ORIGINAL ARTICLE

Study of Prevalence and Management of Basal Cell Carcinoma of the Nose

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Abstract

Objective: The purpose of this study was to observe the prevalence of BCC on Nose among the all BCC of Head & Neck; also to see the clinical type of lesion, method of reconstruction and final outcome of BCC on Nose.

Design: Prospective, longitudinal and comparative study.

Patients and method: Patients with histological proven diagnosis of basal cell carcinoma of the Face area were selected for this study. They were subjected to detailed history and examination. Pertaining investigations were done in addition to base line investigations. Clinical type and site was noted. The lesions were excised with safe margin and reconstructed with local and regional flap in addition to full thickness graft.

Results: In all 53 patients were selected for study. 37 were of non nasal group and 16 were of nasal group. Among the non nasal group the most common site was medial canthal area, followed by cheek and then lower eye lid. The most common clinical variety in both the group was same i.e. ulcerative variety. The most common method for reconstruction in both the groups was very different. Full thickness graft was common method in Non nasal group while local flap was the method of choice in nasal group. The patients of Nasal group were slightly late in presentation in comparison to Non Nasal group.

Conclusions: It was concluded that nasal basal cell carcinoma is more common as compare to Medial canthal area carcinoma in our part of South East Asia. Most of the presenters were late comers in Nasal group in our series and required local flaps for their reconstruction.

Key Words: Basal Cell Carcinoma, flap repair, nasal basal cell carcinoma

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Introduction:

Basal cell carcinoma (BCC) is one of the commonest locally malignant tumors, involving the skin of head and neck. BCC originate in the pluiropotential epithelial cells of the epidermis and hair follicles. It is usually found in fair complex, blue eyed patient, most commonly on face. On the face it is found above the line joining medial angle of the mouth and tragus.

A number of treatment modalities are available. Treatment of basal cell carcinoma includes both surgical and non surgical approaches, some of which are traditional, and others experimental. The treatment modality utilized is dependent on both the tumor type and the patient. Surgical excision, Mohs surgery and radiotherapy are the three standard therapies of choice.[1]

Since a significant advantage has been seen in surgery compared to other treatments, surgical excision ensuring the highest chance of cure is frequently employed.

Medial canthal area and the nose are the most common sites of occurrence of basal cell carcinoma.[2] On nose, somehow BCC was found to be more aggressive and causing much havoc and

destruction.[3]

The purpose of this study was to see the prevalence of BCC on Nose. The other purpose was to see the clinical type of lesion, method of reconstruction and final outcome of BCC on Nose.

Methodology:

Patients who presented at the out-patient area of the Department of Plastic Surgery at Civil Hospital, Karachi and the Department of ENT at Hamdard College of Medicine & Dentistry, Karachi with lesions in the Head and Neck area and who were clinically diagnosed as having BCC were included in this study. The patients were divided into two groups, those having lesion on the Nose (Nasal group) and those having a lesion on other part of the face (Non Nasal group).

Patients were properly interviewed with regard to time of onset lesion, duration and progression of lesion.

On examination the clinical type of BCC was noted. Patients were evaluated for other co morbid.

Baseline Investigations were done along with X-Rays of face. As appropriate to the site, the lesion was excised with 5-10mm margin marked away from indurated margin. In Nasal Group the depth of excision extended till the cartilage of the nose or the subcutaneous tissues on the lateral aspect of the nose was reached. In Non nasal Group the depth of excision extend up to next anatomical layer. In both the groups the next anatomical layer if found to be involved was excised. Specimen was sent for histopathological examination with proper markings and diagram for better orientation for the Histopathologist. Depending upon the site, extent & depth of excision of the lesion, the resultant defect was repaired using various reconstructive options. In some cases more than one option were used. The reconstructive options include full thickness skin graft (FTG), local flaps and regional flap.

All patients were advised to visit out-patient after discharge during the first month weekly, from 2nd to 6th months fortnightly and thereafter every 3 months for three years.

We analyzed overall duration of the BCC of the nose, its clinical presentation, modality of treatment and overall outcome with that of Non nasal lesions of the face.

Results:

The study was done for two years i.e. from 1st January, 2007 to 31st December, 2008. In all 53 patients were studied. Males were 43 and females were 10. 39 males and 6 females were of profession where exposure to sunlight was there.

Out of the 53 patients, 15 constitute the lesion over nose and 38 non nasal lesions Site of the non nasal lesions were : Lower eye lid 6, Cheek 7, Lower eye lid & Cheek 8, Medial canthus of eye 9, Pre auricular region 5, Scalp & Temple 3.

Time of presentation and duration of the lesion varies from patient to patient and are shown in Table 1. It is interesting to note that 11 patients out of 24 who presented with in 1-2 years belong to "Nasal Group" and all three patients who presented after 3 years of onset also belong to this group.

It is clear that nodular variety is more common among the non nasal group whereas Ulcerative variety is more common among the nasal group.

Surgical excision was done in all 53 cases,

Among the 37 patients of non nasal group, Full thickness skin Graft (FTSG) was used in 11 cases, Glabellar flap in eight cases, Nasolabial flap in

Table 1: *Duration of the Basal cell carcinoma in both Nasal & Non Nasal group*

	Duration Of The Lesion		
	1-2 Years	**2-3 Years**	**>3 Years**
Nasal Group (Total 16 Pats.)	1	11	3
Non-Nasal Group (Total 37 Pats.)	9	14	15

Table 2: *Clinical variety of basal cell carcinoma among Nasal and Non Nasal groups*

	Clinical variety of basal cell carcinoma					
	Nodular	**Ulcerative**	**Pigmented**	**Superficial**	**Cystic**	**Field Fire**
Nasal Group (Total 16 Pats.)	2	9	3	Nil	1	1
Non-Nasal Group (Total 37 Pats.)	9	14	6	1	3	4

5 cases, Cheek rotation flap in 10 cases, Limberg flap in three cases

Out of 16 patients in Nasal Group, in seven, midline forehead flap was done, in one FTSG was done, in three nasolabial flap was used and in four combinations of flaps was done, i.e. midline forehead and cheek rotation, or nasolabial flap. In one case, axial dorsal nasal nose flap was raised.

Post Operative Complications were noted in two cases in the form of tip necrosis, one each from Non Nasal and Nasal group.

Out of 53 cases operated only 17 cases were in regular follow up till the end of two years. Out of 17 there were seven of nasal group and ten of Non Nasal group. There was recurrence in 3 cases of nasal group and none in non nasal group.

Discussion:

Among the skin malignancies seen all over the world, BCC tops the other two, i.e. Squamous cell carcinoma (SCC) and Malignant Melanoma. In Pakistan, cases of SCC of skin are reported but malignant melanoma is quite uncommon in this part of world[4].

In Pakistan, BCC seems to be more common in fair skinned population of province of North-West Frontier[5] but cases in big cities of Punjab and Sindh are also not uncommon.

The distribution of the Basal cell carcinoma varies across the body but occurs more commonly on the exposed parts of the body. Eighty six percent of BCC are found on the head and seven percent are found on the trunk and extremities[6]. In the Head region, BCC are more common above the line joining tragus with the angle of mouth. The two most common sites above this line are Nose and medial canthal area. In our series the nasal lesions were the highest in numbers followed by non nasal lesions involving the sites as medial canthal area, lower lid and cheek. This was quite similar to other series[7].

Majority of patients in our series, especially of Nasal group, were late presenter there by visiting with quite extensive lesion, there by requiring large excisions and big repairs. As it is known fact that BCC are stroma dependent they rarely metastasize. They always follow the path of least resistance. Invasion of cartilage, bone and muscle is uncommon[8] but we have seen in our series quite a few cases with extensive erosions and destructions[9].The most probable explanation can be the late presentation because of illiteracy and lack of facility at their area of residence.

The clinical variety noted in our series was Ulcerative variety. This was also in line with other studies where ulcerative and more aggressive BCC were noted on Nose[10].

Numerous treatments have been used against BCC of the nose, with their advantages and disadvantages. Cryosurgery is one[11].The problem with this method is that it is relatively difficult to perform and requires reliable operators. The cure rate is similar to that of other treatments. Second is Electrodessication[12]. Contrary to the conventional excision, this method precludes all histological controls, and the common idea of good ontological results is always in doubt. Third is Radiotherapy[13]. The recurrence rate varies from 7 to 12% with fair cosmetic results. It requires numerous sessions, cannot be repeated in case of recurrence and complicates the surgical treatment. In addition, there is a long-term risk of radio dystrophy. The fourth option is Moh's Microsurgery which is the treatment of choice for the lesions in difficult areas and recurrent lesions[14].

The fifth option is imiquimod, a novel immune response modifier, which is being applied topically and is reported to be effective in treatment of BCC[15]. The sixth option is. Surgery[16], which

we also chose because of lack of facility for the all above options. Surgery has a success rate of 90%. It is a rapid and ambulatory treatment, can be done under local anesthesia. The cosmetic result is generally good but patients must be consulted pre operatively about residual scars and fibrosis.

In surgery the method of reconstruction chosen for the groups was different. Nasal group received all flaps, mostly midline forehead flaps[17] and the Non Nasal group received combination of the Full thickness skin grafts[18] and Glabellar flaps[19]. This is most probably due to less complex problem in non nasal group as compare to the nasal group where defects were larger and more aggressive. Cosmetic outcome in Nasal group was also slightly inferior as compare to non nasal group. This was due to the fact more that flaps were utilized leaving more residual scars and secondary contractions.

Recurrence of three cases in nasal group and none in non nasal group is also slightly complex. This is most probably due to insufficient excision, as larger aggressive nasal lesions provide a very narrow safety excision margin[20].

Conclusion:

In conclusion our study shows that Basal Cell Carcinoma is the most common on Nose among malignant lesions of the face. .Most of them is of Ulcerative variety and is aggressive producing large residual defect to reconstruct. The most common flap use for reconstruction was midline forehead flap.

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