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Nonpharmacological Pain Management During Screening Colonoscopy

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Pain

- Culturally connected and assessed by human behaviour
 - a person's cultural background influences the expression and meaning of pain
- A physiologic response to tissue damage
- Includes emotional and behavioural responses based on individuals' past experiences and perceptions of pain
- Pain pathways are connected to the brain regions which control emotions (limbic system)
- Devor 2008, Jensen & Gebhart 2008, Loeser & Treede 2008, Im et al. 2007, Reyes-Gibby et al. 2007, Finnstrom & Soderhamn 2006, Davidhizar & Giger 2004.

- **The perception of pain**
 - the same between various racial and ethnic groups
- **The pain thresholds and/or tolerance**
- may differ because of genetics
- and according to
 - social and cultural background
 - ethnicity and sex
 - emotional and psychological state
 - memories of past pain experiences
 - beliefs and values
- The same person can sense the pain differently at different times
- Loeser 2000, Bonham 2001

Colonoscopy

- better tolerated by old subjects than young
- technically more difficult and less tolerated by women
 - females tend to have an inherently longer colon, which may predispose the colonoscope to painful looping
- Holme et.al. 2013, Benjamin 2007, Takahashi et al. 2005, Waye 2004, Froehlich 2003, Thiis-Evensen et al. 2000, Ristikankare 2000.

Maneuvers

- **Loop reduction is an essential technique to**
 - improve complete and successful colonoscopy
 - reduce discomfort and increase success
 - could lead to a better tolerated endoscopy
 - takes little extra time to avoid looping of the scope
- **Patient repositioning**
- **Application of abdominal pressure**
- Holme et.al. 2013, Benjamin 2007, Takahashi et al. 2005, Waye 2004, Froehlich 2003, Thiis-Evensen et al. 2000, Ristikankare 2000.

Medication free-colonoscopy

- common practice in Finland
- medication is available if necessary
 - the patient is very anxious before the procedure
 - when pain emerges regardless of loop reduction, reducing bowel air or medication-free interventions
- in most European countries and in the United States sedatives and pain medication are routinely administered by
 - physicians, nurses or patients themselves

Colonoscopy pain

- **visceral pain**
- resulting from the activation of sensory afferent nerves that innervate intestines

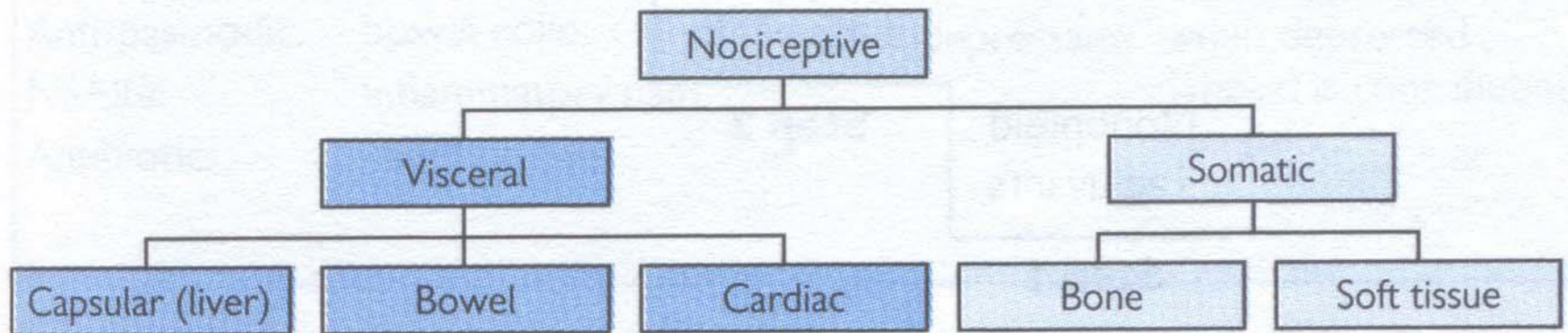


Fig. 6a.2 Nocioceptive pain

Watson M, Lucas C, Hoy A, Back I (eds.). Oxford Handbook of Palliative Care, Oxford University Press 2005, p. 179.

Visceral pain differs from somatic pain

- unformed
- diffused
- difficult to localise
- frequently referred to other intact tissues
- autonomous and motor components are features of it
 - e.g. pallor, sweating, bradycardia, dizziness, hypotension, nausea, fainting

Pre-procedural risk factors for patient pain

- female gender(more painful, more difficult)
- younger age
- low body mass index
- pelvic operations, previous abdominal surgery
- abdominal pain as indication for colonoscopy
- Diarrhoea
- a history of diverticulitis
- first time colonoscopy/previous painful colonoscopy
- anxiety and nervousness
- May predict colonoscopy patients' pain and difficulty of intubation
- For male patients, the presence of multiple risk > sedation?
- Holme et al. 2013, Ylinen et al 2010, Chung et al. 2007, Park et al. 2007

In my study

- Patients with **previous pain experience** evaluated colonoscopy as more difficult and painful than patients without previous pain experience.
- **Women** experienced more anxiety than men and they also reported more pain and discomfort than men.
- **The degree of patient's nervousness** was the major factor leading to patients' pain during colonoscopy

Patient quality indicators for colonoscopy service/Patients' attitudes to their colonoscopy experience

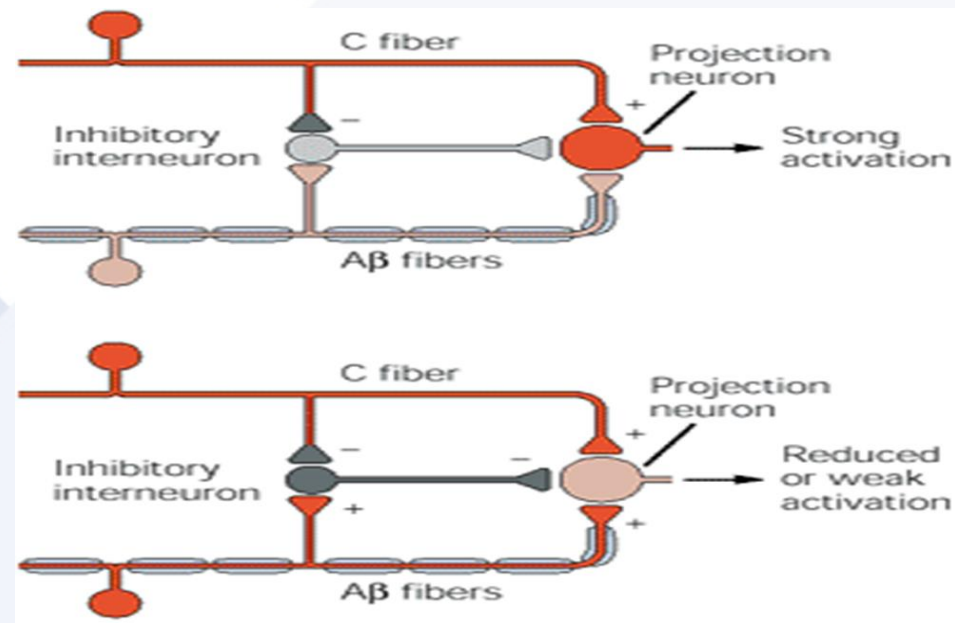
- **Endoscopy unit staff** (friendliness, personal manner, technical skills)
- **Facility environment**
- **Comfort and absence of embarrassment**
- **Short wait times and prompt access to endoscopy**
- **Painless, non-Anxiety**
- **Patient-physician communication**(adequate discussion)about
 - procedure
 - preliminary results
 - with enthusiasm
- McEntire, Sahota, Hydes & Trebble 2013, Sewitch, Gong, Dube, Barkun , Hilsden & Armstrong 2011, de Jong et al 2010, Maslekar et al 2010, Ko et al 2009, Scotto et al 2009, Denis et al 2009, Yacavone et al 2001, Schoen et al.2000

Pain assessment

- It seems that both physicians and nurses assess pain inadequately
- Ylinen et al. 2009, Wilson 2009, van Herk 2009, Lauzon Clabo 2008, Jacobsen et al. 2007, Heins et al. 2006.

Nonpharmacological interventions

- has its basis in pain mechanism
- thought to be explained through the gate control theory of pain
- Melzack & Wall 1993



Nonpharmacological interventions

- Methods designed to relieve pain without medication
- They can
 - reduce the emotional components of pain
 - give patients a sense of control over the situation
 - make pain more tolerable

Nonpharmacological interventions

- Muscle relaxation
- Breathing techniques
- Relaxed posture to patients
- Massage (may lower blood pressure and pulse)
- Listening to music (reduces the patients' anxiety, improves patients' overall experience)
- Stimulation of sense of seeing and hearing (can decrease unpleasant feelings in the abdomen)
- Patient education and guidance (can decrease patients' anxiety and depression before procedures)
- Martindale, Mikocka-Walus, Walus, Keage & Andrews 2014, Bechtold et al 2009, Bytzer & Lindeberg 2007, Lang et al. 2005, Olney 2005, Cooke et al. 2005, Schaffer & Yucha 2004, Hayes et al. 2003, Hayes et al. 2003, , Lee et al. 2002, Allen et al. 2001, Chlan et al. 2000 , Salmore & Nelson 2000, Lembo et al. 1998 , Andrewes et al. 1999.

Nurses' nonpharmacological interventions to manage pain

According to both female and male patients, both
anxious and non-anxious patients

- the nurses' peaceful talk to distract the patient's thoughts away from the pain
- explanation of the reason for pain
- their guidance(explanation of the meaning of the patient's symptoms, the cause of pain
- forewarning of upcoming pain during the examination

Helped

Ylinen et. al 2009

Conclusion

- It is important to recognise
 - patients' anxiety
 - gender differences
 - other pre-procedural risk factors for patient pain
- when preparing them for colonoscopy
- It is important to properly select and present patients for a sedation-free colonoscopy, although the practice is acceptable for most colonoscopy patients

Endoscopy staff

- Be more aware of the positive effects of nonpharmacological interventions
- Acquire knowledge
- Develop these interventions as a part of colonoscopy patients' pain management



 **HVALA !**

 **KIITOS!**

THANK YOU!

Vesel božič in srečno novo leto

