

## LATERAL TRACHEOSTOMY IN AN EXTENSIVE CUTANEOUS HEMANGIOMA PATIENT

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### ABSTRACT

Midline tracheostomy is a common procedure in Otorhinolaryngology. The indication varies from one patient to another. It is performed mainly in emergency situations to provide effective airway. Some elective surgery for example surgery involving oral cavity may need tracheostomy. However, in some cases, lateral tracheostomy may be needed. We describe a case of a man with extensive cutaneous hemangioma crossing midline in which a lateral tracheostomy is needed.

**KEYWORDS:** Lateral tracheostomy, Neck hemangioma.

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### INTRODUCTION

Tracheostomy is a surgical procedure to provide airway bypassing the anatomical dead space. The indications include prolonged ventilation, upper airway obstruction, tracheo-bronchial toilet or to provide an airway for patient undergoing major surgery involving oral cavity lesion. The procedure is usually done in a standard manner by making a midline horizontal incision, retracting the muscles laterally and exposing the trachea. In some exceptional cases, a modification of this technique may be needed.

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### CASE REPORT

A 49 years old Malay male was diagnosed to have olfactory meningioma. Premorbidly, he was having an extensive cutaneous hemangioma which involved half of the head. The lesion on the neck slightly crossed the midline (Fig-1). He was posted for general anaesthesia for the tumour excision by neurosurgical team. Post operatively, he showed poor recovery which necessitated prolonged ventilation up to nine days via endotracheal tube. In addition, he was having a lot of tracheobronchial secretion.

Tracheostomy was planned indicated by prolonged ventilation, tracheobronchial toilet as well as poor recovery in term of Glasgow Coma Scale. Efforts were made not to incise on the lesion as cutting on it would predispose to the unwanted outcome later on.

The patient was placed in a supine position under general anaesthesia. The anterior and left lateral side of the neck were cleaned and draped. A four centimeters horizontal incision was made along the skin crease, starting at few millimeters from the edge of the lesion up to the anterior margin of left sternocleidomastoid



Figure-1: The extension of cutaneous hemangioma crossing midline in the neck.

muscle. It was about one centimeter from the midline. Subplatysma skin flaps were raised. The left strap muscles were divided with electrocautery to expose the anterolateral side of the trachea. Thyroid isthmus was retracted upwards.

By using the number 11 surgical scalpel, a window was made on the 3<sup>rd</sup> and 4<sup>th</sup> tracheal rings on the anterolateral surface of the trachea. Tracheostomy tube sized 7.5 mm was inserted with minimal difficulty (Fig-2). It was exteriorized through the most medial aspect of the incision. The left flange was anchored to the skin by using non-absorbable suture. Strap muscles were opposed and the skin was closed as in usual manner.

The tube was in place during the subsequent follow-up on the next week. However the patient was still dependent on the mechanical ventilation and the weaning was in progress. Tracheostomy tube was in place and no immediate and early complications noted. However, due to the underlying intracranial problems, the patient managed to be ventilator independent only after four weeks post-tracheostomy. The patient also developed few episodes of positive cultures grew from tracheal secretion swab. He was managed by regular tracheobronchial toilet as well as with antibiotic.



Figure-2: The laterally placed tracheostomy tube.

Reassessment of the tracheostomy was made after three months post operation when the acute problems were settled. However, in view of the patient's poor GCS, continuously bedridden which necessitate regular tracheobronchial toilet, he was kept on permanent tracheostomy.

## DISCUSSION

Midline elective tracheostomy is the standard procedure for patients indicated for tracheostomy. However, there are several reported cases in which lateral tracheostomy were indicated. Patients with anterior neck mass especially in the inoperable cases may require laterally placed tube. The lateral tracheostomy using tracheoflex tube was reported to be performed on a patient with advanced anaplastic thyroid carcinoma presented with a big neck mass and an upper airway obstruction.<sup>1</sup>

It has also been described for six patients with high spinal cord injury who underwent anterior cervical fusion.<sup>2</sup> No complications such as bleeding from the wound, pneumothorax and air leak or tube displacement were encountered in this group.

Securing the laterally placed tube is much more challenging as it is more prone to get dislodged. Although it is a common practice to suture the lateral edges of the two flanges to

the skin,<sup>3</sup> it was not possible in our case as the right flange was on the tumour. Biting with the needle into the tumour tissue may cause bleeding and possibility of tumour seeding. Implantation of cancer cells from needle biopsy has been reported in a wide range of malignancies.<sup>4-6</sup>

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