SAFETY PROFILE OF ETORICOXIB FOR THE PERIOD OF 2010-2019

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Abstract
Among hospitalised patients, adverse drug reactions (ADRs) constitute a significant source of morbidity and death. ADRs in internal medicine units at a third-level university hospital were to be described in terms of their occurrence, severity, and cause in this study. Internal medicine units conducted a descriptive research using a structured approach, a review of clinical data, and interviews with hospitalised patients. To determine causation for patient adverse events, the Naranjo method was used. ADRs were also categorised using the Rawlins and Thompson standards. The research consisted of 15 case reports of patients, 6 males and 9 women. After applying the Naranjo algorithm to adverse events, 0 definite, 13 probable and 2 possible were identified ADRs. In the one case study we found ADRs as lethal to the patient. The frequency of ADRs was comparable to that which was noted in earlier studies conducted in internal medicine departments. To effectively detect and prevent ADRs, pharmacological surveillance activities in hospital wards must be systematised.

Keywords: Adverse Drug Reactions, Safety Profile, Etoricoxib, Naranjo Method, World Health Organization

Introduction

Adverse drug reactions (ADRs) are described as "any harmful or undesired response to a medication, occurring at doses used for prophylaxis, diagnosis, and treatment in humans" by the World Health Organisation (WHO) [1]. ADRs were ranked between the fourth and sixth leading causes of mortality in the US in 1994, trailing only cardiovascular disease, cancer, accidents, and violence. Numerous epidemiological studies have been conducted in an effort to determine the severity, incidence, and direct and indirect costs of ADRs in hospital and ambulatory settings as a result of the large rise in commercially accessible drugs in recent years. The prevalence of adverse drug reactions (ADRs) in hospitalised patients has been reported to range from 1.2% to 45%. The wide variation in prevalence reported in studies is primarily attributable to methodological variations in the data collection and the use of non-standardized criteria to diagnose the presence of adverse drug reactions [1-3]. With little information on adverse effects in people in Latin American countries, the majority of research on ADR detection has been done in the USA and Europe.

Latin American countries have developed some research to look at ADRs. At a third-level hospital in Bogotá, Tribio et al. recently reported a 25.1% frequency of adverse effects in hospitalised patients in internal medicine wards. They discovered that patients with ADRs had longer hospital stays, which directly or indirectly raised hospital costs5. In third-level internal medicine wards in Brazil, a cohort study found that 43% of hospitalised patients had adverse responses to at least one drug. Patients in internal medicine wards have adverse drug reactions (ADRs) often because they tend to be older, have several chronic diseases, and take multiple medications (polypharmacy), which puts them at an increased risk of harmful effects and interactions between drugs and illnesses [2-5].

The lack of pharmacological surveillance studies and inadequate reporting of adverse events to the Instituto Nacional de Vigilancia de Medicamentos y Alimentos (INVIMA) [National Institute of Food and Drug Surveillance] are two factors contributing to the lack of knowledge regarding the prevalence, incidence, and mortality of ADRs in hospitalised patients in Colombia and other Latin American countries. In order to describe the prevalence and clinical features of ADRs in internal medicine hospital wards at a university hospital, this study was carried out. Along with the severity of the adverse responses, possibly avoidable side effects, and unfavourable drug-drug and drug-illness interactions, the classes of drugs most commonly linked to ADRs were also found [1,5].

MATERIALS AND METHODS

During 2010-2019, a safety profile study of Etoricoxib was conducted. This research includes all suspected adverse drug reactions (ADRs) related to NSAIDS medicine in all type of patients with different age group that were recognised and reported by various departments of hospitals. Drug responses brought on by prescription mistakes, the use of complementary or alternative medicine, and specialties like oncology, dentistry, and surgery are not included. Case sheets, investigative reports of patients who had experienced an ADR, personal interviews with patients or the patient's companion, historical history of medication usage, and personal interviews with reporting individuals or physicians were used to gather the data for the study.

The "Naranjo causality assessment scale" was used to determine the causes of the reported ADRs. According to the Naranjo Algorithm, a medication response can be categorised as

either certain, likely, or plausible. The modified Hartwig and Siegel Scale categorises the severity of an adverse drug response (ADR) as mild, moderate, or severe with varying degrees in accordance with elements such as the need for a change in therapy, the length of the hospital stay, and the handicap brought on by the ADR. There are different case studies reported for the Etoricoxib which is given below:

Case Studies for Etoricoxib from 2010-2019

Case Study 1

Following will be the key elements of line listing.

1) Case study: Etoricoxib-induced toxic epidermal necrolysis: a fatal cases report
2) Country: India
3) Patient Details
    a) Age: 23Years
    b) Gender: Female
4) Medical history: Ankle sprain.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: She was prescribed Etoricoxib 90 mg twice daily. After 5 days of initiation of the analgesic, she developed maculopapular, erythematous rash along with itching. Despite immediate discontinuation of all medications, her symptoms turned more severe with the formation of blisters, ulceration, and pigmentation involving skin and mucosa of the almost whole body.
7) Preferred Term: Maculopapular, erythematous rash
8) Serious/ Non-serious: Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: Death include septic shock, hypovolemic shock, acute renal failure, fulminant hepatitis, and multi-organ involvement.
12) Drug Reaction (definite, probable and possible): Probable [6]

Case Study 2

1) Case study: Etoricoxib-induced skin rashes a case report
2) Country: India
3) Patient Details
    a) Age: 19 Years

b) Gender: Male

4) Medical history: Patient consulted a physician for rheumatoid arthritis for which he has been prescribed with Etoricoxib 60 mg orally.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: Patient took the medication for nearly 1 month and it was after that maculopapular, erythematous skin rashes associated with itching started developing. The patient was immediately admitted in medicine department and the suspected drug was stopped, as his condition was serious with skin rashes all over the body.
7) Preferred Term: Maculopapular, erythematous skin rashes
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: Severity assessment through Hart wig's scale put the observed ADR under "moderately" severe reaction category. The report suggests close monitoring of Etoricoxib usage among population for the occurrence of ADR.
12) Drug Reaction (definite, probable and possible): Probable [7]

Case Study 3

1) Case study: A case report on toxic epidermal necrolysis with Etoricoxib
2) Country: India
3) Patient Details
    a) Age: 59 Years
    b) Gender: Female
4) Medical history: Osteoarthritis and fever
5) Surgical History: No
6) Suspected Adverse Drug Reaction: Patient presented with the symptoms of extensive rash all over the body with peeling of skin and fever. After taking a single dose of the drug in the evening, she developed maculopapular, erythematous rash with itching. The symptoms turned more severe with the formation of blisters that were later followed by bullous exfoliation of epidermis and necrosis.
7) Preferred Term: Active epidermal necrolysis
8) Serious/ Non-serious: Serious
9) Unexpected: Yes

10) Expected: No
11) Outcome: Even though the chances of developing a serious unexpected reaction with Etoricoxib is very rare, it cannot be completely neglected and requires a keen study of the history of the patient before prescribing this drug.
12) Drug Reaction (definite, probable and possible): Probable [8]

Case Study 4

1) Case study: Probable Etoricoxib-induced severe Thrombocytopenia a case report
2) Country: India
3) Patient Details
    a) Age: 32 Years
    b) Gender: Female
4) Medical history: Pain in the right ankle
5) Surgical History: No
6) Suspected Adverse Drug Reaction: She was prescribed Etoricoxib 60 mg daily for 1 week. After 4 days of therapy the patient developed the first signs of petechial rash, and therefore she stopped Etoricoxib. The following day, as the petechial rash did not improve, she visited the emergency department.
7) Preferred Term: Thrombocytopenia
8) Serious/ Non-serious: Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: Etoricoxib can cause severe thrombocytopenia with a potential risk of life-threatening bleeding.
12) Drug Reaction (definite, probable and possible): Probable [9]

Case Study 5

1) Case study: A case of toxic epidermal necrolysis probably due to Etoricoxib
2) Country: India
3) Patient Details
    a) Age: 25 Years
    b) Gender: Female
4) Medical history: nonspecific symptoms of polyarthralgia involving bilateral upper limb small joints. Associated history of morning stiffness, previous rashes, or photosensitivity

reaction was not recorded. However, for achieving pain relief, the patient admitted taking a "better" drug, obtained from a local pharmacy over the counter. It was later confirmed by the medication label that the drug was tablet Etoricoxib (60 mg), taken once daily orally with no other concurrent medication.

5) Surgical History: No
6) Suspected Adverse Drug Reaction: Female patient presented with symptoms of extensive brown rashes all over the body with fever and peeling of skin at the emergency unit.
7) Preferred Term: Maculopapular rashes
8) Serious/ Non-serious: Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: There was extensive involvement of buccal mucosa, lips, and erosion of the palate associated with eyelid edema, crusting, and discharge with corneal erosion.
12) Drug Reaction (definite, probable and possible): Probable [10]

Case Study 6

1) Case study: Etoricoxib-induced pretibial erythema and edema
2) Country: India
3) Patient Details
    a) Age: 37 Years
    b) Gender: Female
4) Medical history: Experienced pain in her right shoulder for which she had been taking Etoricoxib 60 mg orally once daily for 5 days.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: Woman was referred from the emergency department for complaint of redness on her legs since 2 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.
7) Preferred Term: Maculopapular rashes
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: The edema and erythema resolved after discontinuing the medication.
12) Drug Reaction (definite, probable and possible): Probable [11]

Case Study 7

1) Case study: A case of wet purpura due to Etoricoxib induced thrombocytopenia
2) Country: India
3) Patient Details
    a) Age: 51 Years
    b) Gender: Male
4) Medical history: He was taking tablet Etoricoxib 90 mg twice daily for the past 7 days, as over the counter medication, for his lower back pain. He had been prescribed this drug for 3 days by an orthopaedic surgeon, about 1 year ago, for back pain. He is not a diabetic or hypertensive, and is not on any regular medications.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: One episode of bleeding from the mouth. While he was watering his garden in the morning, he blew through the pipe hose to remove a block and recognised a bloody taste in his mouth. On looking in the mirror, he noticed bleeding from his tongue. He did not give any history of fever or any other bleeding manifestations.
7) Preferred Term: Bloody mouth
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: Etoricoxib, a COX-2 inhibitor, is used as a pain killer in conditions like arthritis etc. Its gastrointestinal tolerance is better compared to other NSAIDs. Hypertension, pretibial oedema, myocardial infarction and thrombotic stroke are some of the noted events with Etoricoxib.
12) Drug Reaction (definite, probable and possible): Probable [12]

Case Study 8

1) Case study: Fixed drug eruption due to Etoricoxib, a case report
2) Country: India
3) Patient Details
    a) Age: 38 Years
    b) Gender: Male

4) Medical history: Lesions relapsed 15---30 min after intake of Etoricoxib, frequently taken by the patient for musculoskeletal pain. There was spontaneous improvement after 3---4 days after stopping NSAIDs intake, but multiple residual hyperpigmented lesions persisted for several months.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: Allergic rhinitis and no history of drug allergy was referred to our outpatient clinic due to multiple sharp round erythematous pruriginous patches of diameter 1-4 cm on the upper and lower limbs, trunk and genitals. The patient mentioned several exacerbations along the previous year, approximately once a months.
7) Preferred Term: Round erythematous pruriginous patches
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: Patch testing was of unquestionable value in the identification of the culprit agent. More research is still required for standardization of this technique, particularly for drugs exclusively available as commercial tablets. Patch testing was also useful in the search for safe alternative drugs. Although a drug challenge is required for definite confirmation, the patient had used several other NSAIDs with no reaction, obviating the need for further procedures. Finally, even though Etoricoxib is a safe drug, a high suspicion index is required in patients with FDE.
12) Drug Reaction (definite, probable and possible): Probable [13]

Case Study 9

1) Case study: Fixed Drug Eruption due to Etoricoxib in a patient tolerance to Celecoxib, the value of patch testing
2) Country: Spain
3) Patient Details
    a) Age: 32 Years
    b) Gender: Female
4) Medical history: The patient had taken various analgesics for episodes of pain secondary to a disc hernia. Those drugs had been ibuprofen, which she had taken again with no problem after the most recent skin reaction, and Etoricoxib, which she had started to take 3 months earlier.
5) Surgical History: No

6) Suspected Adverse Drug Reaction: Woman with no relevant history of allergy came to our outpatients for evaluation of a pruritic and painful erythematous plaque measuring 1.5cm on the cubital border of the left hand. The lesion had resolved leaving slight residual pigmentation. She reported 2 similar episodes that had occurred at the same site over the previous 3 months.
7) Preferred Term: Pruritic and painful erythematous plaque
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: The results were negative. In addition, patches of 10% Etoricoxib were applied to the site of the skin lesion, giving a positive result (++) at 48 and 96 hours. A celecoxib patch was then applied to the previously damaged skin, with negative results, and controlled oral challenge with celecoxib was performed without observing any adverse reaction during the test or afterwards when taken regularly at the usual doses.
12) Drug Reaction (definite, probable and possible): Probable [14]

Case Study 10

1) Case study: Rare Case of Etoricoxib-Induced Oral Ulceration.
2) Country: Thailand
3) Patient Details
    a) Age: 36 Years
    b) Gender: Female
4) Medical history: She had received Etoricoxib 90 mg capsule once a day for 3 days for the management of musculoskeletal pain.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: Patient developed extensive oral ulceration five days after Etoricoxib was administered. The lesion was associated with severe pain and burning sensation. Patient denied cutaneous, nasal, ocular or genital involvement. Moreover, no history of trauma, smoking, alcohol, and any allergic reactions was also reported.
7) Preferred Term: Oral Ulcer
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No

11) Outcome: The clinicians should be aware of the unwanted side effect of Etoricoxib as well as the other COX-2 inhibitors that can cause oral ulcer even though it rarely occurs.
12) Drug Reaction (definite, probable and possible): Probable [15]

Case Study 11

1) Case study: Fixed drug eruption by Etoricoxib confirmed by patch test.
2) Country: Portugal
3) Patient Details
    a) Age: 74 Years
    b) Gender: Female
4) Medical history: These skin lesions appeared less than 12 hours after taking Etoricoxib (Exxiv®) for joint pain.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: She was observed in the emergency room for a violaceous plaque of 5cm in diameter with central blistering on the medial side of the fifth right-hand finger, as well as multiple, smaller, round erythematous lesions on the upper back and lateral side of the arms.
7) Preferred Term: Lesions
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: With an aging population, the growing consumption of medication and the commercialization of new drugs by the pharmaceutical industry, there is an increased incidence in adverse cutaneous drug reactions. Etiologic confirmation of FDE is sometimes hard, particularly in polymedicated patients. After identification of the culprit drug, patients should be given a list of drugs to avoid, to prevent new and more severe episodes of cutaneous adverse drug reactions.
12) Drug Reaction (definite, probable and possible): Probable [16]

Case Study 12

1) Case study: A possible case of Etoricoxib induced fixed drug eruption
2) Country: Portugal
3) Patient Details
    a) Age: 50 Years

b) Gender: Male

4) Medical history: He used Etoricoxib a week back, prescribed for low back pain.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: Complained of skin rashes over lips, oral cavity, trunk, both the upper and lower limbs, palm, soles, scrotum and glans penis since a week.
7) Preferred Term: Skin Rashes
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: The prescribers regarding rare side effects of the above drug and the need to confirm past history of drug reaction before prescription.
12) Drug Reaction (definite, probable and possible): Prossible [17]

Case Study 13

1) Case study: A possible case of Etoricoxib side effects
2) Country: UK
3) Patient Details
    a) Age: 69 Years
    b) Gender: Male
4) Medical history: Patient took Etoricoxib 90 mg/day for knee pain
5) Surgical History: No
6) Suspected Adverse Drug Reaction: after 7 days developed erythema multiforme-like eruptions in the groins. *Herpes simplex* and mycotic infections were ruled out.
7) Preferred Term: erythema and mycotic infection
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: Etoricoxib was withdrawn and he was treated with potent topical glucocorticoids. The skin lesions resolved within 2 weeks.
12) Drug Reaction (definite, probable and possible): Possible [18]

Case Study 14

1) Case study: Seizure following the use of the Cox-2 inhibitor Etoricoxib
2) Country: Italy

3) Patient Details
    a) Age: 61Years
    b) Gender: Male
4) Medical history: He had taken a COX-2 inhibitor (Etoricoxib 90 mg/day) for the first time ever to treat lumbago.
5) Surgical History: No
6) Suspected Adverse Drug Reaction: A man arrived to our emergency room suffering from generalized tonic-clonic seizure followed by confusion upon awakening. The patient had a history of parossistic atrial fibrillation and two syncopal episodes due to sick sinus syndrome.
7) Preferred Term: Tonic-clonic seizure
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: We can hypothesize that Etoricoxib may have induced an unbalanced production of prostaglandins (e.g., PGE2) which in turn may have led to neuronal hyperexcitability by increasing ion channel permeability or enhancing glutamate release from astrocytes.
12) Drug Reaction (definite, probable and possible): Probable [19]

Case Study 15

1) Case study: Acute pancreatitis, an extremely rare complication of Etoricoxib
2) Country: Shri Lanka
3) Patient Details
    a) Age: 73 Years
    b) Gender: Female
4) Medical history: Female with reasonably controlled diabetes mellitus, on metformin 500mg twice daily had undergone an uncomplicated transpedicular fixation of the fourth and fifth Lumbar Vertebrae under general anaesthesia. She was given Etoricoxib 90mg daily as post-operative analgesia from day one after the surgery.
5) Surgical History: Yes
6) Suspected Adverse Drug Reaction: She was readmitted two weeks after the surgery with acute onset of tightening type of central chest pain and epigastric pain for 3 days. She did

not report vomiting, breathlessness or fever. She had severe anorexia and denied any history of trauma to chest or abdomen. She was a teetotaler.

7) Preferred Term: Acute pancreatitis
8) Serious/ Non-serious: Non-Serious
9) Unexpected: Yes
10) Expected: No
11) Outcome: Elevated transaminases more than 15 folds upper limit of normal as in this case can be attributed to hepatic toxicity caused by Etoricoxib, which is further supported by gradual decline of transaminase levels following the withdrawal of the medication. Possible association between Etoricoxib induced hepatic involvement and pancreatitits to be established by further observational studies.
1) Drug Reaction (definite, probable and possible): Probable [20]

RESULT AND DISCUSSION

During the period of 2010-2019, 15 adverse drug reaction case studies of Etoricoxib was reported. Table 1 shows the report of adverse drug reactions.

Table 1: List of Etoricoxib ADRs Reported During the Study Period 2010-2019

S. No.	Gender	Age	Country	ADR reported	Reason for Taking	Drug Reaction
1.	Female	23	India	Maculopapular, erythematous rash, Itching, hypovolemic shock, acute renal failure, fulminant hepatitis, and multi-organ involvement, death	Ankle sprain	Probable
2.	Male	19	India	Maculopapular, erythematous skin rashes	rheumatoid arthritis	Probable
3.	Female	59	India	maculopapular, erythematous rash with itching	Osteoarthritis and fever	Probable
4.	Female	32	India	Thrombocytopenia	Pain in the right ankle	Possible
5.	Female	25	India	polyarthralgia involving bilateral upper limb small joints	Maculopapular rashes	Probable
6.	Female	37	India	Maculopapular	Pain in her right	Probable

				rashes	shoulder	
7.	Male	51	India	Bloody mouth	Lower back pain	Probable
8.	Male	38	India	Round erythematous pruriginous patches	musculoskeletal pain	Probable
9.	Female	32	Spain	Pruritic and painful erythematous plaque	Pain secondary to a disc hernia	Probable
10.	Female	36	Thailand	Oral Ulcer	Musculoskeletal pain.	Probable
11.	Female	74	Portugal	Round erythematous lesions on the upper back and lateral side of the arms	joint pain	Probable
12.	Male	50	Portugal	Skin Rashes	Low back pain	Probable
13.	Male	69	UK	Erythema and mycotic infection	Skin Rashes	Possible
14.	Male	61	Italy	Tonic-clonic seizure	Treat lumbago	Probable
15.	Female	73	Shri Lanka	Acute pancreatitis	post-operative analgesia	Probable

The incidence rate of NSAIDs adverse reactions was found to be 10-25% over the research period, with a total of 15 (Etoricoxib) adverse reactions to NSAIDS medicines recorded among patients between the ages of 1 and 85 years. Additionally, 11 female patients (47.62%) were outnumbered by roughly 9 female patients (60.00%) were outnumbered by roughly 6 (40.00%) male patients by Etoricoxib (Figure 1). Results are shown in table 2. Results showed in Table 3 and Figure 2 that skin 8 (53.33%), and GIT (20%) were the organ systems most severely impacted by Etoricoxib adverse effects. All the case studies showed that the route of administration of NSAIDS was oral by which it causes adverse drug reactions (Table 4).

Table 2: Division of ADRs of Etoricoxib based on gender of the patients

S. No.	Sex	Number (Out of 15)	Percentage
1	Male	6	40.00
2	Female	9	60.00

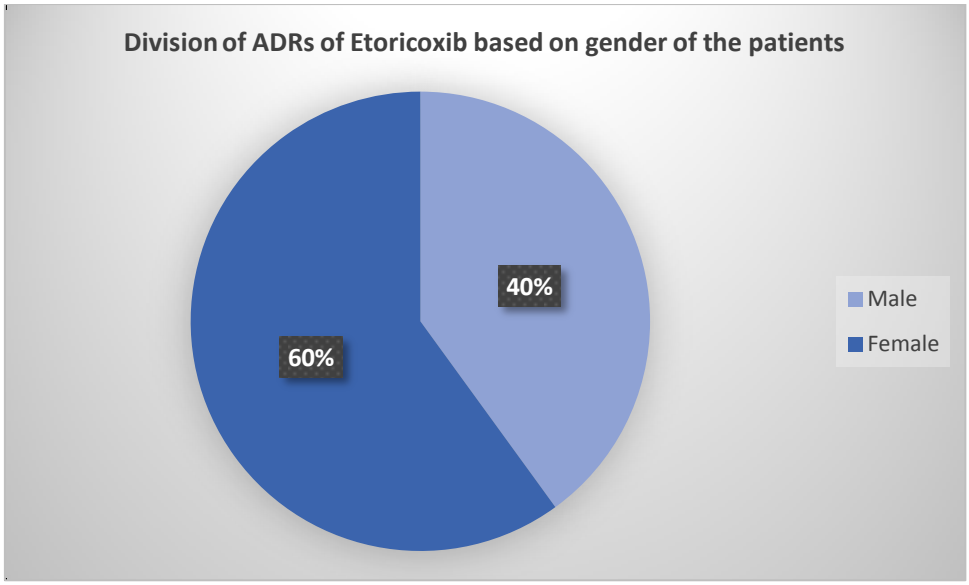

Figure 1: **Division of ADRs of Etoricoxib Based on Gender of the Patients**

Table 3: Organ System Affected Due to ADRs of Etoricoxib

S. No.	Organ System	Etoricoxib	
		Number	Number
1	GIT	3	3
2	Skin	8	8
3	Nephrotoxicity	1	1
4	CNS	1	1
5	Respiratory	0	0
6	Haematological	1	1
7	Other	1	1

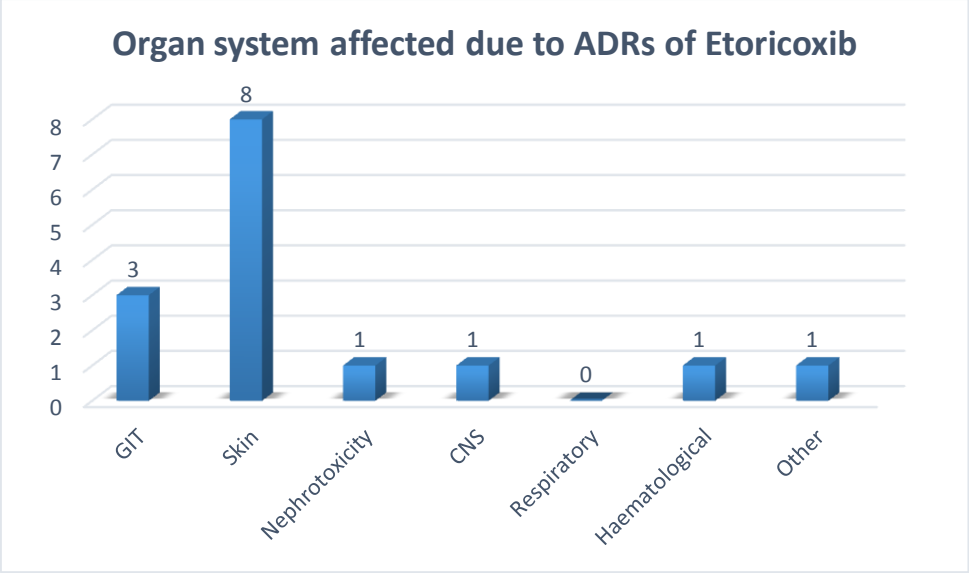

Figure 2: Organ System Affected Due to ADRs of Etoricoxib

Table 4: Route of Administration (ROA) of NSAIDS Agents that Cause ADRs

S. No.	ROA	Etoricoxib	
		Number	Percentage
1	Oral	15	100%
2	Parenteral	0	0%

The suspected drug Etoricoxib was removed in 15 (100%) of the instances, while the suspected drug was left alone in 0 (0%) and the dose was changed in 0 (0%). The results are given in Table 5. According to this study, 14 patients (93.33%) recovered from ADRs, and 1 (6.66%) patients had fatal ADRs of Etoricoxib (Table 6). 0% of these cases were discovered to be unknown for the drugs (Table 7, Figure 3).

Table 5: Fate of Suspected Drugs

S. No.	Fate of suspected drug	Etoricoxib	
		Number	Number
1	Drug withdrawn	15	15
2	Dose altered	0	0
3	No change	0	0

Table 6: Outcome of ADRs

S. No.	Management of ADRs	Etoricoxib	
		Number	Percentage
1	Recovered	14	93.33%
2	Fatal	1	6.66%
3	Unknown	0	0%

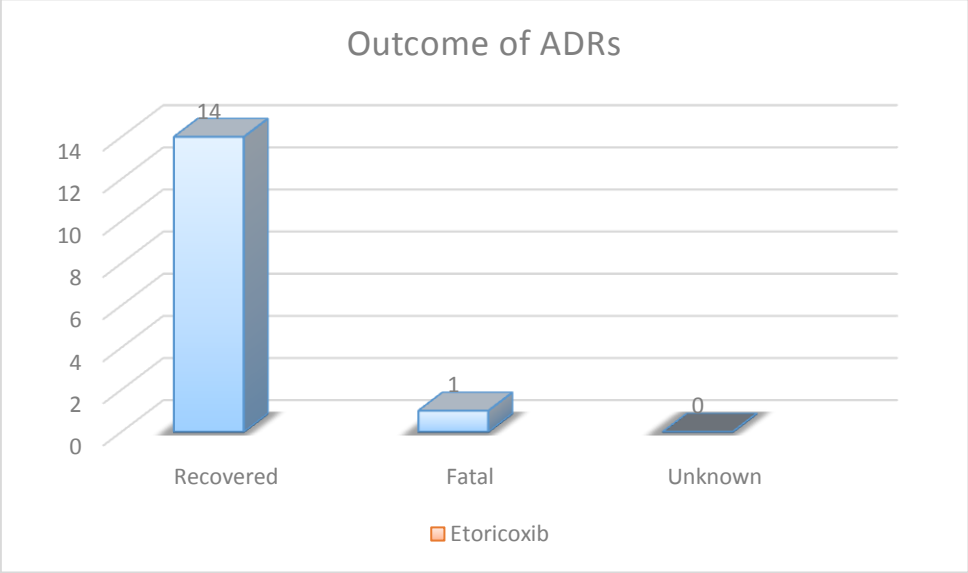

Figure 3: Outcome of ADRs

Table 7: Causality Assessment of ADRs (Using Naranjo Scale)

S. No.	Drug Reaction	Etoricoxib	
		Number	Number
1	Definite	0	0
2	Probable	13	13
3	Possible	2	2

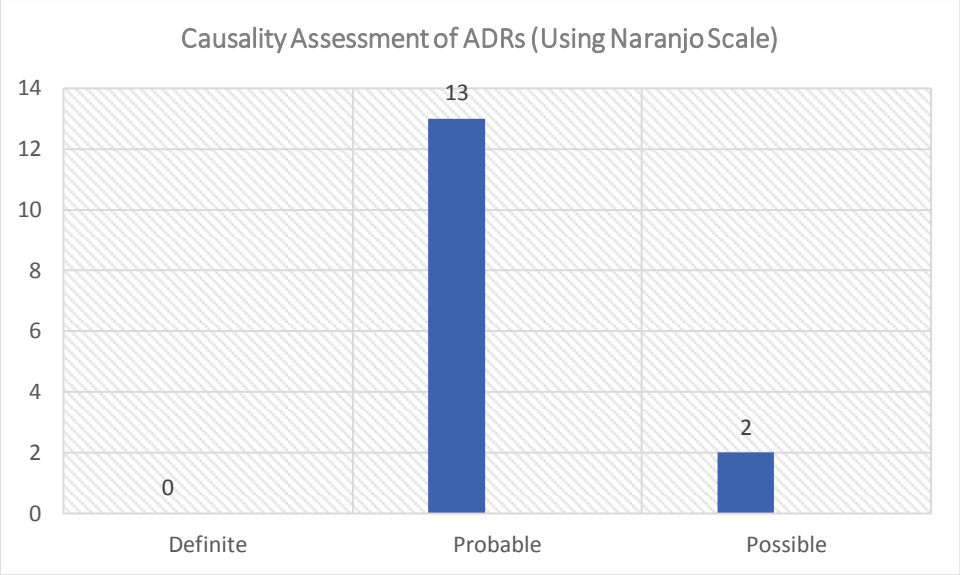

Figure 4: Causality Assessment of Etoricoxib ADRs (Using Naranjo Scale)

According to the Naranjo scale, 0 cases were definite for both the drugs, 13 cases of Etoricoxib (86.66%) were probable and 2(13.33%) case of Etoricoxib was possible (Figure 4).

For decades, rheumatological and other disorders have been treated with nonsteroidal anti-inflammatory medications (NSAIDs) to reduce pain and inflammation. They have adverse effects on the kidneys and the cardiovascular system in addition to gastrointestinal (GI) issues (ranging from modest dyspepsia to serious ulcers, bleeding, and perforation). NSAIDs are a class of medications that block the COX-1 and COX-2 isoforms of the cyclooxygenase enzyme. Since conventional NSAIDs are nonselective, they bind to both isoforms and inhibit them, although COX-1 is inhibited more strongly than COX-2. Side effects are caused by COX-1 inhibition, whereas therapeutic outcomes are brought on by COX-2 inhibition. The development of COX-2 selective medications is the outcome of this.

Due to the rising use of anti-inflammatory in these departments for the treatment and prevention of different illnesses, a higher number of NSAIDs adverse drug reactions have been identified in the general patient medicine department. The study also indicated that the GIT, CNS and skin were the two major areas affected by the recorded NSAIDs adverse medication effects.

Because of the risk benefit ratio in particular patients, and in some cases, the use of NSAIDS was based on the culture and sensitivity reports, the analysis of the fate of the suspected drugs revealed that the drug was withdrawn in many cases and dose altered in some while no change was made with the suspected drug in others. The findings showed that the most common class of NSAIDS to account for adverse drug reactions in patients was Etoricoxib.

CONCLUSION

Adverse drug responses are a difficulty for maintaining drug safety and are one of the drug-related issues in the hospital environment. The majority of inpatient prescriptions are for NSAIDS, which are also the most inappropriately given medicine class. To encourage children's wise use of NSAIDS, it is important to ensure that hospital-based NSAIDS recommendations are implemented and strictly followed. To guarantee medication safety, the health system should encourage the spontaneous reporting of adverse drug reactions, accurate documentation, and regular reporting to regional pharmacovigilance centres.

The medicines that are most frequently prescribed are those that are most frequently connected to ADRs in children. During the study period, the paediatric department often prescribed class of NSAIDS medicines includes Aspirin, Etoricoxib etc.

The study came to the conclusion that in our hospital context, spontaneous reporting of adverse drug reactions is quite excellent. ADRs have the potential to raise the expense of patient care and can resemble illness, leading to pointless investigations and treatment delays. A clinical chemist who has received the necessary training is actively involved in identifying adverse drug reactions and educating healthcare providers about the need of reporting ADRs, especially those that are significant or uncommon.

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