SAFER
SAFER USE OF HIGH RISK MEDICINES

Waitemata District Health Board
Best Care for Everyone

FENTANYL TRANSDERMAL - SAFE PRESCRIBING - A STICKY PROBLEM

- RESERVE FOR RELIEF OF CHRONIC PAIN IN CANCER
- BE AWARE OF DOSING COMPLEXITY
- DISPOSE OF PATCHES SAFELY AND AVOID ACCIDENTAL EXPOSURE
- ACTIVELY MANAGE ADVERSE EFFECTS

RESERVE FOR RELIEF OF CHRONIC PAIN IN CANCER

Fentanyl is an opioid analgesic that binds to opioid receptors in the brain[1]. Transdermal fentanyl patches are indicated for the relief of chronic stable cancer pain and are usually used in patients who have stable opioid requirements but cannot tolerate their current opioid due to side-effects such as constipation, have a deteriorating renal function, or cannot tolerate oral opioid administration. Fentanyl patches should not be used for acute pain in opioid-naïve patients with non-cancer pain or in whom pain is unstable or requires rapid titration.[1,5,15] There have been reports of deaths in these patients from opioid side effects such as respiratory depression.[1,2,3]

BE AWARE OF DOSING COMPLEXITY

Transdermal fentanyl patches are designed to be released slowly and steadily over 72 hours and take approximately 24 hours to reach a steady state when first started.[10] They have a half-life of 6-17 hours. Therefore when a patch is discontinued because a patient has developed severe adverse effects e.g. respiratory depression or prolonged drowsiness, the patient must continue to be monitored for at least 24 hours.

Patches are replaced every 72 hours. A new patch is applied to a different area of skin. [1,2] The 12.5mcg/hr patch allows for a lower starting dose of fentanyl patch and for smaller increments in titration when necessary, e.g. from 25mcg/hr to 37.5mcg/hr which means two patches are applied at the same time. Generally, only one patch should be applied at any one time, unless specifically advised otherwise.[13]

Patients are initially titrated on other opioids and then converted to a fentanyl patch. The initial dose of fentanyl patch is guided by the stable daily dose of oral morphine or the equivalent oral morphine dose the patient is taking at the time. For example, if the patient is on oxycodone, this must be converted to equivalent morphine dose before the dose of fentanyl patch is chosen.

There are differing recommendations about converting other opioids to fentanyl patches, and a wide range of morphine equivalents for every patch size. *The dose conversion tables provided by manufacturers are intended as a guide and individual patients may vary in their response to fentanyl (see table 1).* Consider using a lower patch dose closest to the morphine equivalent initially and titrating upwards depending on pain levels and PRN requirements. In patients on *high* morphine equivalent doses of >300mg daily, re-assess pain type, disease and patient-related factors and other analgesic options available. Seek advice from specialists before starting the fentanyl patch.[1]

The dose of fentanyl patch should be the lowest dose possible based on the long-acting morphine equivalent daily dose, currently being used by the patient.[3] (please see Table 1).[1] The minimum strength of fentanyl patch available is 12.5 mcg, so the patient must have been taking an *approximate* total daily dose of 45 mg long-acting morphine (or other opioids), equivalent to at least 12.5 mcg of fentanyl.[1,16] This dose can be titrated upwards, in intervals of 3 days, .[1,5] The patch should be applied at the same time as the last dose of long acting morphine.[3] Always ensure as required (prn) short acting opioid analgesia, for example oxycodone, is available to manage breakthrough episodes of pain, until efficacy with fentanyl is obtained.[2] Continue or re-consider anti-emetic and review laxative requirements.

Seek advice from specialist at any time.

BE AWARE OF ACCIDENTAL EXPOSURE AND DISPOSE OF PATCHES SAFELY

There have been reports of life threatening and fatal opioid toxicity due to accidental exposure to patches.[9] This can occur if a patch is transferred to another individual or swallowed.[9] Children are particularly at risk and a patch attached to a child could be life-threatening. A recent coroners case in the UK detailed how a 15 month child died from fentanyl toxicity after a patch applied to her mother became attached to her skin.[4,6]

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FENTANYL TRANSDERMAL

In April 2012, a 24 month child died from respiratory arrest two days after accidentally putting a used fentanyl patch in his mouth, which he found on the floor of his grandmother's rest home, when the family were visiting her.[4,6]

If accidental attachment to the wrong person occurs, the patch should be removed immediately and the patient advised to seek medical attention. Reiterate that they should do this even if no side effects are noticed.[6]

Store fentanyl patches out of sight and reach of children[9] especially when applying patches as this action may be copied. After a patch is removed, it should be disposed of carefully by folding the sticky sides together and flushing down the toilet.[7,12,13]

Avoid direct heat on the patch

Do not expose the patch to heat. Hot water bottles, warm baths, saunas and also increased body temperature due to fever, may cause increased absorption of fentanyl. Patients need to be aware and note effects of increased adverse effects.[2,7,8]

ACTIVELY MANAGE ADVERSE EFFECTS

Adverse effects

The most common adverse effects are nausea, vomiting, constipation, sleepiness, visual disturbance, dizziness, skin reactions, sweating and headache. More serious (and potentially fatal) adverse effects are respiratory/CNS depression, hallucinations, euphoria, myoclonic jerks. Patients may be prescribed anti-emetics for nausea and vomiting and should be advised on ways to prevent constipation including prescribing laxatives.[1]

Hepatic impairment

Fentanyl is extensively metabolised in the liver. Patients with hepatic impairment may have delayed elimination and in patients with severe hepatic impairment, this may lead to coma. Patients and their caregivers need to watch carefully for signs of toxicity.[1]

Renal impairment

Fentanyl is the preferred choice of opioid for patients with renal impairment, but should be used with caution. Patients and their caregivers need to watch carefully for signs of toxicity.[1,2]

Overdose

Signs of overdose may include; respiratory depression, extreme sleepiness or sedation, feeling faint, dizzy or confused, and inability walk, think or talk normally. Patients and caregivers should be warned about these signs of toxicity and advised to seek medical attention immediately.[8,9,11]

Care in older adults

Fentanyl should be prescribed with care in older adults. They may have decreased clearance and increased half-life and may therefore be more sensitive to the effects of fentanyl.

They should be observed carefully for signs of toxicity and the dose reduced if necessary.[1]

Pregnancy and breastfeeding

Fentanyl should be avoided in pregnancy.[1,2]

Fentanyl is excreted into human milk and may cause sedation and respiratory depression in the infant. However, one study reported a case of a mother using a 100 mcg patch and on day 27, the blood levels of fentanyl in the infants blood were negligible and would therefore not be expected to cause any clinically significant adverse effects.[14] Some infants, particular pre-term, new born and infants under two months, may be particularly susceptible to the effects of fentanyl and careful monitoring of the infant will be required. [1,2,12,13,14] The patient should be advised of the risks and benefits to make an informed decision.

Interactions

Avoid giving fentanyl with CYP3A4 inhibitors, (eg ritonavir, ketoconazole, itraconazole, clarithromycin and erythromycin) as these may increase fentanyl plasma levels.

Avoid giving fentanyl with SSRIs, SNRIs or MAOIs (eg fluoxetine, citalopram and phenelzine) as this combination may increase the risk of serotonin syndrome.

Avoid concomitant use of mixed opioid agonist/ antagonists (eg buprenorphine) as they may precipitate withdrawal symptoms.[1,2]

Please check individual drug monographs for details of interactions available in Med Safe Drug monograph and New Zealand Formulary

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