Original Research Article

BASAL CELL CARCINOMA: IN TERTIARY CARE CENTER, DEMOGRAPHIC DETAILS AND HISTOLOGICAL SUBTYPES AT PUMHS-W NAWABSHAH, PAKISTAN.

Abstract:
Background: Skin malignancies are more common in fair-skinned persons, but their increasing incidence is alarming in our population**.**
Objective: To evaluate the Basal Cell Carcinoma (BCC) in a tertiary care center, in terms of frequency, age, sex, sites, and histological subtypes.
Methods: A retrospective work was conducted in the Dermatology and Pathology departments, Peoples University of Medical & Health Sciences, Nawabshah, from November 2020 to November 2021, total 100 cases collected by nonprobability consecutive technique, all the patients included reported at the outpatient department during one year period. All the clinical demographic data was collected in the Dermatology department and the biopsy sample was processed in the Pathology department. The observations were recorded on a structured proforma, statistically analyzed on SPSS 20 and the results were tabulated.
Results: A total of 100 cases were assessed, the age of patients ranged from 22-86 years with a female preponderance. Most of the cases were detected in the 61-80 years age group. Cheek was the most common site. The nodular/solid variety was diagnosed in most cases (54%).
Conclusion: In all the histological subtypes about both genders the density of BCC was relatively higher over the face, followed by the trunk. The nodular/solid variety is more common.
Key Words: Basal Cell Carcinoma, Dermatology, nodular/solid variety, cheeks.

Introduction:
Basal cell carcinoma (BCC) this e most common skin malignancy worldwide with constantly increasing incidence due to an aging population and a predilection towards exposed areas especially head and neck areas [1, 2].
Skin malignancies acquire the fifth top position among the ten commonest cancers and account for a little bit of mortality worldwide[3], approximately 70% of malignant diseases of the skin in the western countries[4].
In 2017 the data from Pakistan's largest province Punjab showed that skin malignancy in females and males ranks eighth and ninth respectively, same position for skin malignancy was reported for females from Karachi by the Karachi cancer registry[5].

Skin malignancies are classified as keratinocyte and melanocytic neoplasms. Basal cell carcinoma is categorized as keratinocyte or non-melanocytic skin cancer[6].
It is a slow-growing tumor with a propensity for local invasion with morbid destruction[7].

BCCs are more common among the elderly male population[8]. The higher incidence in men is probably due to increased recreational and occupational exposure to the sun, and also as the women are more concerned about their health and aesthetics, and go to the dermatologist earlier

when they have lesions, especially on face and neck areas.[9] Extensive local tissue destruction is common and if not adequately managed, however, metastasis is exceptionally rare[10]. Clinically the BCC is divided into several subtypes, but the main subtypes are nodular, superficial, and Morphea form BCC[11]. The histological pattern of BCC is the predictors of clinical behavior, [8] for that purpose a skin punch or excisional biopsy is necessary for the confirmation of various histologic types of BCC[12], including solid (nodular), micro-nodular, infiltrating, superficial, fibroepithelial, basosquamous (metatypical), keratotic, basal cell carcinoma with adnexal differentiation, and other variants. [4,13]
There is associated significant morbidity if untreated for a long period.[14] The differential diagnosis of BCC includes certain types of Squamous Cell Carcinoma (SCC) and a variety of other cancers. In these cases, the histopathology report help is essential to establish the diagnosis of BCC.[15]
Keeping the above-mentioned facts in view, we conduct this study to see the morphological spectrum and frequency of BCC cases in a tertiary care hospital of rural areas in our setup.

Methodology:

This retrospective Cross-Sectional study was conducted in the Dermatology and Pathology departments, Peoples University of Medical & Health Sciences, Nawabshah during November 2020-November 2021. We evaluate the 100 cases of BCCs. All the cases were registered at the outpatient department, assessed in the Dermatology department and the biopsy sample was processed under strict protocol in the Pathology department. The cases were collected by nonprobability consecutive technique. A structured proforma was designed for the study and all the available data was recorded on that. The histology was evaluated by retrieving the slides and blocks of the study population, the histological diagnosis was confirmed and the tumors were classified according to the World Health Organization (WHO) classification.[13] The findings were analyzed statistically by SPSS 20 and the results were tabulated.

Results:

We analyzed 100 cases of BCC, the age of patients varies from 22 to 86 years with a mean age of 66.7 years. The maximum number of cases were observed in 61-80 years age group. The female (56%) patients were slightly more in number than male (44%) cases, with a male to female ratio of 1:1.3 (table-1 & Fig-1).

Table-1. Age Groups with Gender Distribution and Number of Cases (n=100)

S. No	Age Group	Number of Cases		Total
		Male	Female	
1	21-40	01	03	04
2	41-60	17	16	33
3	61-80	21	32	53
4	81-100	05	05	10
	Total	44	56	100

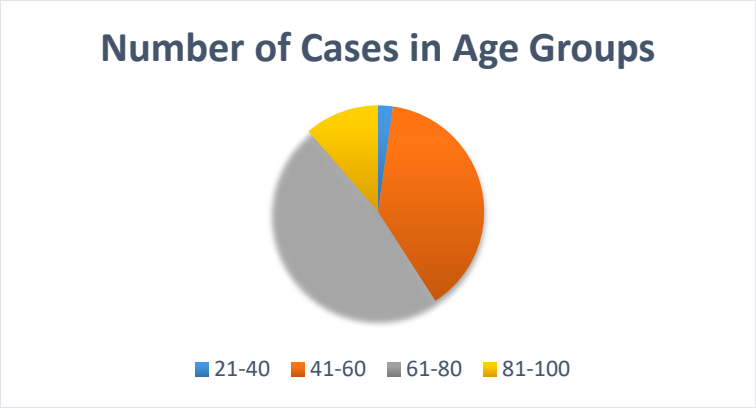

Fig-1. Age Groups in Study Population (n=100)

The most common site we found was cheek.
Regarding different sites of the tumor, we observed 52 (52%) cases on cheek which was the most common site, followed by 27 (27%) lesions on nose, the sternum was found the least common site having only one lesion (table-2).

Table-2. Frequency of Site of the Lesion (n=100)

S.No	Site	No of Cases
01	Cheek	52
02	Nose	27
03	Forehead	07
04	Trunk	05
05	Upper eye lid	04
06	Shoulders	02
07	Scalp	02
08	Sternum	01

On histological examination the nodular/solid tumors were detected in majority (54%) of cases, followed by infiltrating (12%), basosquamous/metatypical (7%) (table-3).

Table-3. Histological Subtypes with Number of Cases.

S. No	**Histological Subtypes**	**No of Cases**
01	Nodular/solid	**54**
02	Infiltrating	**12**
03	Basosquamous/metatypical	**07**
04	Superficial	**04**
05	Keratotic	**03**
06	Micronodular	**03**
07	BCC with adnexal differentiation	**01**
08	Other variants (Pigmented, adenoid, infundibulocystic)	**15**
09	Mixed (solid and adenoid)	**01**
	Total	**100**

Discussion:

Cancer or malignancy is commonly occurring at old age, Age with sex both are major and non-modifiable risk factors for cancer, more frequently involving male than female.[14,15,16,17]
Skin cancers are more common tumors around the globe with more frequently involving the Caucasians than Asians.[18]
Our present study results showed the age of patients varies from 22 to 86 years with a slightly earlier occurrence of BCC in young age group, same results were recorded at Faisalabad by Janjua[19], a slight difference was noticed in a study in which 44yrs – 89 yrs age group was noticed done at Turkey by YO [18], but the results are inconsistent with the Rana[1] in Turkey where the BCC is more common in 6th and 7TH decade of life. In our setup, the earlier occurrence could be the result of prolonged exposure to sunlight as we are more close to the equator line.
The maximum numbers of cases were observed in 61-80 years age group. Same results were seen at Singapore by Oh [20] where the risk of skin cancer increased after 70yrs, Bassukas[7] Turkey. Asians developed their first BCC at an older age than the age of first BCC in Caucasian.[26]
The female preponderance were noticed than affected male, same results were seen
In study by Rishu [23] 82%, Kikuchi A [24], Japan, those were not matched with our results were noticed in Moore [26] found equal incidence in both sexes in Asian countries, male predominance were seen in Jordan by Al-Qarqaz [27], Turkey by YO [18], Pakistan 1.4:1 [19],and 2:1 by Dowerah [25], Male to female ratio in our study was 1:1.3. 0.97 kikuchi.A[24] Japan, 0.92 Scrivener[21], 9;10 Turkey YO[18], 1.4:1 Janjua[19] Pakistan, 2:1 Dowerah[25] India, 1.76:1 Jordan, Al-Qarqaz. [27]
Regarding different sites of the tumor, we observed cheek was the most common site involved, followed by nose, our results are consistent with the results of Rana[1] ,Turkey, but vice versa results were seen by Janjua [19] at Faisalabad, Pakistan, and Jordan by Al-Qarqaz [27], both these anatomical sites are included in high risk areas. The sternum was found the least common site we found, limbs are the least common site involved by BCC at Jordan by Al-Qarqaz [27].
On histological examination the Nodular/Solid tumors were detected in majority of cases, same results were seen at Japan Kikuchi [24], Turkey, YO [18], Pakistan, Janjua,[19] India Dowerah [25], Scrivener[21] . The mixed type was least frequent type observed in our study opposite results were observed at Pakistan Janjua[19] where pigmented variety was on second number.
Conclusion: A rising incidence of malignancy was noticed around the globe. Basal cell carcinoma was more prevalent in fair skinned population, but present study suggests that it is not a disease restricted to a geographic/racial group of peoples but instead it can involve any one. The tumor is more common in 61 – 80 years age group, the cheek was the most common site and the nodular solid variety was the most frequent lesion in our study.
Recommendations: Author recommends the establishment of central cancer statistics in country.

CONFLICT OF INTEREST

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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