Recent Advances in Cancer Pain Management

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This article will focus on:
1. Guidelines and recommendation on opioid treatment of cancer pain;
2. Recent evidences in comparing morphine and methadone as first line opioid, management of breakthrough pain, pharmacological treatment of neuropathic pain and use of bisphosphonate in cancer related bone pain.

**Guidelines and recommendation on opioid treatment of cancer pain**

The Expert Working Group of the Research Network of the European Association for Palliative Care (EAPC) has published guidelines and recommendation on use of morphine and alternative opioids in cancer pain in 2001. The following are the salient points:

1. Morphine is the first choice of strong opioid for moderate to severe pain
2. The optimal route of administration of morphine is by mouth;
3. The dose for breakthrough pain is suggested to be the same dose as regular 4-hourly immediate release morphine;
4. Methadone is an effective alternative but it have pronounced inter-individual differences in its plasma half life ranges from 17 to 100 hrs, relative analgesic potency and duration of action; and
5. Transdermal fentanyl is an effective alternative but is best reserved for patients whose opioid requirement is stable.

**Recent evidence in comparing Morphine and Methadone as first line opioid**

A randomized, double-blinded study in 2004 comparing methadone with morphine as a first line strong opioid for cancer pain found that methadone did not produce superior analgesic effect or overall tolerability at 4 weeks compared with morphine as a first line strong opioid. Both methadone and morphine groups reported that 70% of patients had more than 20% improvement in pain at 4 weeks. However there was a significant higher drop out rate in methadone group compared to the morphine group (22% Vs 6%, p =0.019).

**Recent evidence in management of breakthrough pain**

Breakthrough pain is also described as episodic pain, transient pain and pain flare. It is characterized by transient increase in pain intensity over background pain. It is usually rapid onset, severe in intensity and self limiting.

EAPC has recommended using immediate release oral morphine of dosage around 16% of total daily dose for breakthrough pain. The rescue dose can be given as often as required up to every 1-2 hr orally and up to 15-30min intravenously.

A recent systematic review on use of opioids for management of breakthrough pain in cancer patients in 2005 has included four randomized control studies involving a total 393 of participants, studying the efficacy of transmucosal fentanyl citrate (OTFC) compared to placebo and morphine. OTFC consists of a fentanyl impregnated sweetened and hardened lozenge on a plastic handle and designed for breakthrough pain. It has a very rapid onset of action, ranging from 5-15 min, and has a short duration of action of around 2 hrs. This review found that OTFC was superior to placebo, immediate release morphine and previous rescue medication in providing breakthrough pain relief at 15min and 30min. They also found that the successful dose of OTFC was determined by titration and there was no relationship between the successful dose of OTFC and the total daily around the clock opioid. The practice of deliver a fixed proportion of the around the clock dose for breakthrough pain medication as recommended by EAPC is not supported by this review.