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CORRESPONDENCE

Vincristine Induced Reversible Vocal Cord Palsy in a Young Adult

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Dear Editor,

Vincristine is a type of vinca alkaloid, with a well-known efficacy for the treatment of acute lymphoblastic leukaemia (ALL). Though vincristine is known for neurotoxicity, cranial nerve involvement is rare [1, 2]. Vincristine induced vocal cord palsy is a potentially reversible condition. The mainstay of therapy is withdrawal of the offending drug. However, there are no clear guidelines regarding the possibility of re-treatment with the causative agent.

No more than 20 cases with vincristine induced vocal cord palsy have been reported. The Stollery Children's Hospital, Canada on retrospectively reviewing the 293 cases involving vincristine therapy at their institution from 2002 to 2007, identified 4 children with vincristine induced vocal cord palsy, whereas only 10 paediatric patients are in the English-language literature since 1966, which probably means that this condition is under reported [2].

A 17-year-old male with B cell ALL was being treated with BFM-90 (Berlin-Frankfurt-Münster) protocol. Ten days after receiving the fourth dose of vincristine (1.5 mg/m^2), he developed hoarseness of voice. There were neither any previous clinical symptoms of neuropathy nor any history for inherited neuropathies. A contrast enhanced computed tomographic (CT) scan of neckand also the magnetic resonance images (MRI) of brain were normal. Flexible fibreoptic endoscopy showed both vocal cords in intermediate position with loss of movement of both vocal cords. There was loss of deep tendon reflexes also. The nerve conduction velocity studies showed generalised sensorimotor axonal peripheral neuropathy. His subsequent doses of vincristine were stopped. Then gradually his hoarseness of voice started resolving after 15 days and resolved completely 30 days after the onset of palsy. Subsequent laryngoscopy and flexible fibre opticendoscope were not done. He completed his consolidation and re-induction phase uneventfully. Since more than 6 month she is in maintenance phase and is doing fine.

Vincristine related vocal cord paralysis has been reported infrequently in the literature. Vincristine neurotoxicity is more severe when more than the recommended dose is given, if the patient is hypersensitive to this drug, if there is pre-existing liver dysfunction or a hereditary neuropathy, and if other drugs such as allopurinol, erythromycin, isoniazid, mitomycin C, phenytoin, and itraconazole are concomitantly used [3].

Hoarseness, secondary to upper airway infection, such as laryngotracheobronchitis, should be excludedby clinical and radiographic examination [4]. Visualization of the airway confirms the diagnosis and rules out treatable causes of stridor in the febrile, immunocompromised patient.

Involvement of vocal cords may be unilateral or bilateral but it is the left side which is predominantly involved [2].

Paralysis appeared in most cases during induction phase only implying that even small doses of vincristine is toxic to the nerves. The first case series in paediatric patients by Annino et al. [4] reported that by reducing the dose of Vincristine from then used 0.05 mg/kg to 1.5 mg/m^2 reduced the incidence of vocal cord palsy. The neurotoxicity has a varied presentation. Few children have generalized neurotoxicity like hypotonia, decreased

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gastrointestinal motility and painful paraesthesia, while laryngeal nerve paralysis may be the only neurotoxic manifestation in the other patients [2].

No age is immune. It has been described in infants also. All cases resolved spontaneously upon withdrawal of the vincristine. The neuropathy typically resolves following cessation of the drug; however, recovery times vary, from days to months [5].

Vinca alkaloid-induced vocal cord paralysis is a potentially dangerous but reversible lesion. Most of the authors documented that complete recovery of vocal cord paralysis required six to 9 months [5].

Compliance with Ethical Standards

Conflict of interest The authors have no conflicts of interest to disclose.

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