

Cox-1



رشته مشترک

~~da~~ house keeping enzyme,

3. Anti-platelet use :

- Low dose of aspirin 80-100 mg daily are used to prophylactically decrease incidence of transient ischemic attacks (TIAs) & strokes

2. Propionic acid derivatives

- This class includes Ibuprofen, ketoprofen and Naproxen
- All are reversible non-selective inhibitors of Cox that inhibit synthesis of PGs

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- This class includes Ibuprofen, ketoprofen and Naproxen
- All are reversible non-selective inhibitors of Cox that inhibit synthesis of PGs
- All possess anti-inflammatory, analgesic & antipyretic activities
- They cause less GI side effects than aspirin and therefore are preferred for chronic use in inflammatory joint diseases and in musculo-skeletal disorders

A. Indomethacin :

- It is more potent than aspirin, but toxicity limits its use to short-term dosing
 - **Indications:**
 - It is useful in treatment of RA, OA, ankylosing spondylitis (AS), and acute gout
2. Closure of patent ductus arteriosus in neonate : given by IV infusion within 72 h of birth

B. Sulindac : 

➤ This is a pro-drug

➤ Able to inhibit Cox-1 and Cox-2 but meloxicam shows preferential COX-2 selectivity (preferential Cox-2 inhibitor)

Handwritten notes in red and blue ink are visible at the bottom right of the slide. A yellow arrow points from the word 'preferential' in the text to the handwritten word 'preferential' in red ink. Another yellow arrow points from the handwritten word 'preferential' to the word 'inhibitor' in the text. There are also some blue scribbles and a circled 'a' at the bottom right.

3. Oxicam derivatives :

- Piroxicam (Feldene) and meloxicam (Mobic)
- Able to inhibit Cox-1 and Cox-2 but meloxicam shows preferential COX-2 selectivity (preferential Cox-2 inhibitor)

Cox-1 in gastric cytoprotective

دانشگاه
تبریز

Cox-2

➤ Cox-2 is an inducible enzyme produced by inflammatory cells

الإنزيم

➤ Aspirin at low dose (80-100 mg/d) **irreversibly inhibits the thromboxane A₂** (TXA₂) synthesis inside platelets **via acetylation of Cox-1**. (TXA₂ is a powerful platelet aggregator and a vasoconstrictor)

