PALLIATIVE CARE TIPS

Issue # 34 Approaching 'Breakthrough Pain' (BTP)

(Collect them all)

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Definition and classification:

The term "breakthrough pain" (BTP) has been widely used within the palliative care literature. However, despite extensive research, a consensus on definition and terminology has not yet been reached. In general, BTP describes a phenomenon of transitory exacerbation of pain in the presence of adequately controlled background pain. BTP can be *predictable* (e.g. mouth pain with eating) or *unpredictable* (e.g. sudden lancination of neuropathic pain), *volitional* (e.g. hip pain with weight-bearing) or *non-volitional* (e.g. chest pain with cough). Some authorities consider "end-of-dose failure" as a subtype of BTP, although this is rather an indicator of inadequately controlled background pain.

Typical characteristics:

1. Incidence: Depends on setting (outpatients > inpatients); median number of episodes 3-4 per day
2. Peak/duration: few minutes/45 minutes
3. Predictability: 50%
4. Impact: Associated with perception of more severe pain, and greater psychological distress and functional impairment

Assessment of BTP:

1. Is background pain adequately controlled by around-the-clock analgesics, or is end-of-dose
2. failure present?
3. Is the BTP predictable? Is it volitional or non-volitional? What is its time course (onset, peak,
4. duration)?
5. Are there any other reasons for which the patient may be using breakthrough analgesics e.g.
6. somatization of psychological distress, addictive behaviour, cognitive impairment, opioid tolerance/hyperalgesia?

Treatment options for BTP:

1. Consider non-pharmacological (e.g. radiotherapy for bone pain) and non-opioid pharmacological (e.g. anticonvulsant for neuropathic pain) options.
2. If BTP is predictable and volitional, consider treating it pre-emptively, rather than reactively.
3. Opioids:
   a. Immediate-release oral opioids: onset of action 20-30 minutes
   b. Subcutaneous/IV opioids: onset of action 2-10 minutes; less convenient in outpatient setting
   c. Sublingual fentanyl/sufentanil (injectable formulation): thought to have rapid onset and short duration of action, but pharmacokinetics, efficacy and safety have not been formally evaluated; the liquid may be difficult to hold under the tongue, leading to swallowing
   d. Transmucosal fentanyl preparations (e.g. sublingual tablet, buccal film): onset of action 10-15 minutes; only indicated in *cancer* patients who are *opioid tolerant* (≥ morphine 60 mg po equivalent per day); maximum 4 doses per day (long half-life and accumulation with repeated doses); assess ability of patient and family to comply with instructions
   e. Dosing: Research suggests that the effective dose for breakthrough pain, relative to the dose for background pain, is variable. For oral and injectable opioids, start at approximately 10% of total daily dose, and then titrate if necessary. For transmucosal opioids, start at the lowest dose, and then titrate if necessary (note that different transmucosal formulations are not interchangeable).