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Gemcitabine Induced Skin Rash

Gemcitabine is used in various carcinomas like lung cancer, pancreatic cancer, bladder cancer and breast cancer in adults. It is considered to be a well-tolerated drug with little known side effects [1]. The reported toxic effects of gemcitabine include myelosuppression, altered liver function tests, flu-like syndrome, bronchospasm, rash, itching, and fever [2]. Skin reactions are rarely reported [1-4], the reported incidence being 7%–30% [4].

Gemcitabine has not been frequently used in pediatric malignancies and to our knowledge there is only one paper describing skin rash in children with the use of gemcitabine [5]. A 8-year-old boy was admitted in our hospital because of fever and multiple swellings on both sides of his neck in March 2012. On examination, multiple bilateral cervical lymph nodes were palpable. Abdominal examination showed hepatosplenomegaly and rest of the systemic examination was normal. Biopsy of cervical lymph node suggested Hodgkin's disease. Diagnosed as stage III B Hodgkin's disease, he was treated with adriamycin, bleomycin, vinblastine and dacarbazine (ABVD) based chemotherapy. Re-evaluation following 4 cycles of chemotherapy revealed progressive disease, so patient was put on ifosfamide, gemcitabine, vinorelbine and prednisolone (IGV) based chemotherapy. Gemcitabine 800 mg/m² was given on days 1 and 4, vinorelbine 20/m² mg on day 1, ifosfamide 2000 mg/m² on day 1 to 4 and Prednisolone 2mg/kg from Day 1 to 4 of each 21-day cycle. On Day 3 of treatment child developed a maculopapular, itchy skin rash. The rashes involved the neck, chest, back, upper arms and abdominal wall. It subsided in severity within 4-5 days with the use of oral antihistamine. However, it reappeared again on day 5 on repeat challenge with gemcitabine during second cycle of chemotherapy.

The skin lesions were again easily managed with oral antihistamines.

The other drugs being used in this child also cause skin rash and the possibility of this reaction due to them, or additive effect of all the drugs cannot be ruled out. Dermatologic side effects of vinorelbine including alopecia (12%), rash (<5%), pruritus, blister formation, skin sloughing, and urticaria have been reported and with ifosfamide, even rare (affect between 1 in 1000 and 1 in 10,000 people) includes rash and dermatitis. The causal relationship of gemcitabine treatment with skin reaction is probable in our case according to the Naranjo probability scale.

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