

Outcome of neck dissections in a rural tertiary University Hospital in Malaysia

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ABSTRACT

Objective: To determine the outcome of neck dissection among our head and neck cancer patients in the setting of a rural Universiti Sains Malaysia hospital.

Methodology: Neck dissection procedures were reviewed from 2004 to 2008. The medical folders of each patient were traced and the data collected includes diagnosis, type of operative procedure and outcome on follow-up.

Results: A total of fourteen patients had undergone neck dissection as a combined procedure with the primary tumor surgical removal. There were five radical neck and one modified type two radical neck dissections. The rest were eight selective neck dissections (three anterior and five supraomohyoid). Twelve patients underwent unilateral neck dissections and two patients underwent bilateral neck dissections. The average duration of hospital stay was seventeen days, the longest stay was two months and the shortest stay was four days. One patient died secondary to complication of the primary tumor and one had to undergo exploration due to chylous leak post operation.

Conclusions: Neck dissection is a surgical procedure to control neck lymph nodes metastasis from primary carcinoma of the head and neck. The extent of the cervical nodes involvement determines the type of neck dissections and their outcomes.

KEY WORDS: Cervical nodes metastases, Neck dissection, Head and neck cancer.

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INTRODUCTION

The most important prognostic factor in the management of head and neck cancer is the presence of cervical nodal metastasis. Once the tumor involves neck nodes, survival drops by almost 50 %.¹ The classic radical neck dissection became the standard of care in the management of neck nodes for almost 75 years.

The major complication from radical neck dissection was shoulder dysfunction, which led to modifications in neck dissection techniques. Oswaldo Suarez gets the credit for popularizing functional neck dissection where by the spinal accessory nerve is carefully preserved to the extent where tumor involvement allows.²

Description of the location of metastatic disease in the neck based upon the primary site, justified modifications in radical neck dissection.³ We aimed to

Table-I: Distribution of patients according to gender.

<i>Patient</i>	<i>No</i>	<i>Average age (years)</i>
Male	6	47
Female	8	53

determine the outcome of neck dissection among our head and neck cancer patients in the setting of a rural university hospital.

METHODOLOGY

Neck dissection procedures were reviewed from 2004 to 2008 in the Department of Otorhinolaryngology and Head and Neck Surgery, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan. The medical folders of each patient were traced and the data collected. Only those with complete diagnosis, operative record and follow-up record were taken into account.

RESULTS

There were fourteen patients that had undergone neck dissection as a combined operation with the main clearance of the primary tumors. The average age for male patients was 47 years and female patients was 53 years (Table-I).

One patient with thyroid carcinoma and one patient with tongue carcinoma had bilateral neck dissections. The first patient diagnosed as an anaplastic carcinoma was treated by both radical and selective neck dissections while the second patient with carcinoma of the tongue was treated with bilateral supraomohyoid neck dissections. The rest of the cases were unilateral neck dissections; eight cases on the left side and four cases on the right side.

Only one patient had chylous leak as part of the complication. This patient underwent total thyroidectomy and left radical neck dissection. The leak was on the left side and was not documented during operation but was noted as a persistent milky white

Table-III: The type of neck dissection.

<i>Type of neck dissection</i>	<i>No</i>
Radical neck dissection	5
Modified radical neck dissection, type II	1
Supraomohyoid selective neck dissection	5
Anterior selective neck dissection	3

Table-II: Type of primary tumour.

<i>Type of primary tumour</i>	<i>No</i>
Oral/ Maxilla	
* Tongue Carcinoma	4
* Buccal Carcinoma	1
* Mucoepidermoid carcinoma (floor of the mouth)	1
* Maxillary carcinoma	2
Neck	
* Papillary Thyroid carcinoma	5
* Anaplastic Thyroid Carcinoma	1

discharge from one of the neck drain placed post operation. It was noted just a few hours after the patient was allowed to take orally. The leak was repaired during the exploration. There was only one mortality in the series where the cause of death was advanced primary tumor (anaplastic thyroid carcinoma). Overall duration of hospital stay was about seventeen days, with the longest duration was two months and the shortest stay was four days (Table-IV).

Out of the average 22.5 days of hospital stay for selective neck dissection, anterior type of selective neck dissection was the shortest average about four days of admission. The shortest stay was four days in a modified neck dissection (Type-II) procedure and the longest stay was sixty days in a radical neck dissection procedure in one patient with incomplete resection of the primary tumor which required a second operation to clear the residual.

Eight patients had undergone radiotherapy within six weeks post operation whereas four cases had radio ablation therapy and one had defaulted treatment post operation and one patient passed away before any other treatment. No complications at neck dissection site were documented after or during the radiotherapy and radio ablation therapy.

Table-IV: Duration of hospital stay vs. neck dissection.

<i>Neck dissection</i>	<i>Average hospital stay</i>
Radical neck dissection	18 days
Modified neck dissection (Type II)	5 days
Selective neck dissection	22.5 days

The common complaints during follow up were mild neck swelling, pain and discomfort. No shoulder pain, weakness or limited range of movement of the upper limbs especially the shoulders was documented.

The initial follow up for all the cases in the series was a week after discharge to identify any complications such as wound breakdown then subsequently patients were seen at the average of three to six weeks on the second visit and every six to eight weeks. For all the cases that needed radiotherapy or radioiodine ablation therapy the follow up for the procedure were after six weeks post operation.

DISCUSSION

Neck dissection in association with the main removal of primary tumor plays an important role in assuring the oncological control of the tumor. Deciding the type of neck dissection is determined by not only the extensiveness of the primary tumor but also the clinical and investigational findings of the associated and regional lymph nodes in the neck. Complication of each neck dissection must not be overlooked and must be addressed especially if radical neck dissection is performed.

Post operatively, all patients had good recovery except for one patient who developed complication of chylous leakage. Chylous leakage after neck dissection is an uncommon but potentially lethal complication, with an incidence between 1% and 5.8%.⁴

There were no reported complications of shoulder weakness and pain in all the radical neck dissection.

The major complication from radical neck dissection in the literature was shoulder dysfunction. It occurs in all cases after neck dissection with resection of the spinal accessory nerve and in about 22% when the nerve is preserved. It may cause shoulder pain but such pain may also be present in 49% of the cases without signs of dysfunction.⁵

CONCLUSION

The outcome of the neck dissection depends on extensiveness of the primary tumor and the extent of the cervical node involvement. Patients with extensive primary tumour resection and radical neck operation need longer hospital stay and longer rehabilitation.

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