

PRELIMINARY REPORT ON RECURRENCE OF BASAL CELL CARCINOMA (BCC) AFTER SURGICAL EXCISION IN NWFP AND AFGHANISTAN

Obaidullah, Mohammad Aslam

Department of Plastic Surgery
Aman Hospital, Dabgari Gardens, Peshawar

ABSTRACT

Objective: To assess the efficacy of surgical excision in clearing Basal Cell Carcinoma (BCC).

Material and Methods: Computer data of 100 patients with BCC was retrieved from our database from January 1996 to January 2000. These 100 cases were all exclusive of the drop-outs. Follow up notes were compared for marginal clearance on pathological report and recurrence noted. Subsequent procedure or radiation was recorded.

Result: Out of these 100 patients, 45 were male patients and 55 female. Their ages ranged from 18 to 105 years with a mean of 56.3 year. Out of 100 patients, only 2(2%) specimens were reported as having margins involved with tumour and the same showed recurrence over a period of follow up. Five patients had had preoperative radiotherapy and thus had radiorecurrent lesion. A similar number had surgery elsewhere and presented to us with recurrence.

Conclusion: Surgery is a reliable mode of treatment for BCC provided pathologist can give an accurate assessment of marginal clearance.

Key words: Basal Cell Carcinoma, Rodent Ulcer, Recurrence, Surgery.

INTRODUCTION

Basal cell carcinoma is the commonest malignant skin tumour. Its incidence is highest in people of the European origin.¹ However, contrary to the common belief in the Western countries, its incidence is on the rise in this part of the world. These skin tumours as well as other skin malignancies are initiated by sun exposure. Ultraviolet rays of B type are now positively known to enhance the chances of mutation in cells.² Patients with fair skin are more often involved. Immigrants from the subtropical regions into hot climate have particularly increased prevalence of skin malignancy.³ For example, in Queensland, the incidence of BCC is more than 260 per 100,000 populations, way beyond the known incidence of the disease in South Wales among a similar population.¹ Ozone layer in the outer atmosphere filters out this spectrum of the UV light source from the sunrays. With continued depletion of the Ozone layer, basal cell carcinoma

might become more common. Ultraviolet rays are supposed somehow to increase the number of mast cells in the skin which predisposes the area to immuno-suppression thus causing basal cell carcinomas to arise.²

Basal cell carcinoma arises from the pluripotent cells of the epidermis. Its cells form pallasades and resemble the basal layer of the epidermis, hence its name. It is a locoregionally invasive cancer and very rarely metastasise. The incidence of nodal metastases is less than 0.05%⁴ and is particularly high with giant basal cell tumours when neglected for prolonged periods.⁵ Its three main types are superficial, deeply infiltrating and nodular. However, many other subtypes like pigmented, morphoeic, nodular ulcerative, rodent ulcer etc can frequently present.

The commonest site of basal cell carcinoma is head and neck region. Surgical excision is the treatment of choice but radiation

A BASAL CELL CARCINOMA WAS EXCISED THREE MONTHS EARLIER BUT THE HISTOLOGICAL EXAMINATION SHOWED MARGINAL TUMOUR AT 4' O CLOCK.



Fig. I

therapy is equally effective in eradicating the disease. Surgical excision is handicapped by scarcity of tissue and a very narrow margin of excision is included in the specimen. Frozen section biopsy helps greatly in complete excision of the tumour especially when combined with Moh's technique.¹ In the absence of frozen section facility, a greater resection margin should be ascertained. In all cases including frozen section-controlled excision, there is an incidence of 2-5% of incomplete resection. However, not all these patients come back with recurrence on follow up as to various extent, basal cell carcinomas are known to regress at least partially with time.⁶ Similarly, there is a reported incidence of around 5% of local recurrence even with histologically complete resection.

Basal cell carcinoma is especially common in the northern parts of the country. Being the only plastic and reconstructive surgery unit in the province, most of these patients are clustered in our unit. Additionally, we have good rapport with dermatologists and thus these patients often present to us in early stage of the disease though a number of neglected stage IV disease are also encountered.

MATERIAL AND METHODS

This was a prospective study and record of all patients with proven basal cell carcinoma was maintained in computer database from January 1996 to January 2000, at Department of Plastic Surgery, Hayatabad Medical complex, Peshawar. Our database contains information regarding date

of birth and sex, area wise origin of the patient, occupation of the patient, region and sub-class of the lesion, previous medical history regarding the lesion, histological report including status of the margins and depth of the specimen and exact diagnosis. The procedure of excision, margins of excision and reconstructive mode are also mentioned. A regular follow up is maintained.

Patients who were referred to our unit with a preoperative biopsy taken and histology report made available were planned for definitive surgery. On the other hand patients who did not have a histological proof of the diagnosis were subjected to an incisional biopsy before any definitive planning. Exceptions were only those cases of early lesions where total excision could be easily performed without deforming the surrounding structures.

After a confirmed diagnosis or otherwise, a wide excision biopsy would be performed with safe margin of 3-10 mm. A frozen section facility is not available to us and therefore, in diffuse lesions, larger margins were taken and if the lesion was deep or recurrent for many times, reconstruction was deferred for at least six months so that recurrence was excluded.⁷ The specimen was marked at one or more points to guide the histopathologist for correctly orientating the specimen and commenting on the completion of excision. In all cases, there was close liaison with the pathology department as the assistant surgeon would accompany the specimen and explain to the pathologist the dimensions of the specimen. The histology report was interpreted as diagnosis and completion of excision.

Patients' referral source is identified and recruited in the study. The first 100 patients fulfilling the criteria were included in the study but their follow up continued. It is the policy of our unit to review such patients every three months for three years. If there is no recurrence at the end of three years, the disease is considered cured and the patient discharged. Those dropping off follow up were excluded and also those referred elsewhere except for radiation therapy as they were not part of follow up programme of our own unit.

Recurrence was noted as was occurrence of a secondary lesion. Subsequent procedure or radiation was recorded.

RESULTS

As mentioned in the methods and materials, one hundred patients were selected chronologically while excluding those who did not fulfill the criteria. There were only two patients who did not report for follow up even after

RECURRENCE SEEN AFTER TWO YEARS AT THE SAME POINT AS MENTIONED IN THE HISTOLOGY REPORT.



Fig. II

repeated reminders sent to them. Three patients opted to be referred to elsewhere for surgery and radiotherapy. A total of 100 cases in this report are all exclusive of the drop-outs.

Out of these hundred patients, 45 were male patients and 55 female. Their ages ranged from 18 to 105 years with a mean of 56.3 year. A table of various age groups is shown in Fig. I. On the whole the female patients were younger as the average age of the female patients was 40 and that of the male patients was 76 year. The youngest patient was also a female.

There were 24 lesions, which were confused with malignant melanoma because of pigmentation. There were 24 nodular lesions with pigmentation and 21 nodular without pigmentation. Thirty-nine lesions were ulcerated with typical rolled margins while six lesions were of morphoeic type. Ten lesions were of deeply excavating type (true rodent ulcers).

Five patients had had preoperative radiotherapy and thus had radiorecurrent lesion. A similar number had surgery elsewhere and presented to us with recurrence.

Only two specimens were reported as having incomplete excision with involvement of one margin. Both of them declined surgery but agreed to strict follow up and ultimately both showed recurrence after six months and three years (Fig. I and II), respectively. One of them agreed to excision and she has not shown recurrence for the last 6 months. The other patient declined surgery and was referred for radiation. He is also recurrence free for the last 18 months.

DISCUSSION

Basal cell carcinoma is the most frequent

cutaneous malignancy and is characterised by local spread and a less than 0.5% tendency to metastasise to local lymph nodes.⁸ The commonest site of origin is face where radical surgery is made difficult by sparsity of tissues and cosmesis of the results.⁹ Radiotherapy and surgery are known to provide similar chances of cure.⁸ Cosmetic results are variously shown to be superior whether the attending physician is a surgeon or radiation oncologist. However, surgery has one edge over other modes of therapy as the resected specimen is available for detailed analysis, completion of excision and study of perineural spread. Establishment of perineural spread is an ominous sign and should prompt postoperative radiation as the incidence of recurrence or spread to deeper structures is highly expected.¹⁰ In a study of 174 patients treated by surgery and 173 by radiation therapy, at 4 years of follow up, cosmetic results were found to be a lot better after surgery than after radiation.¹¹ Even with superficial lesions and assessed by dermatologists for cosmetic results after cryo-therapy and surgical excision, preference was evident for surgical excision.¹² Being perhaps on the surgical side of the divide, our primary line of management of basal cell carcinoma has been surgical excision except in very advanced cases or where the patient preferred to undergo radiation therapy. Cosmetic results are evident from the few cases we have illustrated in the patients' photographs.

As each specimen was properly marked, histological report on completion of excision was available. General figures for completion of excision are 95% and incomplete in 5%.⁸ In our series this has dropped to 2% because we exercise bigger margin of excision. Thus with availability of frozen section, the completion of excision does not greatly increase though tissue preservation does. Moh's technique increases the chances of complete excision with very little additional sacrifice of normal tissue and thus primary repair becomes easier.¹³ With increasing experience, greater control over completion of excision is achieved and the number of procedures for re-excision or the need for prolonged follow up decreases.¹⁴

With time, the incidence of multiple basal cell carcinomas increase in the prone population and these are the patients who are more suitable for radiation or cryo-therapy as surgical excision becomes difficult especially at the extreme of age.¹²

CONCLUSION

Basal Cell Carcinoma is still common in NWFP as well as the adjoining Afghanistan.

Surgery is a cost effective treatment modality with equal results with Radiation. However, radiation can cause long term scarring and would not give us the proof of complete excision. Pathologist and the surgeon have to collaborate closely to ensure reliable margin reading of the specimen. This study showed that incomplete excision as evident from pathology report was invariably followed by recurrence.

REFERENCES

1. Casson PR, Robins P. Malignant tumors of the skin. In: McCarthy JO (ed) Plastic Surgery, Philadelphia, W.B. Saunders Company, 1990.
2. Grimbaldeston MA, Skov L, Baadsgaard O, Skov BG, Marshman G, Finlay-Jones JJ, et al. Communications: high dermal mast cell prevalence is a predisposing factor for basal cell carcinoma in humans. *J Invest Dermatol* 2000;115(2):317-20.
3. Armstrong BK, Kricger A, English DR. Sun exposure and skin cancer. *Australas J Dermatol* 1997;38 Suppl 1:S1-6.
4. Manstein CH, Gottlieb N, Manstein ME, Manstein G. Giant basal cell carcinoma: A series of seven T3 tumors without metastasis. *Plast Reconstr Surg* 2000;106(3):653-6.
5. Barnetson RS, Halliday GM. Regression in skin tumours: A common phenomenon. *Australas J Dermatol* 1997;38 Suppl 1:S63-5.
6. Niederhagen B, Lindern J, Berge S, Appel T, Reich RH, Kruger E. Staged operations for basal cell carcinoma of the face. *Br J Oral Maxillofac Surg* 2000;38(5):477-9.
7. Petit JY, Avril MF, Margulis A, Chassagne D, Gerbaulet A, Duvillard P, et al. Evaluation of cosmetic results of a randomised trial comparing surgery and radiotherapy in the treatment of basal cell carcinoma of the face. *Plast Reconstr Surg* 2000;105: 2544-2551.
8. Lalloo MT, Sood S. Head and neck basal cell carcinoma: Treatment using a 2-mm clinical excision margin. *Clin Otolaryngol* 2000, 25(5):370-3.
9. Veness MJ, Biankin S. Per ineural spread leading to orbital invasion from skin cancer. *Australas Radiol* 2000;44(3):296-302.
10. Petit JY, Avril MF, Margulis A, Chassagne D, Gerbaulet A, Duvillard P, et al. Evaluation of Cosmetic Results of a Randomized Trial Comparing Surgery and Radiotherapy in the Treatment of Basal Cell Carcinoma of the Face. *Plast Reconstr Surg* 2000;105:2544-51.
11. Thissen MR, Nieman FH, Ideler AH, Berretty PJ, Neumann HA. Cosmetic results of cryosurgery versus surgical excision for primary uncomplicated basal cell carcinomas of the head and neck. *Dermatol Surg* 2000;26(8):759-64.
12. Godek CP, Weinzweig J, Bartlett SP. Lip reconstruction following Mohs' surgery: The role for composite resection and primary closure. *Plast Reconstr Surg* 2000;106(4):798-804.
13. Kumar P, Orton CI, McWilliam LJ, Watson S, Incidence of incomplete excision in surgically treated basal cell carcinoma: a retrospective clinical audit. *Br J Plast Surg* 2000;53(7):563-6.
14. Ramachandran S, Fryer AA, Smith AG, Lear JT, Bowers B, Griffiths CE, et al. Basal cell carcinoma: Tumor clustering is associated with increased accrual in high-risk subgroups. *Cancer* 2000;89:1012-8.

Address for Correspondence:

Dr. Obaidullah
169-E2, St.#7,
Phase I, Hayatabad,
Peshawar – Pakistan 25100