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ORIGINAL RESEARCH

Assessment of management and post- operative complication of head and neck cancer

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Abstract
Background: Surgical resection is the mainstay of treatment for head and neck cancer (HNC). The present study was conducted to assess management and post- operative complication of head and neck cancer.
Materials & Methods: 62 head and neck cancer patients of both gendersunderwent salvage surgery. Parameters such as time between initial treatment and salvage surgery, site, side and post- operative complication etc. was recorded.
Results: Out of 62 patients, males were 40 and females were 22. The site was mouth, lip, oral, or oropharynx in 38, larynx or hypopharynx in 24. Neck dissection was unilateral in 36 and bilateral in 26. Time between initial treatment and salvage surgery was <1 year in 44 and >1 year in 18. Previous treatment performed was radiotherapy in 19, surgery in 18 and none in 25. The difference was significant (P< 0.05). Post- operative complications were major partial flap necrosis in 5, large salivary fistula in 2, hematoma in 3, wound infection in 10, wound dehiscence in 14 and stroke in 2 patients. The difference was significant (P< 0.05).
Conclusion: Post- operative complications were major partial flap necrosis, large salivary fistula, hematoma, wound infection, wound dehiscence and stroke.
Key words: hematoma, Surgical resection, wound infection

Introduction

Surgical resection is the mainstay of treatment for head and neck cancer (HNC), a number of cancers that collectively encompass about 5% of all cancer incidence in the United States.[1] Surgery is used as a single or combined treatment modality. Unfortunately, surgical procedures may be complicated by cardiac, pulmonary, and other comorbid disorders; infection; hemorrhage; shock; renal failure; and thromboembolic events.[2] Site-specific complications, such as dysphonia or dysarthria, airway obstruction, dysphagia, mucositis, and severe pain also may occur as a result of surgery.[3]

Chemotherapyand radiotherapy in some patients with advanced disease, reserving salvage surgery for patients who do not respond to treatment or who have recurrences. This approach

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is based on a theory of organ preservation in patients with squamous cell carcinoma of the larynx and hypopharynx and in selected patients with oropharynx tumors.[4]
Preventing surgical complications of the head and neck is, therefore, imperative for the delivery of high-quality care and improvement of patient outcomes. By knowing and taking into consideration factors associated with postoperative complications, recovery can be enhanced.[5] Nursing interventions implemented to monitor and care for patients at risk for developing complications, promote prevention, and enhance prompt management of symptoms can decrease morbidity.[6]The present study was conducted to assess management and post- operative complication of head and neck cancer.

Materials & Methods

The present study comprised of 62head and neck cancerpatients of both genders. All gave their written consent for the participation in the study. The inclusion criteria for this study were histological confirmation of recurrent squamous cell carcinoma, exclusion of the possibility of a second primary tumor and distant metastasis, and enbloc surgery with curative intent.
Data such as name, age, gender etc. was recorded. All patients underwent salvage surgery. Antibioticprophylaxiswithclindamycinphosphateplusamikacin sulfatewas routinely given at anesthesia induction andforthesubsequent24hours. Parameters such as time between initial treatment andsalvage surgery, post- operative complication etc. was recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Results

Table I Distribution of patients

Total- 62		
Gender	**Males**	**Females**
Number	40	22

Table I shows that out of 62 patients, males were 40 and females were 22.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Site	Mouth, lip, oral, or oropharynx	38	0.04
	Larynx or hypopharynx	24	
Neck dissection	Unilateral	36	0.05
	Bilateral	26	
time between initial treatment andsalvage surgery	<1 year	44	0.03
	>1 year	18	
Previous treatment	Radiotherapy	19	0.12
	Surgery	18	
	None	25	

Table II, graph I shows that site was mouth, lip, oral, or oropharynx in 38, larynx or hypopharynx in 24. Neck dissection was unilateral in 36 and bilateral in 26. Time between initial treatment and salvage surgery was <1 year in 44 and >1 year in 18. Previous treatment performed was radiotherapy in 19, surgery in 18 and none in 25. The difference was significant (P< 0.05).

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Graph I Assessment of parameters

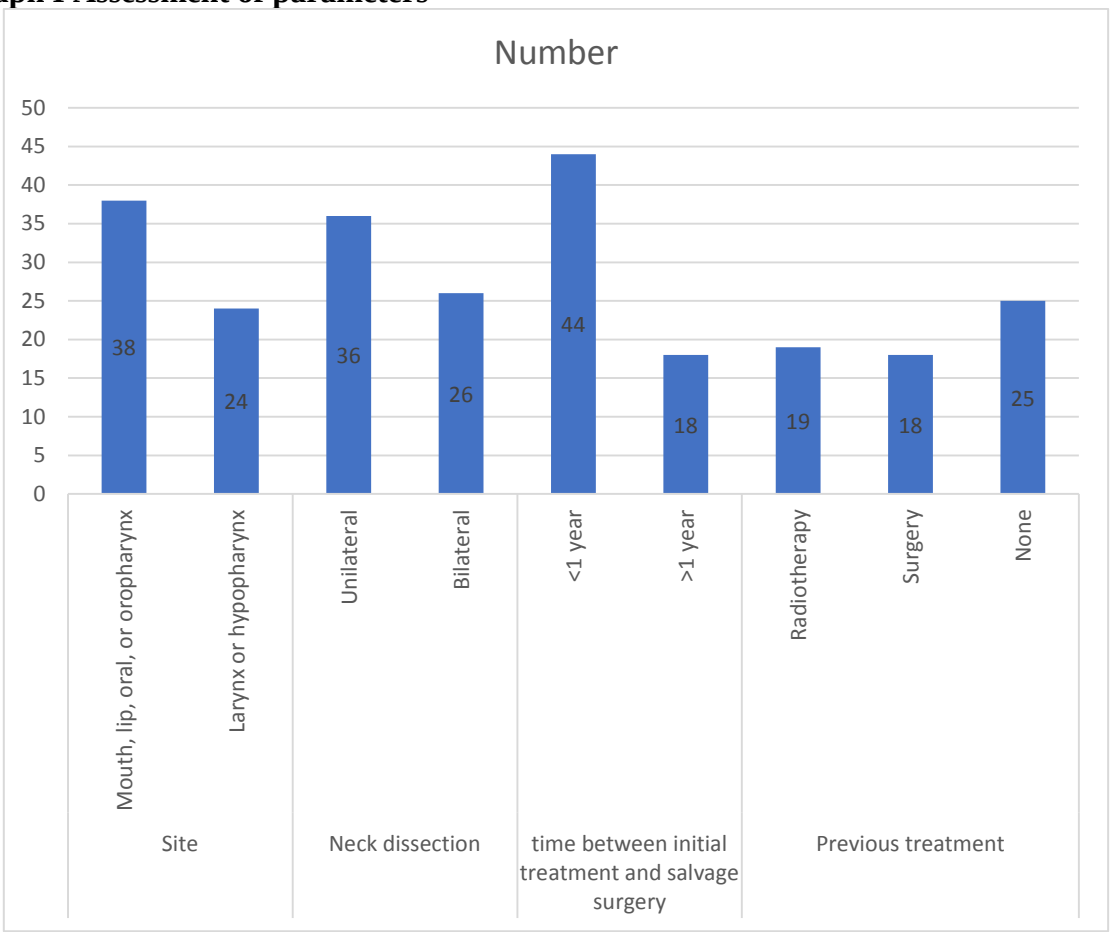

Table III Assessment of post- operative complications

Complications	Number	P value
Major partial flap necrosis	5	0.01
Large salivary fistula	2	
Hematoma	3	
Wound infection	10	
Wound dehiscence	14	
Stroke	2	

Table III shows that post- operative complications were major partial flap necrosis in 5, large salivary fistula in 2, hematoma in 3, wound infection in 10, wound dehiscence in 14 and stroke in 2 patients. The difference was significant (P< 0.05).

Discussion

HNC, although radiation and chemotherapy may in some cases be used as single-modality treatment. For early stages (stages I and II), patients are operated on with curative intent.[7,8] In advanced stages, surgery reduces tumor size, improves QOL, and enables continuing therapy with radiation or chemotherapy. Choice of therapy is determined by patient and physician preference, as well as clinical factors including tumor site, extent of disease, treatment morbidity, nutritional status, and concomitant health problems.[9] Depending on location and stage, patients may need more than one operation for cancer removal and restoration of appearance and function. Surgical interventions include endoscopic sinus surgery, laryngectomy, pharyngectomy, maxillectomy, glossectomy, mandibulectomy, parotidectomy,

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tracheostomy, and neck dissection.[10]The present study was conducted to assess management and post- operative complication of head and neck cancer.

We found that out of 62 patients, males were 40 and females were 22. Agra et al[11]analyzed the frequency of and risk factors for complications after salvage surgery.The tumor location was the lip in 6 patients, oral cavity in 55, oropharynx in 31, larynx in 24, and hypopharynx in 8. Previous treatment was surgery alone in 20 patients, radiotherapy alone in 68, surgery and radiotherapy in 21, and radiotherapy and chemotherapyin 14. An additional patient received chemotherapy alone before salvage surgery. The clinical stage of the recur- rent tumor was I or II in 23 patients and III or IV in 101 patients. Postoperative complications occurred in 66 patients (53.2%). Fifty-three patients (42.7%) had minor complications, and 23 patients (18.5%) had major ones. There were 4 postoperative deaths (3.2%). The major factor associated with the overall occurrence of postoperative complications was the clinical stage of the recur- rent tumor (P =.02). The occurrence of minor complications correlated with the previously treated site, with complications occurring more often in patients under- going locoregional vs local treatment (P=.04). Major com- plications were associated with the time between initial treatment and salvage surgery (P =.05).

We found that site was mouth, lip, oral, or oropharynx in 38, larynx or hypopharynx in 24. Neck dissection was unilateral in 36 and bilateral in 26. Time between initial treatment and salvage surgerywas <1 year in 44 and >1 year in 18. Previous treatment performed was radiotherapy in 19, surgery in 18 and none in 25. Corey et al[12]evaluated postoperative complications in a randomized series of patients with head and neck cancer who received preoperative chemotherapy. Forty-two patients with advanced squamous carcinoma of the head and neck were randomized to receive either high-dose methotrexate with leucovorin calcium rescue (23 patients) or no chemotherapy (19 patients) prior to definitive conventional treatment. The two groups of patients were balanced by sex, disease site, stage, histologic grade, and prior therapy. Sixteen of the 23 patients receiving preoperative chemotherapy had postoperative complications, whereas only eight of 19 patients not receiving chemotherapy had postoperative complications. Surgical complications included wound infections, oro-cutaneous fistulas, and flap necrosis.

We found that post- operative complications were major partial flap necrosis in 5, large salivary fistula in 2, hematoma in 3, wound infection in 10, wound dehiscence in 14 and stroke in 2 patients. The overall management of HNC has evolved into increasingly complex, combined-modality programs and integration of new diagnostic and therapeutic technologies.[13] Unlike other solid tumors involving one organ, HNC encompasses several anatomical structures, each with a set of unique complications. Oral cancer, for instance, has a higher rate of complications related to infection because of the unsterile nature of the mouth. Research studies about the incidence rate of surgical complications after head and neck surgery are, therefore, difficult to compare, and they report a wide range in incidence of complications.[14]

The limitation the study is small sample size.

Conclusion

Authors found that post- operative complications were major partial flap necrosis, large salivary fistula, hematoma, wound infection, wound dehiscence and stroke.

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