران هاتبوونە بنبرکرن ب تەمامی 61.9%

دەرکەفتن:

پەنجەشێرێن پیستی دهێنە هژمارتن ژ وان نەخوشیان کو خوپاراستنێ قەدەغە دبیتن. لادانا بنبرکری ژ هەمی رەخان (کنار) ڤە و ب قوڵای ژیک گەلەک گرنکە دا کو نەهێلین ئەڤ پەنجەشێرە دووبارە ببیتەڤە.

کێشەیێن ئارەزووی:

ڤەکوڵەر رادگەهینیتن کو چ کێشەیێن ئارەزووی نینە.

سوپاسی:

سوپاسی و رێزەکا بێ سنور بۆ تایبەتمەندێن نەخوشەزانی و کارمەندێن تاقیکەها مەڵبەندی یا دهوکێ ژبەر هاریکاریا وان بو ڤەدوزینا زانیاریێن ڤەکولینێ

الخلاصة

الأمراض الجلدية الخبيثة في مدينة دهوك ؛ تجربة مركز واحد

الخلفية: يعد سرطان الجلد من أكثر أنواع السرطان انتشارًا في جميع أنحاء العالم. هناك كان هناك زيادة كبيرة في حالات الإصابة بسرطان الجلد خلال السنوات الأخيرة.

الهدف من الدراسة: تحديد نمط سرطان الجلد في منطقتنا والتأكيد على أهمية الاستئصال الكامل لسرطان الجلد بهامش أمان منع التكرار.

المرضى والطريقة: هذه دراسة مقطعية بأثر رجعي شملت 715 تم إجراء المرضى في مستشفى آزادي التعليمي في دهوك عن طريق الاسترجاع والمراجعة التقارير التشريحية المرضية للمرضى الذين ثبت إصابتهم بسرطان الجلد من المعمل المركزي لمدينة دهوك لمدة 10 سنوات من كانون الثاني 2011 حتى كانون الثاني 2020 تضمنت المعايير المطلوبة العمر والجنس والأعراض وموقع الإصابة ونوع الإصابة الآفة ، هوامش الأمان ، والنوع التشريحي المرضي. تم التعبير عن المعلمات بالنسب المئوية والترددات.

النتيجة: كان متوسط عمر المرضى 60.44٪ سنة مع ذكور طفيفة غلبة. غالبية المرضى لديهم نوع من الآفات المتقرحة 52.7٪ و وكان معظمهم في مناطق الرأس والرقبة .معظم الآفات كانت بدون أعراض 89.5٪. كانت القرحة غير الشافية هي الأكثر الأعراض الشائعة. كان متوسط حجم الآفات أقل من 2 سم. الخلايا القاعدية كان السرطان هو النوع المرضي الأكثر شيوعاً 61٪ ، وغالبية الآفات تم استئصاله بالكامل 61.9٪

الخلاصة: يمكن الوقاية من سرطانات الجلد في معظم الحالات. الاستئصال الكامل من جميع الأطراف ومن عمق الآفة إلزامي لمنع تكرارها من السرطان.

تضارب المصالح: يعلن المؤلفون أنه لا يوجد تضارب في المصالح.

شكر وتقدير: عظيم شكر وتقدير لأطباء وموظفي مختبر دهوك المركزي لمساعدتهم الكريمة في استرجاع هذه البيانات البحث.