Predictors of Acute Perioperative Pain: What to do?

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Reminders...

• Day surgery - Good adherence to prescribed analgesics can be crucial to suppress or even prevent acute post-op pain.

• Prevalence rates of analgesic nonadherence and partial adherence were 21.6% and 20.0% in abdominal surgery.

• Dropped to 9.4% and 19.8%, respectively, in patients with moderate to severe pain.
Reminders...

• Low postoperative pain intensity and short duration of surgery are often the most important predictors of analgesic nonadherence.

• Often, the most important preoperative predictors for analgesic nonadherence are low preoperative pain intensity, low preoperative expectations of pain, and low fear of short-term effects of surgery.
Psychological predictors of postoperative pain

- Chronic Post Surgical Pain (CPSP) after major surgery continues to be problematic.

- Studies suggest 10% - 70% of major surgery patients go on to develop CPSP depending on the surgery type (e.g. cardiac, thoracic, gynaecological, spinal).

- Increasing chronic pain and major surgery patients remain on long-term, high-dose prescription opioids:
  - little to no medical help for tapering
  - incur risks for opioid dependence, misuse, addiction and even fatal overdoses
Psychological predictors of postoperative pain

• Several pre-surgical Psychological risk factors for CPSP have been consistently identified over last 15 years.

• Systematic reviews of psychosocial risk factors for CPSP indicate a high level of evidence (i.e. Grade of Association 1: Association Likely) for the predictive value of presurgical depression, psychological vulnerability and chronic stress on risk of persistent pain following surgery.
Psychological predictors of postoperative pain

• Pooled odds ratios (ORs) for *pre-surgical anxiety* (OR=1.76) and *pre-surgical pain catastrophizing* (OR=2.37) suggest that patients who present with these issues before surgery are approximately twice as likely to develop CPSP compared with controls.
Psychological predictors of postoperative pain

• Newer constructs:
  – perceived injustice
  – sensitivity to pain traumatization

• These predict CPSP but these findings require replication.
Psychological predictors of postoperative pain

• Newer versions are coming:

• **Psychological Robustness** - predicts a lower incidence of CPSP at 4 months in women undergoing breast cancer surgery (OR = 0.70)
  – High dispositional optimism
  – High positive affect
  – Low emotional distress

• Maintaining an optimistic outlook is not always possible?
Psychological predictors of postoperative pain

- Taken altogether, these studies indicate that fostering optimism and enhancing self-efficacy and adaptive behaviours in the perioperative period could improve outcomes for patients undergoing major surgeries.
What to do?

• **#1**: Minimize acute post-operative pain intensity and improve quality of life

• Reduce distress, disability and chronic opioid use for patients who sustain neuropathic injury during surgery

• New talk of patient’s “character” at some forums and conferences
What to do?

• **#2**: Pre-operative education has long been known to reduce pre-surgical anxiety, leading to improved post-surgical outcomes
  – Reduced opioid consumption in hospital and shorter post-surgery stay

• **#3**: Relaxation, guided imagery and hypnosis reduce pain, use of analgesic medication, negative affect acute postop
Practical Problems of Psychological Interventions?

1) Patients may be “Blunters”?
2) Time of staff – resources?
3) Time cost to patients?
Cost of doing nothing?

• Successful Interventions Combine:
  – Pain education
  – Cognitive restructuring challenging pain catastrophizing
  – Practice redirecting attention from pain to other sensory channels of perception
  – Relaxation with a personalized audio recording

• The intervention was delivered for 1 hour the day before surgery and for an additional hour 1–3 days after surgery by staff.