The Opioid Rotation Ratio From Transdermal Fentanyl to ...

The Opioid Rotation Ratio From Transdermal Fentanyl to "Strong" Opioids in Patients With Cancer Pain.

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Abstract

CONTEXT: One-third of cancer patients require opioid rotation (OR) to treat uncontrolled pain or opioid-induced neurotoxicity. Although fentanyl is the most frequently rotated opioid in cancer patients, the accurate opioid rotation ratio (ORR) from transdermal fentanyl (TDF) to other so-called "strong" opioids is unknown.

OBJECTIVES: We aimed to determine the ORR of TDF to strong opioids, as measured by morphine equivalent daily dose (MEDD).

METHODS: We reviewed 2471 consecutive patient visits (938 patients) to our supportive care center for an OR from TDF to strong opioids. Information regarding demographics, symptoms, and MEDD was collected in patients who followed up within six weeks. Linear regression analysis was used to estimate the ORR between TDF dose and net MEDD (MEDD after OR minus MEDD of the breakthrough opioid used along with TDF before OR).

RESULTS: Among 47 eligible patients, the median age was 54 years, 53% were male, and 77% had advanced cancer. The median time to follow-up was 14 days. Uncontrolled pain (83%) was the most common reason for OR. In patients with OR and no worsening of pain at follow-up (n = 41), the median ORR (range) from TDF mg/day to net MEDD mg/day was 100 (12.5-217) and from TDF mcg/hour to net MEDD was 2.4 (0.3-5.2); the correlation of TDF dose to net MEDD was 0.60 (P < 0.0001).

CONCLUSION: The median ORR from TDF mg/day to MEDD is 100 and from TDF mcg/hour to MEDD is 2.4, suggesting that TDF 100 mcg/hour is equivalent to an MEDD of 240 mg.

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KEYWORDS: Cancer; cancer pain; conversion ratio; fentanyl transdermal; morphine equivalent daily dose; opioid rotation; supportive care

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