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NSAID Induced Pedal Edema: A Case Report

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Abstract: A 67 years old female suffering from shortness of breath and swelling of both legs since three days.Upon investigation, the patient diagnosed to have suspected anaemia. Shewas admitted in the female medicine department and treated with a loading dose of 240 mg deriphylline IV, furosemide 40 mg, Pantoprazole 40 mg, B-Complex and Iron folic acid. On day 2, no fresh complaints, elevated blood pressure up to 150/90 mm Hg, Hemoglobin was in normal range and treated with Aten 50 mg, amlodipine 10 mg along with same treatment. Past medication history reveals that she is on medication with diclofenac, amoxicillin and pantoprazole for joint pains and fever. Systematically analyzing the ADR report, the pedal edema suspected to have been cause by diclofenac. The elderly are at higher risk because of interaction of prevalent medical problems, multiple drug therapies, and reduced renal hemodynamics.
Keywords: NSAIDs, pedal edema, adverse drug reactions, shortness of breath

INTRODUCTION

Drugs can be remarkably beneficial, lengthening life and improving its quality by reducing symptoms and improving well-being. All drugs have adverse effects and carry the potential of causing injury, even if used properly. Well-gathered, highly representative data about the adverse effects of drugs help physicians use drugs, balancing the benefits and hazards. Nonsteroidal anti-inflammatory drugs (NSAIDs) cause a variety of problems with renal function, including fluid retention; hyperkalemia; deterioration of renal function (generally reversible); and less frequently, interstitial nephritis, papillary necrosis, and even chronic renal failure with prolonged use of high doses. When diclofenac potassium was administered short-term (2 weeks or less), the incidence of adverse effects was about 10-50% of that associated with long-term administration of the drug. Fluid retention manifested principally as edema has occurred in up to 10% of patients receiving diclofenac. Educational efforts have included not only lectures and dissemination of printed material such as newsletters, but also one-on-one educational efforts by clinical pharmacists and clinical pharmacy consultative services.

CASE REPORT

A 67 years old female suffering from shortness of breath and swelling of both legs since three days.Upon investigation, the patient diagnosed to have suspected anaemia. Shewas admitted in the female general medicine department and treated with a loading dose of 240 mg deriphylline IV, furosemide 40 mg, Pantoprazole 40 mg, B-Complex and Iron folic acid. On day 2, no fresh complaints, elevated blood pressure up to 150/90 mm Hg, Hemoglobin was in normal range and treated with Aten 50 mg, amlodipine 10 mg along with same treatment. Past medication reveals that she admit in the same hospital since three weeks with the complaints of joint pains and fever and on medication with diclofenac, amoxicillin and pantoprazole. Later, the physician suspected that it could be due to the diclofenac and hence spontaneously reported as an ADR. Upon systematically analyzing the ADR report, the pedal edema suspected to have been cause by diclofenac.

Fig.1: It displays the NSAID induced pedal edema

Careful literature survey carried out to access the causality of the reported ADR. Literature survey

revealed that diclofenac could cause fluid retention and edema. Upon confirmation of the causality, symptomatic treatment was initiated. NSAID's, including diclofenac, should be used with caution in geriatric patients 65 years of age or older. There is no definite treatment for NSAID induced pedal edema but the symptomatic treatment will be necessary for the patient. Physician attending the patient was adapted this treatment. By afternoon of next three days, the patient blood pressure returns to normal, relieved from shortness of breath and pedal edema. The patient was treated for shortness of breath and pedal edema with deriphylline 100 mg p/o and furosemide 40 mg and was discharged two days later after he was found to be stable.

DISCUSSION

NSAID's exert antipyretic and analgesic effects, but their anti-inflammatory properties that make them most useful in the management of disorders in which pain relates to the intensity of the inflammatory process. Diclofenac is a phenyl acetic acid derivative that is relatively nonselective as a COX inhibitor. Chemically, diclofenac is a 2-aminobenzeneacetic acid derivative [1]. The elderly are at higher risk because of interaction of prevalent medical problems, multiple drug therapies, and reduced renal hemodynamics [2]. Adverse reactions to diclofenac are usually mild and transient; however, adverse effects may be severe enough to require discontinuance of the drug in about 1.5-2% of patients [3]. When diclofenac potassium was administered short-term (2 weeks or less), the incidence of adverse effects was about 10-50% of that associated with long-term administration of the drug [4]. The relationship of the frequency of adverse effects to dosage remains to be established. Patients typically present with complaints of diminished urine output, shortness of breath and edema [5, 6]. Fluid retention manifested principally as edema has occurred in up to 10% of patients receiving diclofenac. NSAIDs have little effect on renal function or blood pressure in normal subjects. NSAIDs are associated with loss of the prostaglandin-induced inhibition of boththe reabsorption of Chloride and the action of vasopressin, leading to the retention of salt and water [7-10].

CONCLUSION

The elderly are at higher risk because of interaction of prevalent medical problems, multiple drug therapies, and reduced renal hemodynamics. The potential benefits and risks of diclofenac therapy as well as alternative therapies considered prior to initiating diclofenac therapy.The present case importantly highlights the importance of adverse drug reaction reporting.

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