

CASE REPORT ON PIROXICAM INDUCED HAEMOPTYSIS

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ABSTRACT

NSAIDs are used worldwide for their analgesic and anti-inflammatory effects. The responses to NSAIDs differ among patients. Piroxicam is a drug belonging to the oxicam class of NSAIDs and is often used to reduce the symptoms of painful inflammatory conditions. Several adverse effects are reported with piroxicam. In this case report, we are emphasizing on piroxicam induced haemoptysis, one of the rare adverse effects associated with piroxicam.

KEYWORDS: Piroxicam, Nonsteroidal anti-inflammatory disease, oxicam, haemoptysis.**INTRODUCTION**

Piroxicam is a long acting potent NSAID. The anti-inflammatory effect of piroxicam may result from the reversible inhibition of prostaglandin synthesis. The prostaglandins are produced by an enzyme called COX-1. Piroxicam is used to relieve pain, tenderness, swelling and stiffness caused by arthritis (rheumatoid arthritis, osteoarthritis, ankylosing spondylitis) and other joint pain. The plasma t_{1/2} of piroxicam is nearly 2 days. Common adverse effects include anemia, thrombocytopenia, hematemesis, gastric ulcer, face edema, dyspnea etc. Gastrointestinal bleeding and ulcer are frequent ADR with higher doses of piroxicam. It has slow onset of action and is suitable for long term use as anti-inflammatory drug.^[1] Haemoptysis is a rare adverse effect of piroxicam and that can be life threatening.

CASE REPORT

A 25 years old female patient came to orthopaedics OPD with complaints of neck pain radiating to left shoulder for 7 months, which aggravated since 1 month. MRI spine showed mild straightening of cervical spine and C4/C5, C5/C6 and C6/7 levels showed disc osteophyte complex causing mild narrowing of left foraminal zone. She was managed with Tab. Piroxicam 20mg BD, Tab. Ranitidine 150mg BD, physiotherapy and cervical traction. On the next day, she reported several episodes of cough with blood tinged sputum. She was advised to withhold Tab. Piroxicam and substituted with tramadol. Pulmonology consultation and lab investigations were further sought in view of haemoptysis. The lab investigations were within the lower limits and pulmonologist advised management with Tab. Tranexamic acid 500mg TID and Tab. Acetylcysteine 600mg BD for 5 days. He was also recommended to do a

chest X-ray, which was reported to be normal. The haemoptysis resolved after the withdrawal of the drug. The patient was haemodynamically stable and discharged.

DISCUSSION

Piroxicam is an NSAID, used to treat pain and help to relieve symptoms of arthritis such as inflammation, swelling, stiffness and joint pain. Piroxicam blocks the COX-1 enzyme, resulting in the disruption of production of prostaglandins. It also inhibits the migration of leucocytes into sites of inflammation and prevents the formation of thromboxane A₂, an aggregating agent, by the platelets.^[2] Piroxicam is well absorbed from the oral routes and its volume of distribution is 0.14L/Kg in adults.^[4] It is metabolized in liver by hydroxylation and glucuronide conjugation and elimination half-life of piroxicam is extended due to low clearance rate. It is excreted mainly through urine and bile. Single daily administration is sufficient and steady state concentrations are achieved in a week.^[1] Haemoptysis is a rare adverse effect of piroxicam. Only 2% of respiratory ADRs associated with piroxicam are reported under vigiaccess till date, of which 0.9% accounts for haemoptysis.

Haemoptysis can occur though infraction and ischemia of pulmonary parenchyma as seen in pulmonary embolism, vasculitis and infections. Another possible mechanism is vascular engorgement with erosion as seen in bronchitis, bronchiectasis and toxic exposure to any irritants. In some cases underlying cause cannot be identified and they are considered as idiopathic.^[3] In this case report, the etiology of haemoptysis is considered to

be caused by NSAID (piroxicam), but the mechanism is unclear.

CONCLUSION

The above case report represents a unique incidence of haemoptysis caused by piroxicam. However the exact mechanism of piroxicam induced haemoptysis is unknown. Thus, if a patient on piroxicam therapy develops haemoptysis, after ruling out all other possible causes, the drug can be suspected as the possible offending agent. In this case, the patient stopped developing episodes of haemoptysis after the drug was withdrawn and the class of medication was changed from NSAID (Piroxicam) to opioid analgesics (Tramadol).

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CONFLICTS OF INTEREST

There are no conflicts of interest.

ABBREVIATIONS

NSAIDs- Non Steroidal Anti-Inflammatory Drugs

COX- Cyclooxygenase

ADR- Adverse Drug Reaction

OPD- Out Patient Department

BD-Twice daily

TID- Thrice daily

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