

Pain management in special situation

Common painkiller using in daily practice-

1. Paracetamol-widely use drug. Only contraindicated in hepatic impairment.
2. NSAIDs-those are the mainstay of analgesic. But are potentially hazardous. Increase risk of developing CVD, hepatic and renal impairment. Contraindication of NSAID are
 - a) Active GI bleeding (upper or lower) within 6 months
 - b) Jaundice with elevated transaminases
 - c) Overt CHF and recent MI within 6 months
 - d) Stroke within 6 months
 - e) Renal impairment
3. Opioids (codeine, oxycodone, hydromorphone, hydrocodone and morphine, as well as drugs such as pethidine and tramadol)- opioids are strong analgesics used in the relief of pain (particularly post operative pain), both acute and chronic, and cancer and non-cancer related. Prolong use may cause addiction. Contraindication are
 - a) Significant respiratory disease
 - b) Increased intracranial pressure
 - c) Comatose patients

Diabetes mellitus

1. In diabetes mellitus we can use all types of analgesic.
2. But as NSAID increase risk of CVD and DM is an important risk factor of CVD so use of NSAID should be limited-lowest dose, shortest possible time.
3. If patient develop any complication e.g. stroke, IHD or CKD then choice of analgesic will be according to the type of complication.

Hypertension

1. We can use paracetamol and opioids (e.g. tramadol). But if patient develop CHF then opioid should be avoided.

2. NSAIDs raise blood pressure and may aggravate the existing hypertension. NSAIDs can also interfere with the following drugs to act properly e.g. diuretics, ACEi, ARB.
3. If blood pressure is control then we can use NSAID but lowest dose, shortest possible time.
4. In case of uncontrolled blood pressure NSAID should not be used.
5. If patient develop any complications e.g. stroke, IHD or CKD then choice of analgesic will be according to the type of complications.

Asthma

1. Potent NSAIDs are well tolerated in most of the asthmatics. Unless NSAID clearly cause severe exacerbations of asthma, people with asthma should not be denied the benefits of NSAIDs without being offered the option of a trial to assess the effect on asthma control. In short- NSAID should be given in asthma patient when necessary; if patient experience increasing symptom of asthma then NSAID should stop; otherwise it can be continued.
2. Paracetamol and tramadol are the preferred agents, as they usually produce no adverse effect.

PUD

1. We can use paracetamol and opioids (e.g. tramadol).
2. Overall NSAID are contraindicated. But COX-2 inhibitors can be used if NSAID is absolutely necessary.

Stroke

1. We can use paracetamol and opioids (e.g. tramadol).
2. NSAID should not be used within 6 months of stroke.
3. COX-2 inhibitors must be avoided.

IHD

1. We can use paracetamol and opioids (e.g. tramadol). But if patient develop CHF then opioid should be avoided.
2. If NSAID is necessary then naproxen is the only drug to demonstrate safety from cardiovascular perspective.

3. COX-2 inhibitor increase risk of CVD, so those must be avoided.
4. FDA has issued a warning that aspirin and ibuprofen should be given 2 hours apart (if use concomitantly).

The stepwise approach to pharmacologic therapy for musculoskeletal symptoms in patients with or at risk for cardiovascular disease includes the following drugs to be administered in this order:

- a) Paracetamol
- b) Tramadol or other opioid analgesics (short-term)
- c) Nonacetylated salicylates
- d) Non-COX-2 selective NSAIDs

Pregnancy

1. Paracetamol can be used throughout the pregnancy.
2. Opioids (codeine, oxycodone, hydromorphone, hydrocodone and morphine, as well as drugs such as pethidine and tramadol) can be used throughout the pregnancy but should avoid prolonged use due to risk of dependency and addiction.
3. NSAIDs should be used with caution in first trimester and must be avoided in last trimester because of their potential to cause premature closure of the fetal ductus arteriosus and persistent pulmonary hypertension. High doses of NSAIDs in the third trimester may also reduce perfusion of the fetal kidneys and decrease fetal urine output.
4. Topical NSAIDs are safe to use as systemic absorption is less but should avoid use in large surface area.

Renal impairment (AKI, CKD etc)

1. We can use paracetamol and opioids (e.g. tramadol).
2. NSAIDs are contraindicated.
3. Among the NSAIDs-sulindac can be used.

Hepatic impairment (acute hepatitis, chronic hepatitis, cirrhosis etc)

1. Paracetamol and NSAID should be avoided. In cirrhosis of liver NSAID (causes reduction of renal blood flow and ulceration of oesophageal varices)
2. Opioids (tramadol) can be used with precaution only for short term. Opioids should be avoided (constipation, drug accumulation and precipitate hepatic encephalopathy).