

Bon Secours Richmond
Pharmacy & Therapeutics Committees
Transdermal Fentanyl (Duragesic®)
11/2002

Recommendations:

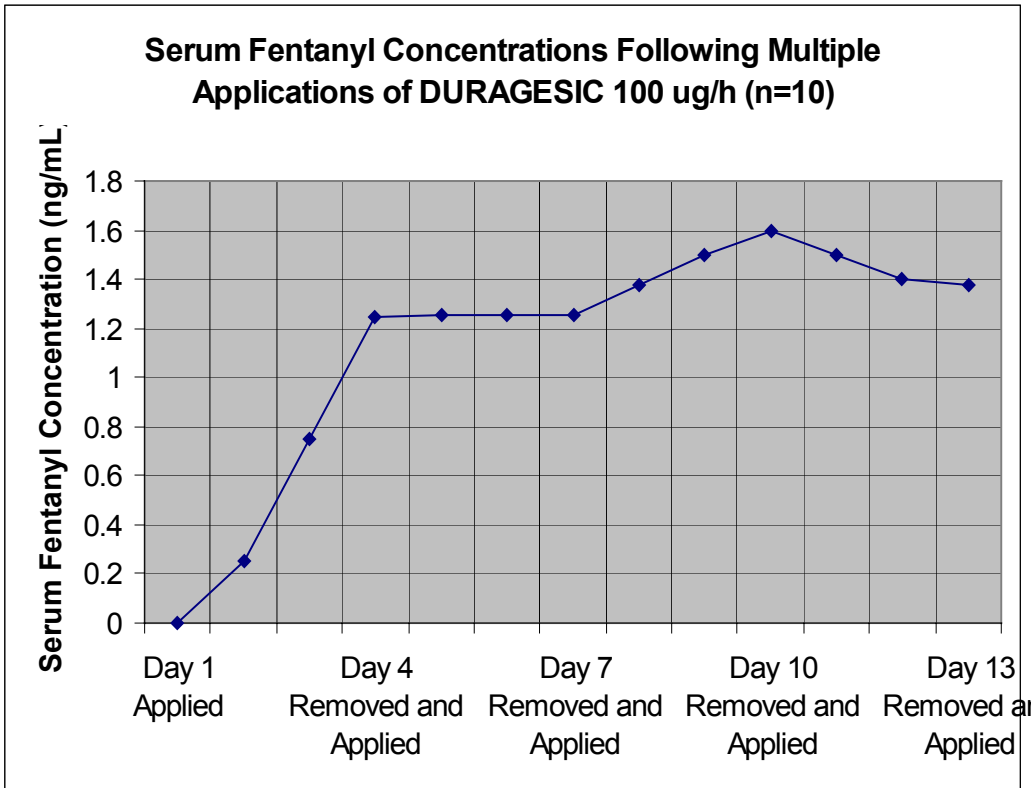
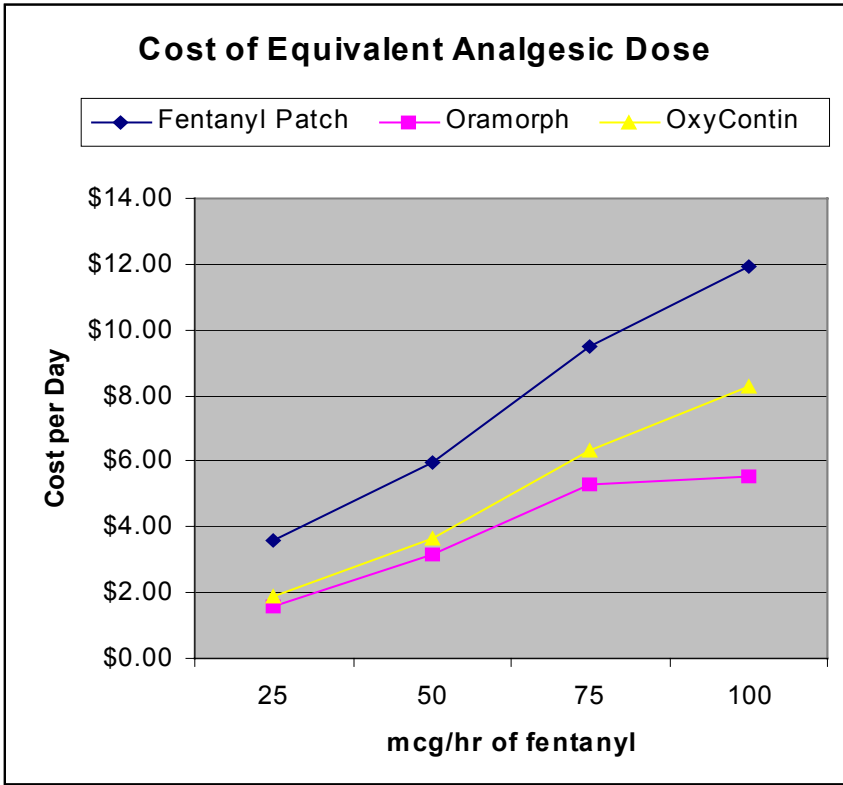
- Fentanyl patches should not be titrated during the initial 3 days when starting therapy as serum fentanyl levels continue to rise during this time reaching peak level at end of the third day.
- Patients should be prescribed short-acting opioids for breakthrough pain that may occur during the initiation of Duragesic therapy; usually 25% of the previous daily opioid dose q3-4 hours as needed or 10-20% of the 24-hour oral dose every 1 h as needed.
- Fentanyl strengths of 50, 75, and 100 µg/h should only be used in patients who are already on and are tolerant to opioid therapy.
- Pharmacy will not honor orders for fentanyl patches under the following conditions as transdermal Fentanyl may cause serious life-threatening hypoventilation and is *contraindicated* in:
 - Management of acute or post-operative pain, including use in out patient surgeries
 - Management of mild or intermittent pain responsive to PRN or non-opioid therapy
 - Doses exceeding 25 mcg/h at the initiation of therapy in opioid-naïve patients
 - Children under 12 years of age or patients under 18 years of age who weigh less than 50 kg.
- When fentanyl patches are removed from the patient they should be placed in the return/wastage bin in Pyxis and witnessed by two nurses. A sufficient amount of drug is retained in the patch to present an abuse or overdose potential.
- A dosage equivalence of 25 mcg/hour of fentanyl being equal to 60 mg/day of oral morphine or 30-40 mg of OxyContin per day is recommended to prevent under dosing of when converting to fentanyl patches (Duragesic®).
- Sustained or controlled-release opioid products and transdermal preparations do not permit rapid dose escalation and therefore are best used when a patient's pain is well controlled and daily opioid requirements have been established.
- When the patients pain scores fall below 4 on a 10-point scale and the daily opioid requirements become clear, conversion to a sustained-release preparation of the same opioid with immediate-release rescue doses can be considered.

Findings:

- Patients require short acting opioids during initiation to control pain and to prevent potential withdrawal syndrome, usually 25% of the previous daily opioid dose given q3-4 hours as needed.
- The Duragesic package insert under doses approximately 50% of patients and other dosing equivalence have been suggested. The package insert states that 25 mcg/hour of fentanyl is equivalent to 45-134 mg/day of oral morphine. Other sources recommend using an equivalence of 25 mcg/hour of fentanyl being equal to 60 mg/day of oral morphine to prevent under dosing of Duragesic.
- Serum levels increase continuously throughout the first three days after initiation of therapy.
- Steady state serum levels are obtained and maintained with the application of the second dose.
- Dosing recommendations/concerns after steady state.
 - If the patient has persistent and frequent breakthrough pain the fentanyl dose patch should be increased by 25-50%.
 - A small percentage of patients who are well controlled for the first two days after patch application have increasing pain on day 3 and may require the patch be changed every 48 hours.
 - Serum levels peak 48 hours after patch application and slowly decline thereafter. Patches should not be changed any more frequent than every 2 days.
 - After discontinuation fentanyl displays a 17-hour half-life due to continued absorption from the skin.
- One study of 39 cancer patients initiated fentanyl patches with daily dosage titrations in increments of 25 mcg/hr as needed. Patches were changed every 3 days unless pain profiles suggested a 2 day interval. The author concluded that the patches can be titrated effectively and safely on a day-to-day basis. Each patch was dated when applied to ensure that it was changed on schedule.
- Fentanyl patches have been associated with a 50% lower incidence of constipation than oral morphine (28.6% versus 50.8%).

Opioid Prescribing and Titration for Cancer Pain (Using a 10 point scale)

- Pain rating 7-10 Consider increasing dose by 50-100%
- Pain rating 4-6 Consider increasing dose by 25-50%
- Pain rating 1-3 Consider increasing dose by 25%
- Switch from fixed-combination opioids to single-entity opioids when acetaminophen dose exceeds 4 g per day.
- Provide rescue doses of short-acting opioids for breakthrough pain (10-20% or 24-hour oral dose every 1 hour as needed)
- Medications Not Recommended for Cancer Pain
 - Propoxyphene
 - Meperidine
 - Mixed agonist-antagonist (nalbuphine, butorphanol)
 - Partial agonist (buprenorphine)



References

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