A1.7 Oxycodone

ATC Code: N02AA05
Tablet: 5 mg, 10 mg, 15 mg, 20 mg, 30 mg (as hydrochloride).
Tablet (modified release): 5 mg, 10 mg, 15 mg, 20 mg, 30 mg, 40 mg, 60 mg, 80 mg, 160 mg (as hydrochloride).
Capsule: 5 mg, 10 mg, 20 mg (as hydrochloride).
Oral liquid: 1 mg/ml (as hydrochloride).
Concentrated oral liquid: 10 mg/ml, 20 mg/ml (as hydrochloride).

Indications: moderate to severe persisting pain.

Contraindications: hypersensitivity to opioid agonists or to any component of the formulation; acute respiratory depression; acute asthma; paralytic ileus; concomitant use of, or use within 14 days after ending monoamine oxidase inhibitors; raised intracranial pressure and/or head injury, if ventilation not controlled; coma; use within 24 hours before or after surgery.

Precautions: impaired respiratory function; avoid rapid injection which may precipitate chest wall rigidity and difficulty with ventilation; bradycardia; asthma; hypotension; shock; obstructive or inflammatory bowel disorders; biliary tract disease; convulsive disorders; hypothyroidism; adrenocortical insufficiency; avoid abrupt withdrawal after prolonged treatment; diabetes mellitus; impaired consciousness; acute pancreatitis; myasthenia gravis; hepatic impairment; renal impairment; toxic psychosis.

Skilled tasks: warn the patient or caregiver about the risk of undertaking tasks requiring attention or coordination, for example, riding a bike.

Dosage:

Starting dose for opioid-naive patients:
Oral (immediate-release formulation):
- **infant 1–12 months** – 50–125 mcg/kg every 4 hours;
- **child 1–12 years** – 125–200 mcg/kg every 4 hours, max 5 mg.

Oral (prolonged-release formulation):
- **child over 8 years** – 5 mg every 12 hours.

Continuation: After a starting dose according to the dosages above, the dosage should be adjusted to the level that is effective (with no maximum), but the maximum dosage increase is 50% per 24 hours in outpatient settings. Experienced prescribers can increase up to 100% with careful monitoring of the patient.

Dose for breakthrough pain
Oral (using immediate-release preparation):
- **infant** or **child**: Additional oxycodone may be administered as frequently as required with a maximum of 5–10% of the regular daily baseline oxycodone dose. If repeated breakthrough doses are required, adjust the regular baseline oxycodone dose guided by the amount of oxycodone required for breakthrough pain with a maximum increase of 50% per 24 hours.

Dosage discontinuation: for short-term therapy (7–14 days), the original dose can be decreased by 10–20% of the original dose every 8 hours increasing gradually the time interval. In the case of a long-term therapy protocol, the dose should be reduced not more than 10–20% per week (*79, 80*).

Renal impairment: mild (GRF 20–50 ml/min or approximate serum creatinine 150–300 micromol/l) to severe (GFR <10ml/min or serum creatinine >700micromol/l) – dose reduction may be required; start with lowest dose and titrate according to response.

Hepatic impairment: moderate and severe; reduce dose by 50% or avoid use.

Adverse effects:

- **common** – nausea, vomiting, constipation, diarrhoea, dry mouth, sedation, biliary spasm, abdominal pain, anorexia, dyspepsia, pruritus, somnolence, dizziness;
- **less common** – muscle rigidity, hypotension, respiratory depression, bronchospasm, dyspnoea, impaired cough reflex, asthenia, anxiety, chills, muscle fasciculation, postural hypotension, hallucinations, vertigo, euphoria, dysphoria, dizziness, confusion;
- **uncommon** – bradycardia, tachycardia, palpitation, oedema, mood changes, dependence, drowsiness, sleep disturbances, headache, miosis, visual disturbances, sweating, flushing, rash, urticaria, restlessness, difficulty with micturition, urinary retention, ureteric spasm, gastritis, flatulence, dysphagia, taste disturbance, belching, hiccups, vasodilation, supraventricular tachycardia, syncope, amnesia, hypoesthesia, pyrexia, amenorrhoea, hypotonia, paraesthesia, disorientation, malaise, agitation, speech disorder, tremor, dry skin;
- **rare** – raised intracranial pressure, circulatory depression, cardiac arrest, respiratory arrest, shock, paralytic ileus, seizures.

Interactions with other medicines:

- **central nervous system depressants** – additive or potentiating effects with oxycodone;
- **monoamine oxidase inhibitors*** – severe and unpredictable potentiation of opioids;
- **naloxone*** – precipitates opioid withdrawal symptoms;
- **naltrexone*** – precipitates opioid withdrawal symptoms;
- **opioid antagonists/partial agonists*** – may precipitate opioid withdrawal symptoms.

* Indicates severe.

Notes:

- Oxycodone is subject to international control under the Single Convention on Narcotic Drugs, 1961.
- Prolonged-release oxycodone preparations must not be crushed or chewed; the child must be able to swallow the whole tablet.
- To administer with food to reduce gastrointestinal upset.
- Oxycodone is partially metabolized to an active metabolite, oxymorphone, via CYP2D6 pathway; slow or ultra-fast metabolizers may experience reduced or enhanced analgesia and dose-related side-effects.
- High strength modified-release tablets should only be used in patients who are opioid tolerant. Administration of these strengths to non-opioid tolerant patients may cause fatal respiratory depression.
- Naloxone is used as an antidote in case of opioid overdose.

Equianalgesic doses:

When converting from oral morphine to oral oxycodone, use an initial dose conversion ratio of 1.5:1 (e.g. replace 15 mg morphine with 10 mg oxycodone). Then titrate to optimize the analgesia.

References:

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