

## UNILATERAL VOCAL CORD PALSY FOLLOWING CHEMOTHERAPY FOR LYMPHOMA

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### ABSTRACT

Unilateral vocal cord palsy is not uncommon. The common aetiologies include post neck operation particularly thyroid surgery, trauma to the neck, primary or metastatic neck node or bronchogenic carcinoma. We present a case of a 61 years old Malay gentleman who was diagnosed to have lymphoma and started on usual chemotherapy regime for lymphoma. Later on, he developed unilateral vocal cord palsy. Possible aetiologies were discussed.

**KEYWORDS:** Unilateral vocal cord palsy, Lymphoma.

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### CASE REPORT

A 61 years old Malay male, presented to Hematology Department with complaint of multiple neck swelling. The swelling started on the left side of the neck, which slowly increased in size for the past ten months. It was painless. On examination, there were bilateral multiple neck swelling of various sizes. The largest was 12 x 8 cm, located at the left supraclavicular region. There was also a single left axillary node of moderate in size. Fine needle aspiration cytology (FNAC) result was consistent with Non Hodgkin Lymphoma. He was

referred to Otorhinolaryngology team for excisional biopsy of the lymph node for grading of the disease. Biopsy of the right lower cervical lymph node was done under local anaesthesia. The report came back as Diffuse Large B Cell Lymphoma. Treatment with R-CHOP regime was commenced, which consisted of Rituximab (monoclonal antibody), cyclophosphamide, doxorubicin (adriamycin), vincristine and steroid (prednisolone).

However, one month after the first cycle of chemotherapy, the patient started to develop hoarseness of voice. It was progressive in nature. There was no episode of choking or stridor. Indirect laryngoscopy showed that the patient was having unilateral left vocal cord palsy.

The left vocal cord was in paramedian position. Compensation by the right vocal cord was present. As the phonation gap was minimal, the treatment was conservative. Recent computed tomography of the brain showed no abnormality or any focal pathology that suggest active lesion or previous cerebrovascular accident.

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## DISCUSSION

Vocal cord palsy may be unilateral or bilateral. The nerve affected can be the vagus main trunk, or the branches namely superior laryngeal and recurrent laryngeal nerves. Usually, the left side is more commonly affected than the right. It is due to the longer course of the left recurrent laryngeal nerve that travels down and hook around the arch of aorta.

Causes of vocal cord palsy, apart from the 30% of idiopathic causes are numerous. High vagal lesions can be due to intracranial tumour of posterior fossa or basal meningitis, skull base fractures, nasopharyngeal cancer and glomus tumour. Low vagal trunk lesion or specifically recurrent laryngeal nerve lesion can be due to the pathology in the neck or mediastenum.

With regards to our patient, there are few possibilities of aetiology. Cervical lymphadenopathy in general and lymphoma in specific has been identified to be the causes described in the literature. Malignant lymphoma was reported to be one of the unusual paratracheal mass presenting as vocal cord palsy.<sup>1</sup> However, in this patient, the development of the vocal cord palsy was not during the progression of the lymph node size but rather during the resolution phase while he was undergoing chemotherapy. The good response to chemotherapy was documented in serial computed tomography scan done after every three cycle to this patient.

The excisional biopsy procedure, as it involved the neck region also can be the possible aetiology. However, the biopsy performed in this patient was very superficial and rather was performed on the right, which was on the opposite side of the vocal cord palsy. The other possibility was that the entrapment of the nerve in the fibrotic tissue post chemotherapy. As chemotherapy induced cell shrinkage and fibrosis, the nerve also can be trapped, either in the neck, mediastenum or in the lung. This

was consistent with the presence of bilateral apical and anterobasal lung fibrosis.

BV Burns et al 1998 has reported two cases of unilateral vocal cord palsy following vinca alkaloid treatment in lymphoma patients. It was described that the vinca based chemotherapeutic agents namely vincristine and vinblastine are neurotoxic. However, the usual paralysis is seen as the result of peripheral neuropathy, and cranial mononeuropathies are a rare side effects.<sup>2</sup> In addition, most patients experience predominantly sensory neuropathy which may progress to motor involvement.<sup>3</sup> Autonomic neuropathy is also relatively common, manifesting as constipation or urinary difficulties.

Vincristine has been used as an anti cancer drug since 1960s for hematological malignancies and some head and neck tumours. Common side effects of vincristine include fatigue, numbness and tingling sensation, constipation, infertility and alopecia. However, most of these symptoms are temporary and usually subsides after two months of finishing vincristine treatment.

## CONCLUSION

In conclusion, although it is very rare, vinca based chemotherapeutic agent should be considered as one of the causes of vocal cord palsy especially after the common aetiologies has been ruled out.

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