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Case Report

Sumag (sulphacetamide) induced allergic reaction, aggravating superficial thrombophlebitis

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ABSTRACT

Adverse drug reaction (ADR) is not only require early identification of the offending drugs but also requires proper care and management of complications. Also adverse drug reaction need to be differentiated from the problem unrelated to the drug so that needed medications are not unnecessarily stopped. Adverse drug reaction may be unpredictable and represent a life-threatening risk. ADR can also complicate the management of any infection. This case report provide the precise clinical course of a rare ADR.

Keywords: Adverse drug reaction, Offending drugs, Unpredictable, Life-threatening risk

INTRODUCTION

An adverse drug reaction (ADR) is an unwanted, undesirable effect of a medication that occurs during usual clinical use.[1] ADRs occur almost daily in health care institutions and can adversely affect a patient's quality of life, often causing considerable morbidity and mortality. Adverse drug reactions may cause patients to lose confidence in or have negative emotions toward their physicians and seek self-treatment options, which may consequently precipitate additional ADRs.[2] Although it is difficult to predict the incidence of nonfatal ADR, serious and fatal ADR incidence are overall extremely high.[3] In Nair et al study five cases of deaths were reported from adverse drug reaction.[4] Similarly in the study of Ramesh et al 1.8% had fatal ADR.[5] An ADR is associated with a significantly prolonged length of stay, increased economic burden, and an almost 2-fold increased risk of death.[6] So, it is important to report fatal as well as nonfatal ADR, as it helps the not only physician but also the regulators to take preventive measures to reduce the morbidity and mortality. We report a case that is adversely affected by ADR.

CASE REPORT

A 75-year-old man who had presented with complete heart block was planned for permanent pacemaker implantation. On the day of procedure pre-operative medications like injectables ticoplanin, avil, hydrocortisone and aciloc was given and dual chamber permanent pacemaker inserted through left subclavian vein. Around after 12 hours of the procedure redness was seen around left wrist where intravenous canula was placed. It was warm and tender and also swelling occurs. We think it was superficial thrombophlebitis, due to intravenous canula. Local heparin jelly was applied but swelling progresses around wrist joint. Surgery consultation was taken as a fear of compartment syndrome, they advised injectable antibiotics clindamycine, meropenem and alternate day local sumag ointment (magnesium sulphate, urea, sulphacetamide sodium, and proflavine in glycerine base) dressing. But swelling progressing proximally (Figure 1). After 4 days instead of decreasing there was gross swelling over left upper limb, also involve pacemaker pocket (Figure 2). Patient was hemodynamically stable but he was febrile of temperature 101^0F. Laboratory tests revealed a

hemoglobin level of 13.5 g per decilitre (normal range, 13.1 to 16.6), total leukocyte count of 5,600 per mm^3 (normal range, 4000 to 10000), platelet count of 1.8 lakh per mm^3 (normal range 1.5 to 3.5). His liver function tests and renal function tests was also in normal.

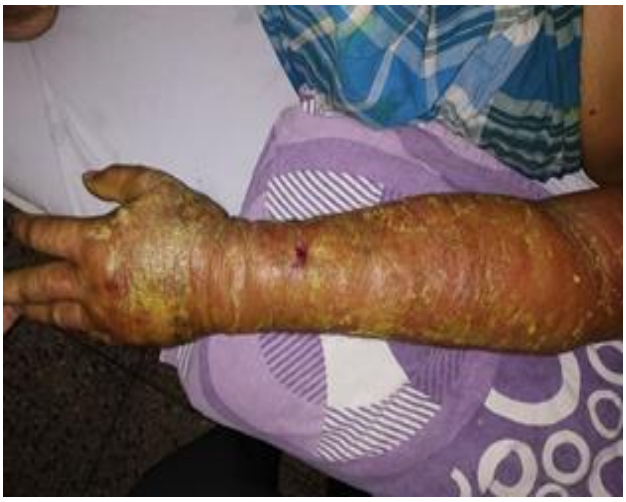

Figure 1: Progressive swelling of the left upper limb.

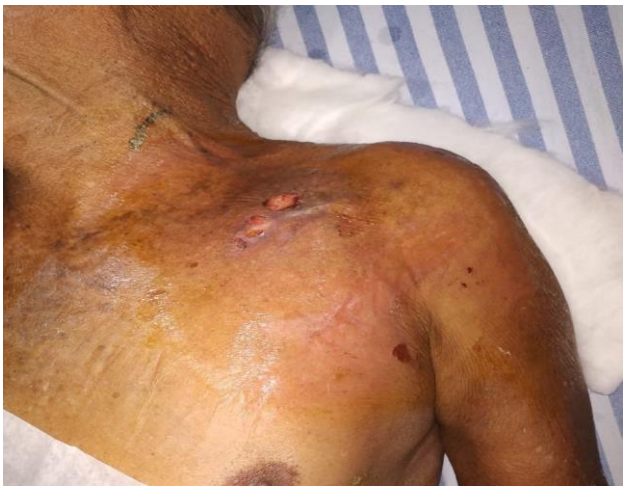

Figure 2: Pacemaker pocket site also affected secondary to superficial thrombophlebitis aggravated by allergic reaction of sumag ointment.

At the pacemaker pocket site secretions was found, so culture and sensitivity test was sent, which was found sterile. On taking detailed history he was found allergic to sulphonamide groups of drug. In view of patient allergic to sulphonamide group of drug, we stopped local sumag ointment dressing as it contain sulphacetamide sodium. After stopping this, the very next day his left upper limb swelling reduced significantly and return to normal (Figure 3).

Later, pacemaker pocket secretion also subsides and site was healthy. On further follow-up dressing of pocket site, wound was healed and patient doing well.

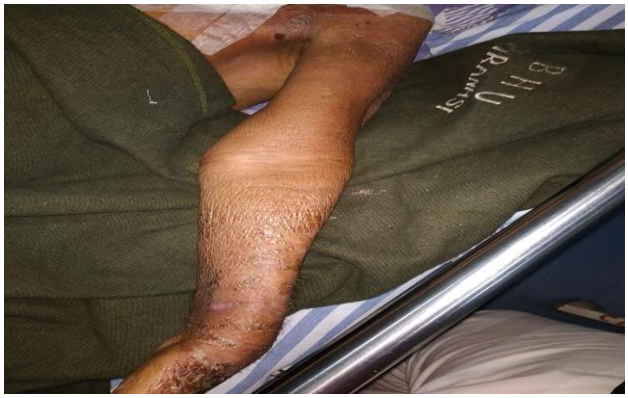

Figure 3: Recovery from inflammation of patient's left upper limb after withdrawal of sumag ointment application.

DISCUSSION

Skin reactions, from benign rash to potentially lethal toxidermias, are the most frequent ADRs to sulphate containing drugs.[7] The mechanisms behind these reactions are not fully elucidated but it is thought that reactive metabolites play a pivotal role.[8] These metabolites induces specific adverse immune response that leads to allergic reactions.[8] There is no valid tools which predict such an unpredictable allergic reaction except careful history and attention.[7] Diagnosis is very important as re-administration of offending drug leads to severe reactions.[7]

Treating an ADR consists mainly of supportive therapy with symptom management. Furthermore, additional steps should be taken to determine the cause of the patient's symptoms and whether they can be attributed to the use of a drug. In our case also when we stopped the application of offending drug sumag which contains sulphacetamide, result was dramatic regression of swelling and pain. This can only be possible with careful review of the patient's medication list. Finally corrective action was taken timely and further follow-up done.

CONCLUSION

It is not possible to completely eliminate ADRs, even with the most sophisticated pharmacovigilance systems in place. It is our duty as a health care practitioner to minimize the occurrence of ADRs by working to prevent them. Prevention is made possible through knowledge gained by the reporting of ADRs to national and global reporting agencies, to drug manufacturers, and in published primary literature. Sharing this information with colleagues and patients will create an awareness of ADR potential and can reduce significant morbidity and mortality.

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