Original Research Paper

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General Surgery

A STUDY OF RECONSTRUCTIVE SURGERIES FOR TISSUE DEFECTS IN THE MANAGEMENT OF HEAD AND NECK MALIGNANCIES

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ABSTRACT

Background: With improved survival in head and neck malignancies by means of surgical excision, the present day impetus is on proper reconstruction of the resulting tissue defects for a better quality of life . Various reconstructive procedures are in vogue for a variety of tissue defects in head and neck.

Objectives:

- To find out various kinds of tissue defects encountered after surgical resection of head and neck malignancies.
- To study the various procedures performed to reconstruct the tissue defects after surgical resection of head and neck malignancies.
- To study the outcome of the reconstructive surgeries performed for tissue defects after surgical resection of head and neck malignancies.

KEYWORDS :

INTRODUCTION:

With better clearance, head and neck cancers have seen improved survival rates"

However the quality of life after surgery depends largely on the functional and aesthetic results achieved by the reconstructive surgery done for the tissue defects.

The basic need for this study is to highlight the various types of tissue defects encountered in surgical management of head and neck malignancies and the various procedures used to reconstruct them.

MATERIALS AND METHODS :

A prospective study was conducted in the surgical wards

METHODOLOGY

Patients admitted for surgical treatment of head and neck malignancy between june 2022 and may 2023 were studied.

Detailed history was taken from the patients and thorough clinical examination was performed. The findings were recorded in the proforma.

The patients underwent either fine needle aspiration cytology and/or open biopsy of the lesion to ascertain the tissue diagnosis.

Imaging modalities like Roentgenograms,sonology and computed tomographic scans were done to assess the extent of the tumor and to look for lymphatic and distant spread when required.

Hemoglobin level, routine urinalysis, blood sugar, blood urea and serum creatinine levels were the basic investigations done for all the patients.

Chest X-ray, electrocardiogram, lipid profile and liver function tests were done when indicated.

Operative details were noted in terms of the resective surgery done, tumor margins, the tissues lost to resection. the size of the resulting defect and the margins of the defect.

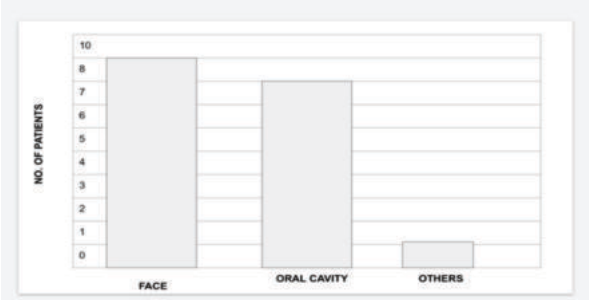
Details of the reconstructive procedure were noted in terms of the timing and the nature of the procedure.

Postoperatively, patients were followed up for occurrence of any major complication, take of the graft or survival of the flap and at a later date for any disability and effects on physical appearance.

The patients were followed up during the study period for any recurrences.

Patients admitted for surgical management of head and neck malignancy are included.

RESULTS:



Tumour character	Present	Absent
Fungation	4	14
Lymphadenopathy	8	10
Distant metastasis	0	18

Procedure performed	No.of cases	Percentage
Split skin graft	1	5.6
Full thickness graft	1	5.6
Rotation flap	2	11.1
Advancement flap	1	5.6
Tenzel semicircular flap	1	5.6
Forehead flap	4	22.2
Nasolabial flap	1	5.6
Deltopectoral flap	1	5.6
PMMC flap	6	33.3

DISCUSSION:

A variety of malignancies occur in head and neck region ar different sites in different stages.

With surgical extirpation being the treatment of choice for a majority of them, a lot of challenge is laid on the reconstructive procedure following the resection.

Given the wide differences in anatomy, functionality and aesthetic implications of the various sites in head and neck, one has to make a right choice from a host of reconstructive procedures available.

It is important at the same time to adhere to the reconstructive ladder using the simplest procedure possible to get the best and the most consistent results.

The number of patients undergoing reconstructive procedure for head and neck malignancy during the study period was 18

All patients except one were aged more than 30 years. The average age of the patients was 53.6 years.

This reflects on the fact that head and neck malignancies tend to occur in older age group.

More than three fourth of the cases in our study were of either basal cell carcinoma or squamous cell carcinoma as squamous cell carcinoma is the most common malignancy in the head and neck mucous membranes and along with basal cell carcinoma, frequently affects the skin of the head and neck region.

The size of the tissue defect ranged from 1cm to 10 cm. In 83% of the cases a primary reconstruction was used as it is reported to be safe.

Owing to the wide variation of tissue defects in size, location and the tissue lost, a variety of reconstructive procedures were utilized.

In only two cases, the skin graft could be used. The most common method used was adjacent flap.

This is preferred in head and neck regions whenever possible as it gives good aesthetic results. When tissue defect was too large and/or involved loss of soft tissue, a distant flap was used.

Pectoralis major myocutaneous flap was used in 33%cases. Free tissue transfer technique was not used in any patient owing to the lack of facilities.

study	No. of cases	Partial necrosis	Total flap failure
other study	50	6%	6%
Present study	6	16%	16%

Graft take were 100% in all the cases. While all the adjacent flaps survived well, PMMC flaps had failures.

While one case (16%) had a superficial tip necrosis, one underwent total flap necrosis. These results with PMMC flap are comparable with study in which three cases (6%) had partial necrosis and a similar number had total flap failure.

Post-operatively, no patient had disability secondary to resection or reconstruction skin-grafts produced mild effect on physical appearance.

Adjacent flaps were found to be the best providing reconstruction without effect on physical appearance in 10% of the cases.

CONCLUSIONS:

Head and neck malignancies affect older individuals mail as a result of cumulative effect of abuse of upper aerodigestive tract with agent like alcohol and tobacco. The lesion at presentation is often too large to leave a defect which can be closed directly.

Hence some form of reconstructive procedure is frequently required by the surgeon treating head and neck malignancies.

Skin grafts along with local, distant and free flaps can be used for reconstruction of the tissue defects left by surgical excision of the tumors when direct closure is not possible.

In our study, local flaps gave better cosmetic results than the distant flaps and are recommended to be preferred to the latter whenever possible.

Large multicentric studies are required to establish the usefulness of various reconstructive procedures in various situations and their relative functional and aesthetic results.

REFERENCES:

1. Watkinson JC.Stell and Maran's head and neck surgery. Ah edition. Woburn(MA): Butterworth-Heinemann, 2000.
2. Butlin, HT Diseases of the tongue. Philadelphia, Lee Brothers. 1885.
3. Blair VP. The influence of mechanical pressure on wound healing. linois Med. J., 46:249, 1924.
4. Blair VP Moore S,Byars LT. Cancer of the face and mouth. St. Louis: Mosby, 1941.
5. Lorenz RR,Netterville JL., Burkey BB Head and neck In Townsend CM,Beauchamp RD, Evers BM,Mattox KL., editors. Sabiston textbook of surgery Elsevier: Saunders, 2004:833-53
6. Green FL, Page DL, Fleming ID, et al (eds): AJCC Cancer Staging Manual, 6' ed. New York, Springer-Verlag, 2002.
7. Sankarnarayanan R, Masuyer E, Swaminathan R, et al: Head and neck cancer:A global perspective on epidemiology and prognosis. Anticancer Res 18:4779-86,1998.
8. Teknos TN, Smith IC, Day TA,et al Microvascular free fissue transfer in reconstructing skull base defects: lessons learned. Laryngoscopel12.1871-76,2002
9. Urist MM, Soong S Melanoma and cutaneous malignancies In Townsend CM, Beauchamp RD, Evers BM, Mattox KL., editors.Sabiston textbook of surgery Elsevier: Saunders, 2004:781-801.
10. Mathes SJ, Nahai F. Selection of the muscle and musculocutaneous flap in reconstructive surgery. In Mathes J, Nahai F. editors. Clinical applications for muscle and musculocutaneous flaps. St. Louis: Mosby, 1982:3-15.
11. McGregor AD, McGregor IA. Fundamental techniques of plastic surgery and their surgical applications. 10th edition. London: Churchill Livingstone, 2000.
12. McGregor AD, McGregor IA. Cancer of the face and mouth. Pathology and management for surgeons. Edinburg: Churchill Livingstone.