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Case Report

A rare case of abnormally high thoracic duct in neck

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ABSTRACT

Thoracic duct injury can be a cause of significant morbidity if its injury remain undiagnosed during surgery. Knowledge of its course and anomaly should be known to prevent its injury. Presenting a case of 40 year male who was diagnosed to have left buccal mucosa squamous cell carcinoma. During neck dissection, anomalous thoracic duct was found much above the omohyoid muscle. Adequate steps were taken to prevent injury to it. It is necessary to acknowledge thoracic duct and prevent its injury during neck dissection. Knowledge about its anomalous path should be known to prevent its injury. Valsalva manoeuvre should be done at the end of neck dissection to find and thoracic duct injury by observing chyle leak and adequate measures should be taken immediately to prevent morbidity associated with it.

Keywords: Thoracic duct, Neck dissection, Anomalous anatomy of thoracic duct

INTRODUCTION

Neck dissection is an integral part of surgery of oral cavity squamous cell carcinoma.[1] The type of neck dissection depends on clinical staging as well as radiological finding. At present, modified radical neck dissection (MND) is preferred as compared to past where all patients used to undergo radical neck dissection (RND). According to the structure preserved during neck dissection (spinal accessory nerve, internal jugular vein and sternocleidomastoid muscle), MND has been divided into type I,II and III.[2] One structure that is also sometimes encountered during neck dissection and can be a source of significant morbidity when injured and not usually encountered during neck dissection is thoracic duct.[3]

CASE REPORT

Here presenting a case of 40 year male who had carcinoma of left buccal mucosa. On examination, there was almost complete involvement of left buccal mucosa with skin involvement. Upper and lower gingiva-buccal sulcus was free. No neck node was palpable. CT scan neck with intravenous contrast was suggestive of contrast enhanced lesion involving left buccal mucosa with skin involvement. No neck node was enlarged.

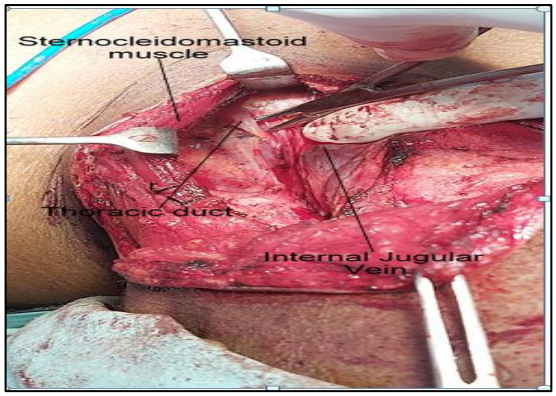

Figure 1: Abnormally placed thoracic duct much above omohyoid muscle.

There was no bony erosion. He underwent modified radical neck dissection with wide excision of left buccal

mucosa along with overlying skin with Pectoralis major myocutaneous flap reconstruction. During neck dissection, a glistening structure was noticed much above the superior border of omohyoid muscle (Figure 1). It was identified as thoracic duct. Adequate precaution was taken to avoid any injury to the duct and surgery was completed.

DISCUSSION

Lymphatic duct drains lymph to the venous system. Right lymphatic duct and the thoracic duct are the two lymphatic duct in the body. Out of two, thoracic duct is the largest one carring lymph from the whole body except for the right sides of the head and neck, the right side of the thorax, and the right upper extremity which are primarily drained by the right lymphatic duct.[4,5] Thoracic duct carries lymph from abdomen and left side chest. In the thorax, it ascends in the posterior mediastinum between esophagus and aorta, crosses from right to left at the level of D7 vertebrae and at the level of D5 vertebrae ascends on left side, comes out of thoracic inlet for a distance of 2-3 cm above clavicle, arches behind common carotid artery, inter jugular vein and vagus nerve to drain at the junction of subclavian vein and internal jugular vein. There are many physiological variations in the course of the thoracic duct, one of the most rare being right sided thoracic duct.6 The abnormal course of the thoracic duct predisposes it to traumatic injury during thoracic, cardiac, or head and neck surgeries.[6-8]

No previous paper can be found out which describes the abnormally high thoracic duct on the left side of neck.

CONCLUSION

This case gives us an insight into the abnormal position of thoracic duct which should always be kept in mind while performing neck dissection and even supraomohyoid neck dissection. Even while performing right sided neck dissection, a rare possibility of right sided thoracic duct should be kept in mind. Also after performing neck dissection, thorough evaluation of bleeding and thoracic duct injury should be performed particularly after valsalva manoeuvre.

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