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OUTCOME OF SELECTIVE LYMPH NODE DISSECTION V/S RADICAL LYMPH NODE DISSECTION IN CASE OF ORAL CAVITY MALIGNANCIES.

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Abstract:
All the patients had undergone surgical treatment for their primary lesion with cervical lymph node dissection, either radical neck dissection or selective neck dissection with or without radiotherapy after completion of the treatment, all were followed up and the results were studied.
To conclude, the management of the cervical nodes should be highly individualized and different approach should be offered to the patients, explaining the risks and benefits of the various procedures. Selective neck dissection, when used in combination with postoperative radiotherapy, is an efficacious way to manage metastatic squamous cell carcinoma of the neck in early nodal disease (N0, N1, N2a) and is being considered for more and more patients, with good results. For N2b disease and beyond Radical Neck Dissection with post-operative radiotherapy gives best loco-regional control .more studies need to be done with larger data base and multivariate analysis to formulate comprehensive guidelines for the management of neck in cases of oral cavity cancers, so as to have the best results with least morbidity.
Keywords: Lymph, Node, Oral, Cavity, Malignancy & Dissection.

Introduction

Cancers In the head and neck region commonly metastasize to cervical lymph nodes. The term “neck dissection” refers to a surgical procedure in which the fibrofatty contents of the neck are removed for the treatment of cervical lymphatic metastases.[1,2,3] Neck dissection is the most commonly used in the management of cancers of the upper aerodigestive tract. It is also used for malignancies of the skin of the head and neck area, the thyroid, and the salivary glands.

Radical neck dissection was the original surgical procedure described for treatment of metastatic neck cancer Criledescribed the operation in 1906, and until recently, radical neck dissection was considered the standard procedure for management of both occult and clinically positive neck disease in the last 2 decades, a shift toward the use of more conservative surgical procedures has occurred this shift is predicated upon the following 2 important insights that developed over a period of time 1:- the removal of lymphatic tissue is not hindered by preserving adjacent non lymphatic structures and 2:- the specific nodal groups at risk for metastatic disease are predictable on the basis of the size , location and other features of the primary tumour.[4,5,6]

Neck dissection with conservative of non-lymphatic structures was shown by **BoccaGavillan**and others to yield equivalent oncologic outcomes with improved functionalresults. Experimental studies of lymphatic drainage, coupled with clinical studies of the specific location of nodal metastasis within neck dissection specimens, provided the rationale for more targeted surgery.[7,8,9,10] The data allowedfor reliable prediction of the lymph node groups most likely to be involved with metastatic disease from specific primary tumor location and established which lymph node groups carry negligible risk of involvement and may be safely preserved as a result, a great variety of surgical procedures have been described for use in various clinical situations.[11,12,13]

Classification of neck dissections

Principles of classification

The current classification of neck dissections developed by the committee for head and surgery and oncology of the American academy of the otolaryngology head and neck surgery is based on the following governing principles:

- Radical neck dissection is the stimulated basic procedures for cervical lymphadenectomy, and all other procedures represent one or more modifications to this procedures.[14]
- When modification of the radical neck dissection involves preservation of one or more nonlymphatic structures, the procedure is termed a modified radical neck dissection.[15]
- When the modification involves one or more lymph node groups that are routinely removed in the radical neck dissection, the procedure is termed a selective neck dissection.[16]
- When the modification involves removal of additional lymph node groups or nonlymphatic structures relative to the radical neck dissection, the procedure is termed an extended radical neck dissection.[17,18,19]

Objectives

1. Comparison between selective lymph node dissection and radical lymph node dissection on the overall prognosis of the oral cavity malignancies
2. To select the cases with oral cavity malignancies
3. To study the lymphatic metastatic patterns in oral cavity malignancies
4. To study the incidence of various lymph node groups involvement
5. To study the recurrence rates with and without radiotherapy, in both the groups.

Material &Methods

The material for the present study considered of 52 cases of carcinoma of oral cavity registered with the Index Medical College Hospital and Research Centre, Indore, between January 2018 to July 2019. All the patients had undergone surgical treatment for their primary lesion with cervical lymph node dissection, either radical neck dissection or selective neck dissection with or without radiotherapy after completion of the treatment, all were followed up and the results were studied.

In the cases, the various points were noted and recorded, from the time of admission till complete follow up,in the proforma prepared for the same (vide appendix) a thorough history of the complaints was taken at the onset. A history of any significant past illness was recorded particular attention was given to the personal history, with history of tobacco intake, smoking or alcohol addiction recorded. Thorough examination of all the patients was done including general examination and local examination of the oral cavity and the neck nodes. Any ulcer or swelling was examined thoroughly with all the points noted and recorded as in the proforma, including the size of the lesions, their exact location , edge etc. the cervical lymph nodes were examined thoroughly bilaterally any palpable lymph node was noted in the proforma under appropriate level. Through search was done to detect any metastasis, by clinical examination and relevant investigations.

Patient's was categorized as per the TNM classification and treatment was given, as deemed appropriate.

After the completion of treatment, including any radiotherapy (if given), the patients were followed up at each visit, the complaints were recorded and local examination was done to look for any locoregional recurrence. Detailed clinical examination was done to detect any metastasis.

At the end of it, the patients were grouped according to the clinical staging , their lymph node status, the treatment they received for their cervical modes and whether they received radiotherapy or not the results were recorded and studied in various groups .

Observation & results

The present work was carried out to have a comparative study between selective lymph node dissection and radical lymph node dissection in cases of oral cavity malignancies the subjects were studied from January 2018 to July 2019 the following were the observations :-

Total number of cases- 52

Total number of recurrence- 12(10 local + 4 regional recurrence, 2 patients were common to both)

Total number of patients undergoing selective neck dissection – 36

Total number patients undergoing radical neck dissection – 16

Total number of patients receiving radiotherapy – 34

Table 1: distribution of patients according to treatment modality

	No. (n=52)	%
Selective neck dissection	36	69.2
Radical neck dissection	16	30.8

Table -1 shows the distribution of patients according to treatment modality more than half of patients were in selective neck dissection (69.2%) and (30.8%) were in radical neck dissection

Table 2: Distribution of patients according to radiotherapy received

Radiotherapy received	No. (n=52)	%
Received	32	61.5
Not received	20	38.5

Table 2 shows the distribution of patients according to radiotherapy received majority of the patients received radiotherapy (61.5%)

Table 3: distribution of patients according to recurrence

Recurrence	No. (n=52)	%
Local	10	19.2
Regional	4	7.7
Both	2	3.8
No recurrence	38	73.1

Table 3 shows the distribution of patients according to recurrence . there was no recurrence in majority of the patients(73.1%) however , local recurrence was observed in 19.9% patients and regional recurrence was found in 7.7% . both recurrence was seen in 3.8% patients.

Table 4: Total number of patients in each treatment modalities

	No.	%
SOH	17	32.69
SOH+RT	19	36.53
RND	3	5.76
RND+RT	13	25

The majority of patients undergone selective neck dissection

Table 5: Distribution of patients according to gender

Gender	No. (n=52)	%
Male	40	76.9
Female	12	23.1

Table 5 shows the distribution of patients according to gender. majority of the patients were males (76.9%) .

Table 6: Distribution of patients according to lesion

Lesion	No. (n=52)	%
Ca-buccal mucosa	18	34.6
Ca-alveolus	16	30.8
Ca-tongue	15	28.8
Ca-lip	3	5.8

Table 6 shows the distribution of patients according to lesions. Ca-buccal mucosa was seen in 34.6% patients and Ca-alveolus was found in 30.8%. however, Ca-tongue was seen in 28.8% patients and Ca- lip was seen in 5.8% .

Table 7: Distribution of patients according to tumor size

Tumor size	No. of patients		SOH+RT		SOH ONLY		RND+RT		RND ONLY		p-value
	No.	%	No.	%	No.	%	No.	%	No.	%	0.57
T1	3	5.8	1	33.3	2	66.7	0	0	0	0	
T2	32	61.5	14	43.8	7	21.9	9	28.1	2	6.3	
T3	13	25	6	46.2	1	7.7	5	38.5	1	7.7	
T4	4	7.7	2	50	0	0	2	50	0	0	

Table7 shows the distribution of patients according to tumor sizeoverall,T2 was observed in 61.5% patients and T3 was in 25%. T1 was found to be most common in SOH only group (66.7%). there was no significant ($p>0.05$) difference in the tumor size among the groups.

Table 8: Distribution of patients according to nodal status

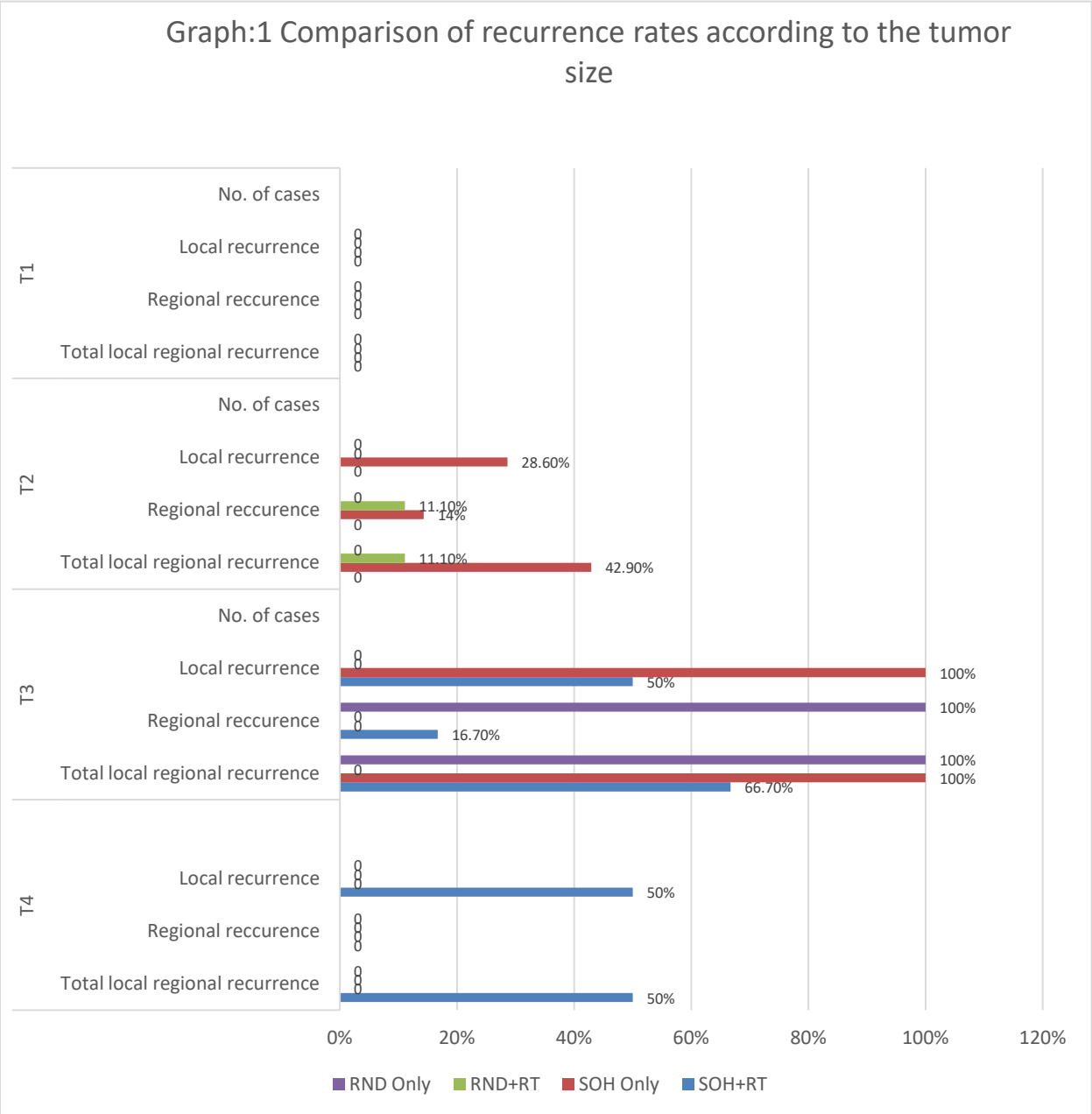
Nodal	No. of patients		SOH+RT		SOH Only		RND+RT		RND Only		p-value
	No.	%	No.	%	No.	%	No.	%	No.	%	0.55
N0	12	23.1	0	0	12	100	0	0	0	0	
N1	16	30.8	8	50	5	31.3	2	12.5	1	6.3	
N2a	9	17.3	6	66.7	1	11.1	1	11.1	1	11.1	
N2b	10	19.2	3	30	0	0	5	50	2	20	
N2c	1	1.9	0	0	0	0	1	100	0	0	
N3	4	7.7	0	0	0	0	4	100	0	0	

Graph 2 shows the distribution of patients according to nodal status. overall ,N1 node was observed in 30.8% patients and N0 was 23.1% .N0 was found to be in all the patients in SOH group .N2a was most common in SOH+RT group (66.7%) . there was no significant (p>0.05) difference in the nodal status among the groups.

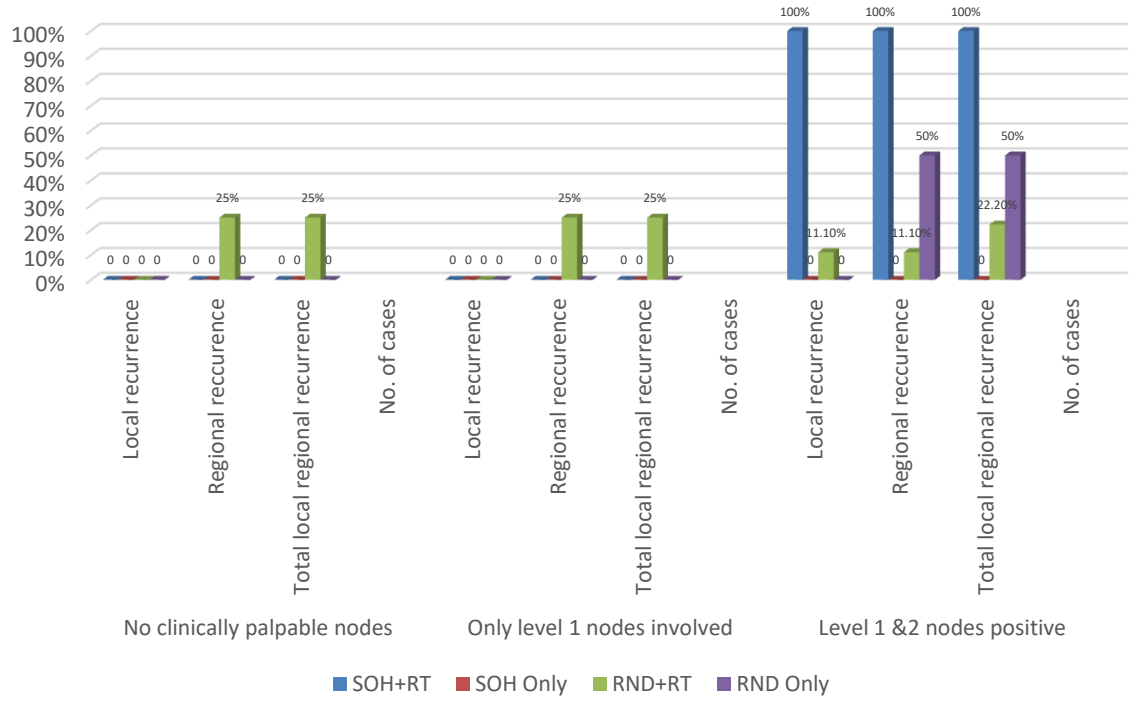
Table 9: Distribution of patients according to the level of nodal group involvement

	No. of patients		SOH+RT		SOH Only		RND+RT		RND Only		p-value
	No.	%	No.	%	No	%	No.	%	No.	%	0.0001
No clinically positive nodes	12	23.1	0	0	11	91.7	0	0	0	0	
Level 1 Only	27	51.9	16	59.3	5	18.5	5	18.5	2	7.4	
Level 1+2	13	25	1	7.7	1	7.7	9	69.2	2	15.4	

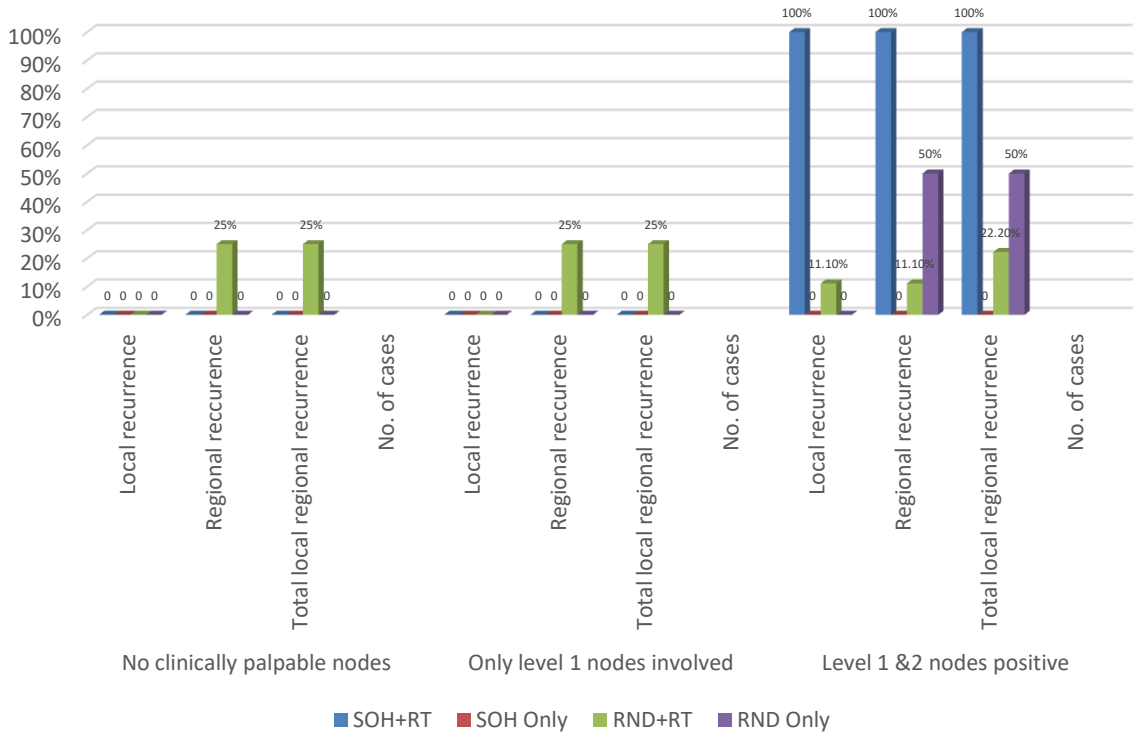
Table 9 shows the distribution of patients according to the level of nodal group involvement. overall ,level 1 only was observed in 51.9% patients and level 1+2 was in 25% .level 1+2 was found to be in 69.2 in RND+RT group . Level 1 only was in 59.3% in SOH+RT group. There was significant (p=0.0001) difference in the level of nodal group involvement among the group.



Graph:3 Comparison of recurrence rates according to the level of nodal group involvelment



Graph:3 Comparison of recurrence rates according to the level of nodal group involvelment



Conclusion

To conclude, the management of the cervical nodes should be highly individualized and different approach should be offered to the patients, explaining the risks and benefits of the various procedures. Selective neck dissection, when used in combination with postoperative radiotherapy,is an efficacious way to manage metastatic squamous cell carcinoma of the neck in early nodal disease (N0,N1,N2a) and is being considered for more and more patients, with good results. For N2b disease and beyond Radical Neck Dissection with post-operative radiotherapy gives best loco-regional control .more studies need to be done with larger data base and multivariate analysis to formulate comprehensive guidelines for the management of neck in cases of oral cavity cancers, so as to have the best results with least morbidity

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