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DICLOFENAC INDUCED BREATHLESSNESS AND ABDOMINAL DISTENSION- A CASE REPORT

Dr. Ch. Ascharya[1]*, Dr. B. Deva sree[2], Dr. K. Bhargavi[2], Dr. A. V. Kavya Sree[2], Dr. T. Chandana[2]

[1]Department of Pharmacy practice, Bharat Institute of Technology, managalpally, ibrahimpatnam, Hyderabad, Ranga reddy dt, Telangana, INDIA 501510.

[2]Doctor of Pharmacy, P.Rami reddy memorial college of Pharmacy, JNTUA, RIMS Hospital, Kadapa, Andhra Pradesh, INDIA.

*Corresponding author E-mail**: ascharya.chintalapati@gmail.com**

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ABSTRACT

Non-steroidal anti-inflammatory drugs are extensively used as anti-inflammatory agents, antipyretics and analgesics by many patients worldwide[1]. NSAIDs are one of the most commonly prescribed groups of drugs for variety of indications. However, they are associated with many potential adverse drug reactions[2]. Breathlessness and abdominal distension are typically a symptom of an underlying disease or dysfunction in the body rather than an illness in its own. A 50yrs old female patient was admitted in female general medicine ward, RIMS, Kadapa with chief complaints of fever, pedal edema from past 5 days and also breathlessness and abdominal distension which was raised as an adverse drug reaction of diclofenac. Which has been used for her joint pains continuously since 1yr as an OTC medication. This adverse reaction is considered as dose related Probable Type A ADR as per WHO scale. . Diclofenac causes decrease in synthesis of prostaglandins (PGF2 which helps in GI protection) and increase in leukotriene production which further causes breathlessness. Thus the hint of this written report is to create awareness about most commonly used analgesic (diclofenac) which causes acute exacerbation of bronchial asthma and abdominal distension.

INTRODUCTION

Breathlessness or dyspnoea is described as the feeling of shortness of breath. It is very common complaint associated with various medical conditions affecting the heart, lungs and other systems. It can be caused by variety of conditions affecting the lungs, heart and/or general circulation. It may occur in conjuction with other symptoms such as cough, chest pain and fever.

Causes:

- Decrease in oxygen levels in blood stream.
- Increase in carbondioxide levels in blood stream.
- Decrease in ability of lung to expand.
- Increase in work load associated with normal breathing.

The possible causes of breathlessness are extensive. It is frequently seen in emphysema, chronic airflow limitation, pneumonia, asthma, heart failure, dementia, multiple sclerosis and AIDS. Majority cancer patients also experience some degree of SOB. Abdominal distension refers to swelling of the abdomen. The distension may be caused by either air(gas) or fluid

collection. The accumulated substance causes an outward expansion of the stomach and waist beyond normal proportion. While this is not a disease in itself ,it is a symptom or indication of other diseases like cirrhosis, heart failure, anemia or fluid over load.

Causes:

- Common- IBS, Constipation.
- Others- Fibroids, Ascites, Intra-abdominal bleeding.
- Less- Cysts, tumors, neoplasm.

Lower, over-the-counter (OTC) doses of NSAIDs are effective for short-term (eg, ≤10 days) relief of minor aches and pains due to headache, toothache, backache, menstrual cramps, common cold, muscular aches, and arthritis.[4] All NSAIDs inhibit COX, an enzyme that converts arachidonic acid to prostaglandins, there by mediating pain, inflammation, and fever. In the process, prostaglandin H_2 is converted to five primary prostaglandins, including thromboxane A_2 (which stimulates platelet aggregation and blood clot formation) in platelets and prostacyclin (a vasodilator that inhibits platelet aggregation) in the endothelium. Two COX isoenzymes (COX-1 and COX-2) are commonly recognized. In general, COX-1 is constitutively expressed and is involved in gastroprotection from stomach acid and in thromboxane formation by platelets.

COX-2 is inducible by inflammatory mediators in a wide range of tissues and has been associated with inflammation; however, it may also be constitutively expressed, where it contributes to renal physiology, reproductive function, bone resorption, and neurotransmission[5]. Diclofenac is a NSAID which acts by inhibiting the COX-1 and COX-2 enzyme and decreases prostaglandin production and increases the leucotriene synthesis. It's bioavailability is 50-60%It is absorbed 100%. It is metabolised in liver by hydroxylation and conjugation with glucuronic acid, taurine amide, sulfuric acid, and other biogenic ligands,as well as conjugation of unchanged drug. It is given orally. It has a half life of 1.2-2hr. It is usually taken as an analgesic. Adverse reaction associated with diclofenac are commonly abdominal distension and flatulence, abdominal pain or cramps, constipation, diaerrhea, dizziness, dyspepsia,edema,fluid retention, headache, nausea, peptic ulcer or GI bleeding, asthma, aplastic anemia etc.

CASE REPORT:

A 50yrs old female patient was admitted in the General medicine female ward of RIMS- Kadapa (Rajiv Gandhi Institute of Medical Sciences), with her chief complaints of fever since last night associated with chills and rigors, pain in both legs since 5 days, B/L pedel edema since 5 days. No H/o vomitings and motions.

H/O of breathlessness- +ve

H/O Abdominal distension- +ve

H/O body aches, head ache.

Her past medical history says that she was taking analgesic (diclofenac) from past 1yr continuously for her body pains. On General Examination she was conscious and coherent, On physical examination her vitals were found to be pulse rate 105bpm and blood pressure was 110/80mm of Hg and fever- (101) febrile, SPO2-91%. Her systemic examination reveals that RS-B/L wheeze-+ve, P/A-soft, distended. CVS-S1,S2-+ve, CNS-NAD. For further confirmation she was subjected to laboratory investigations which are as follows WBC-13000 cells/cumm in Which neutrophils-80% and eosinophils-8%. ESR is also elevated up to 20mm/hr. And her Hb levels are 10gm/dl and RFT's shows increased creatinine 1.6mg/dl. So She was treated with inj.ceftriaxone-1gm-iv –BID , inj.pantoprazole-40mg –iv od Tab-Paracetamol-500 mg-tid , Astalin-nebulisetion –tid, it is a bronchodilator and oxygen- inhalation . Parenteral therapy was gradually stopped after 5days The patient showed steady improvement with the given therapy, and was discharged with following medications , such as Tab –cefixim-200 mg,Bid, Tab-Paracetamol - 500 mg –SOS, Tab- Rantac-150mg –Bid ,Syp-Sucralfate -5ml- tid, and Tab-salbutamol- 2mg - Bid review after after 10 days.

DISCUSSION:

Thus the above mentioned symptoms has a sequential relationship to diclofenac administration. This adverse reaction is dose related and can be labelled as type A class of adverse effect. It can be considered as probable ADR as per WHO scale. Both abdominal distension and breathlessness are not an illness on its own they are the symptoms of underlying

diseases experiencing most commonly by people now a day in one stage of their life or the other.

CONCLUSION:

Thus, the main motive of this written report is to create awareness in hospital sectors about the adverse drug reactions and necessity to provide patient counselling of long term administration of most commonly used analgesics (diclofenac)

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