Etoricoxib-induced pretibial erythema and edema

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ABSTRACT

Cyclooxygenase inhibitors were developed in the quest of enhanced analgesic efficacy devoid of gastric side effects. Etoricoxib is a second-generation cox-2 inhibitor and as its use increases so do the reports of side effects. We report a case of extoricoxib-induced pretibial erythema and edema; and review the literature.

Key words: Erythema, etoricoxib, edema

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INTRODUCTION

Today's fast pace of life is extremely demanding and people stretch beyond their limits to meet the challenges. Nonsteroidal anti-inflammatory drugs (NSAIDs) are the most widely prescribed medication as well as sold over the counter. Hence there is a constant demand for an effective yet safe analgesic.

NSAIDs are said to function as inhibitors of isoforms of 1 and 2 of cyclo-oxygenase enzyme (COX-1 and COX-2).[1,2] Cox-1 stimulates prostaglandin synthesis. Prostaglandin E2 (PGE 2) has cytoprotective effects in the gastroenteric system. NSAIDs thus produce gastric and renal side effects through their indirect inhibition of PGE-2 and PGI2 synthesis.[3]

Coxibs are a class of NSAIDs designed to inhibit cox-2 selectively. Their development was based on the hypothesis that cox-2 was the source of PGE-2 and PGI2, which mediate inflammation and that cox-1 was the source of the same PG in gastric epithelium where they afford cytoprotection. This prompted the development of selective cox-2 inhibitors (coxibs) such as rofecoxib and celecoxib, second-generation coxibs valdecoxib, parecoxib and etoricoxib.[4] Etoricoxib is a relatively new drug and its adverse effects are not completely known.

CASE REPORT

A 37-year-old woman was referred from the emergency department for complaint of redness on her legs since 2 days. She had experienced pain in her right shoulder for which she had been taking etoricoxib 60 mg orally once daily for 5 days. The rash appeared on the legs on second day of intake of this medication. The redness was not associated with any pain, itching, or irritation. Her past history was not suggestive of atopy. She did not apply any topical medication. On cutaneous examination, diffuse erythema [Figures 1 and 2] was observed below the knees to just above the ankles on both lower limbs. Redness was more evident on the anterior aspect of the leg, similar to that observed in pretibial myxedema except that it was pitting in nature. Local temperature was not raised. Her temperature, blood pressure, and routine investigations and thyroid function tests were all within normal limits. She was advised to withhold etoricoxib. The edema and erythema resolved after discontinuing the medication. Oral challenge test was not done. Naranjo's score[5] in this patient was 5 denoting thereby that this was probably a drug-induced reaction.

DISCUSSION

High usage of etoricoxib by prescription as well as

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Figure 1: Erythema and pretibial edema on legs

Figure 2: Closeup view of the same patient

self-administered routes has led to increase in reports of side effects and adverse reactions including dermatologic reactions in 0.1%–0.3% of cases.[6]

Various studies have been done wherein cases with a history of adverse cutaneous reactions to NSAIDs were challenged with etoricoxib. They have reported varying incidence of cutaneous reactions.[7]

Sporadic cases of etoricoxib-induced acute generalized exanthematous pustulosis[8] and erythema multiforme-like eruption have also been documented[9] as are case reports of erythema and fixed drug eruption induced by etoricoxib.[10]

Drug-induced erythema is a type IV hypersensitivity reaction of the Gell and Coombs classification.[11] Prompt cessation of the incriminating drug results in resolution of the rash. No specific treatment is required; however, topical corticosteroids and/or oral antihistaminics may give symptomatic relief from itching.

Etoricoxib is an effective NSAID with minimal cutaneous adverse reaction reported so far. However in doubtful circumstances, the possibility of any kind of adverse reaction to a drug must be kept in mind. In our case, the diagnosis was corroborated with the help of Naranjo score. To the best of our knowledge, pretibial erythema associated with edema has not been reported so far in any patient receiving etoricoxib.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Fu JY, Masferrer JL, Seibert K, Raz A, Needleman P. The induction and suppression of rostaglandin H2 synthase (cyclooxygenase) in human monocytes. J Biol Chem 1990;265:16737-40.
2. Kujubu DA, Fletcher BS, Varnum BC, Lim RW, Herschman HR. TIS10, a phorbol ester tumor promoter-inducible mRNA from Swiss T3 cells, encodes a novel prostaglandin synthase/cyclooxygenase homologue. J Biol Chem 1991;266:12866-72.
3. Süleyman H, Demircan B, Karagöz Y. Anti-inflammatory and side effects of cyclooxygenase inhibitors. Pharmacol Rep 2007;59:247-58.
4. Fitzgerald GA. Coxibs and cardiovascular disease. N Engl J Med 2004;351:1709-11.
5. Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, Roberts EA, *et al*. A method for estimating the probability of adverse drug reactions. Clin Pharmacol Ther 1981;30:239-45.
6. Settipane GA. Aspirin and allergic diseases: A review. Am J Med 1983;74:102-9.
7. Reginster JY, Malmstrom K, Mehta A, Bergman G, Ko AT, Curtis SP, *et al*. Evaluation of the efficacy and safety of etoricoxib compared with naproxen in two, 138-week randomised studies of patients with osteoarthritis. Ann Rheum Dis 2007;66:945-51.
8. Makela L, Lammintausta K. Etoricoxib-induced acute generalized exanthematous pustulosis. Acta Derm Venereol 2008;88:200-1.
9. Thirion L, Nikkels AF, Piérard GE. Etoricoxib-induced erythema-multiforme-like eruption. Dermatology 2008;216:227-8.

10. Augustine M, Sharma P, Stephen J, Jayaseelan E. Fixed drug eruption and generalised erythema following etoricoxib. Indian J Dermatol Venereol Leprol 2006;72:307-9.
11. Blume JE, Ali L, Ehrlich M, Helm TM. Drug Eruptions. Medscape. 2014. Available from: http://emedicine.medscape.com/article/1049474-overview. [Last accessed on 2015 May 28].