

CASE STUDY ON IFOSMADIDE-INDUCED CYSTITISSRINIVAS PASULA^{1*}, SYEDA ZAINEB HUMAIRA HUSSAINI², NAGARAJU GV³

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ABSTRACT

Adverse drug response elaborates, is response to the drug which is caused to an organ or tissue damage for normal dose in the patients for the prophylaxis, 22 years male patient was hospitalized with complaints of relapsed Hodgkin's lymphoma (HL) using post-Adriamycin, Bleomycin, Vinblastine, and Dacarbazine regimen. The patient had treated HL with ICE regimen, after 24 hours of treatment with prescribed the ICE regimen, The patient was observed with following symptoms like vomiting, painful burning micturition and laboratory investigations reported. Abnormal then we suggested Mesna 3 days for prophylactic course then symptoms were not found and patient was discharged. We conducted Adverse drug reaction (ADR) assessment was resulted as probable type and we can probably prevent this type of ADR.

Keywords: Hodgkin's lymphoma, Adriamycin, Bleomycin, Vinblastine, Dacarbazine Regimen, Adverse drug reaction, Ifosfamide, Mesna, Prophylactic treatment, Serum creatinine.

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INTRODUCTION

It is described as a dispersed inflammatory state of the urinary bladder due to an infectious or non-infectious etiology and produces bleeding from the bladder mucosa. The most regular common reason is behind N. bacterial infection that usually responds promptly to treat the bacterial infection is the most common cause for bladder cystitis and it is responded to proper treatment. However, patients are diagnosed with prolong or relapsed hemorrhagic cystitis, those patients under the treatment of malignancies for the region of pelvic. Infectious etiologies remain limited in common causes of prolonged hemorrhagic cystitis without having in hosts like immunocompromised patients already under bone marrow transplantation and these cases are challenging and frustrating problems for the urologists and a source of much morbidity and sometimes patients are also death [1].

CASE STUDY

Twenty-one years of a male patient were admitted in the Basavatarakam Indo American Cancer Hospital and Research Institute (Hyderabad) with the known case of relapsed Hodgkin's lymphoma (HL) post-adriamycin, bleomycin, vinblastine, and dacarbazine. On the day of admission (4-11-1019), physician prescribed ICE regimen (ifosfamide, carboplatin, and etoposide) and he goes chemotherapy using the above regimen. He does not have any chief complaints and clinical examinations include blood pressure (BP) – 120/70 mmHg, PR – 80 bpm, and temperature includes 98°F, height – 170 cm, and weight – 83 kg and next day progress includes, he is conscious and coherent but he experienced vomiting and painful burning micturition, vitals include BP – 130/60 mm/Hg, PR – 76 bpm, and temp – 98°F, investigations include HB – 13.6 g/dl, WBC – 22, 400, and PC – 2.8 Lakha. Day after tomorrow, that is, November 7, 2019, he developed suprapubic pain – withheld chemotherapy yesterday (November 7, 2019) serum creatinine (SCR) – 0.99 mg/dl, clinical pathology (complete urine analysis) investigations include volume – 25 ml, color – pale yellow, appearance – clear, urine for pH – 6.0, specific gravity – ≥ 1.030 . Proteins +Ve, pus cells – 2–3, epithelial cells – 10–15, and remaining all are normal and by the assessment of the above clinical feature and complete urine analysis, oncologist opinion is cystitis with no hemorrhage.

Suspected drug

IV. Ifosfamide
Dose: 3500 mg.

Adverse drug reaction (ADR) management

After the 1st day of chemotherapy, the patient developed severe pain suggestive of cystitis. Patient managed with IV mesna and adequate hydration, the patient continued with the rest of chemotherapy with adequate supportive care along with medication.

Casualty assessment

Using the above case data, we were done a casualty assessment for using the WHO and Naranjo scales for the assessment of the relation between the drug reaction and it will show in below displayed, Tables 1 and 2.

DISCUSSION AND CONCLUSION

In the view of ADR, the WHO defines any response to the drug which is caused to any organ or tissue damage for normal dose in the patients for the prophylaxis. According to the ifosfamide is the drug used for the treatment of HL, in this patient is previously suffered from the HL disease, so far we are managed by above conditions using ICE regimen. But unfortunately, the patient has developed cystitis hemorrhage, this ICE regimen, especially ifosfamide, has strong evidence of hemorrhagic cystitis these data available from Manikandan [1] and micromedex.com [2] also demonstrate above-suspected drug have the same adverse drug reaction [3]. Hence, by the analysis of both primary and secondary resources and patient compliance, that is, SCR and complete urine analysis, we confirmed that above condition is caused by ifosfamide, we are treated with mesna for cystitis after 3 days, the patient was Relived from symptoms and he was discharged. We conducted casualty assessment with reference to the WHO's scale and Naranjo scale and using preventability and predictability assessment shows probably the preventable undergo category of Type-A. Finally, we educated the patient and created awareness on ADRs and instructed the patient that in case of undesirable effects were found while medication notify it to clinical Pharmacist, Physician or any health care professionals in ward. As a responsible clinical pharmacist, we are having sound knowledge about ADRs we directly interact with the patients by daily ward round participation along with medication history interview and patient

Table 1: Casualty assessment for suspected ADR

ADR scale	WHO-UMC	Naranjo
Assessment	Probable	Probable

ADR: Adverse drug reaction, UMC: Uppsala Monitoring Centre

Table 2: Analysis of observed ADR

Severity assessment	Moderate level - 4(A)
Preventability	Probably preventable
Predictability	Type - A

ADR: Adverse drug reaction

counseling, by doing the above activities, patients are directly beneficial and the prolongation of hospital stay also decreased and it will also enhance the quality of life to the patients.

AUTHORS' CONTRIBUTIONS

Srinivas Pasula presented extraordinary contributions to interpretation, procurement of data, took part in drafting the article or reviewing it critically for important intellectual content, final endorsement of the version to be published, and agreed to be accountable for all perspectives

of the work. Syeda Zaineb Humaria Hussaini presented extraordinary contributions to interpretation, procurement of data, took part in drafting the article or reviewing it critically for important intellectual content, final endorsement of the version to be published, and agreed to be accountable for all perspectives of the work. G.V.Nagaraju presented extraordinary contributions to interpretation, procurement of data, took part in drafting the article or reviewing it critically for important intellectual content, final endorsement of the version to be published, and agreed to be accountable for all perspectives of the work.

CONFLICTS OF INTEREST

The author declared that there are no conflicts of interest related to this study.

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