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Vinca alkaloids induced peripheral neuropathy: Case series

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Statement of Problem: Peripheral neuropathy is one of the commonest side effects of vinca alkaloids due to decreased level of serum folate and vitamin B 12, underlying hepatic impairment and concurrent drugs which decrease vinca alkaloids hepatic metabolism. Although lot of research is done in western countries but incident is less studied in eastern population. The purpose of this study is to find out the etiology of vinca alkaloids induced peripheral neuropathy in local population. Research in our study was done on seven patients; case series of seven patients who suffered from vinca alkaloids induced peripheral neuropathy.

Findings: Only one out of seven patients had low serum folate acid level while rest of the parameters were normal. Baseline renal hepatic functions were normal in the listed patients; most common symptoms were numbness and tingling of hands and feet. Weakness of arms or legs was also observed in some patients. Most patients developed these symptoms after 3-4 cycles of vinca alkaloids, showing a dose dependent pattern.

Conclusions & Significance: The study findings are slightly contrary to data available which showed vinca alkaloids induced peripheral neuropathy associated with low serum folic acid level or deranged hepatic functions. More than half of the patients developed peripheral neuropathy after receiving at least 3 doses of vinca alkaloids. This seems in relation with the cumulative dose rather than after a single dose incident; almost all patients had advanced stage disease. Two patients later diagnosed to have CNS disease that may be contributing to symptoms of patients as well. So it is important to rule out CNS disease in non-Hodgkin lymphoma patients, in particular if PN symptoms are getting worse even after stopping the culprit agent. So it became very evident from the study that patients suffering PN had very different risk factors from those described in literature.

Recommendations: As most of the literature and research work is done in western countries, the result from this study strongly emphasizes the need of research in eastern population and so that we may be able to find a comprehensive etiology to modify drug therapy accordingly.

Biography

Shahbaz Ahmad Khan is Senior Clinical Oncology Pharmacist in Shaukat Khanum Cancer Hospital, Pakistan with 7 years of experience in Oncology. His area of interest is optimization of cancer drug therapy for cancer patients. He did Master of Philosophy in Pharmaceutical Sciences after PharmD. He also holds MBA degree to improve his management skills. He has participated in several phase III drug trials in his organization with multinational companies. Currently, he is working closely with oncologist and research team in SKMCH & RC to identify the underlying side effects and toxicities caused by cytotoxic drugs in cancer patients. His research work ifosfamide induced peripheral neuropathy is also in process for publication. His keen interest is to address the etiology and to suggest the appropriate treatment for anticancer drug therapy. He is also involved extensively in education and training of cancer drug therapy nationwide to raise the level of oncology services in country.

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