Nacionalni inštitut za javno zdravje

Svit

DRŽAVNI PROGRAM PRESEJANJA IN ZGODNJEGA ODKRIVANJA PREDRAKAVIH SPREMEMB IN RAKA NA DEBELEM ČREVESU IN DANKI

Nonpharmacological Pain Management During Screening Colonoscopy

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Pain

- Culturally connected and assessed by human behaviour
  - a person's cultural background influences their 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)
- Kalso 2002, Davidhizar & Giger 2004, Finnstrom & Soderhamn 2006, Im et al. 2007, Reyes-Gibby et al. 2007, Devor 2008, Jensen & Gebhart 2008, Loeser & Treede 2008

Pain

- **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

Patients' culturally-based responses to pain

Stoic patients

- Less expressive
- Tend to “grin and bear it”
- Withdraw socially
- Make as little fuss as possible over injuries and illness

- Northern European and Asian backgrounds

Why?

- Long tradition in European culture
- Children, especially boys are
  - admonished for crying like babies
  - applauded for keeping a stiff upper lip

- “Easy patients” who behave in ways consistent with the values of the western medical system?

The Finns

- belong to the Northern European stoic expressing population
  - experience pain in a manner that is quietly enduring
  - the culture of pain tends to honor the person who deals with pain without verbal expressions
- the need to alleviate their pain seem to be lesser than e.g. among North American patients

- Moore et al. 1998

Emotive patients

- Verbalize their expressions of pain
- Prefer to have people around
- Expect others to react to their pain so as to validate their discomfort

- Hispanic, Middle Eastern, and Mediterranean background

Why?

- Child's crying immediately elicits sympathy, concern, and aid
- Child's health is worried about constantly
- – a sneeze can be an illness
- > child become more anxious about the health in general
- > as adult…. need greater reassurance from caregivers even in the face of minor symptoms

In general

- Ill people revert to childhood behavior
- Complaining bring them attention as children….complaining out of habit as adults

- this generalization help us to understand human behavior
- **BUT** not everyone in every culture conforms to a set of expected behaviors or beliefs
  - rigid use of generalizations
  - leads to cultural stereotyping > lead to serious inaccuracies

It is important to understand

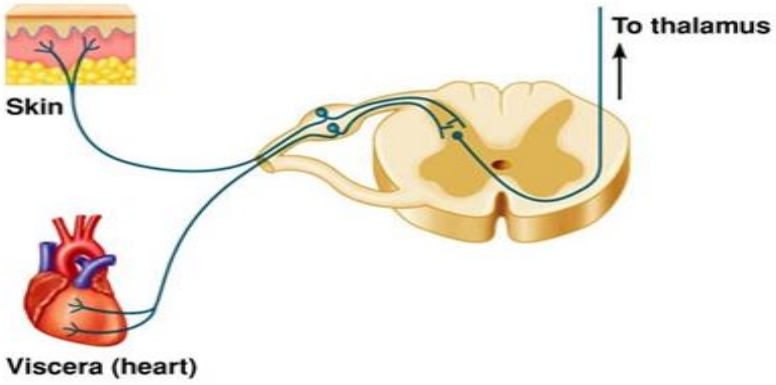
- How my own culture affects the attitudes I hold about pain = self-awareness
- My attitudes and beliefs versus those of patients who come from different cultures
- My reaction to pain is “normal”/ anything different is “abnormal”
- Staff raised in a stoic family
  - how to react to patients who respond to pain with loud verbal complaints and may discount “overly expressive” reactions?

Visceral pain

- Colonoscopy pain
- Resulting from the activation of sensory afferent nerves that innervate intestines
- Every internal organ has its specific superficial referred aria
- Sensory fibres from the viscera enter the same segment of the spinal cord as somatic nerves (those from superficial tissues)
- The sensory nerve from the viscera stimulates the nearby somatic nerve so the pain localisation in the brain is confused

Visceral pain

- The pain of a heart attack > in the left arm and shoulder, thorax, or epigastrium rather than in the chest
- Oesophagus related pain > in the left side of the chest



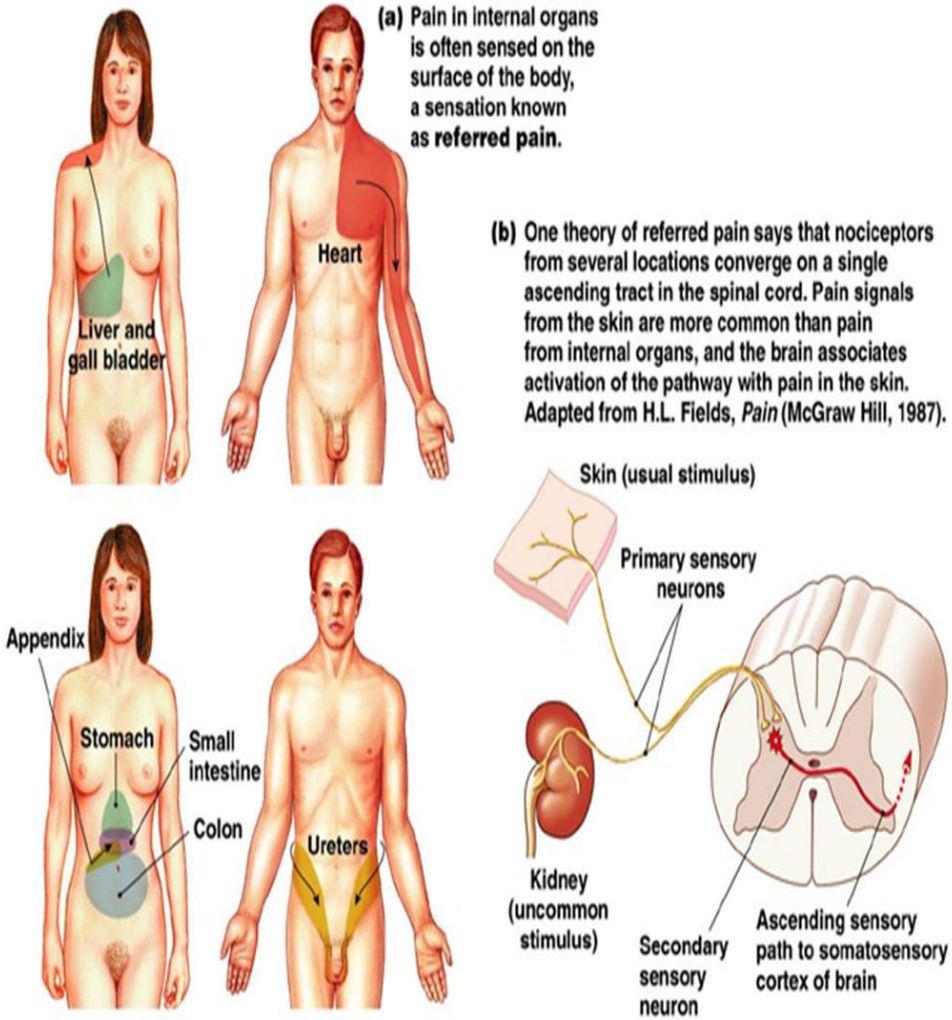


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Fig. 10-13

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

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, Ylinen et.al 2009, 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

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
- first time colonoscopy/previous painful colonoscopy
- anxiety and nervousness
- a history of diverticulitis

- 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 2009, 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 patient's pain during colonoscopy

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

- **Endoscopy unit staff** (friendliness, personal manner, technical skills, relaxed atmosphere)
- **Facility environment**
- **Absence of embarrassment**
- **Short wait times and prompt access to endoscopy**
- **Comfort and 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

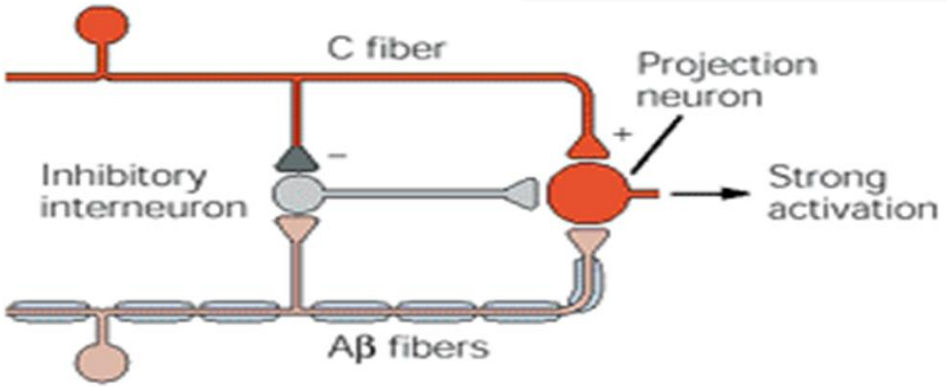
- It seems that both physicians and nurses assess pain inadequately
  - In my study both nurses and endoscopists evaluated patients' pain intensity less than patients
- Wilson 2009, van Herk 2009, Ylinen 2009, Lauzon Clabo 2008, Jacobsen et al. 2007, Heins et al. 2006,Klopfenstein et al. 2000

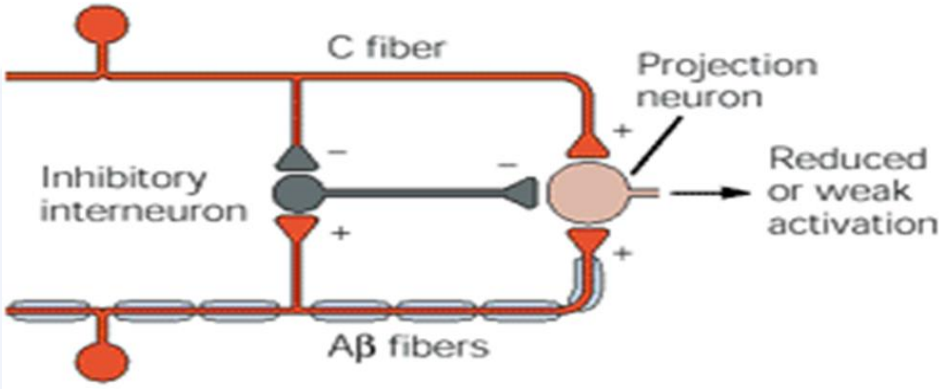
Nonpharmacological interventions

- 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

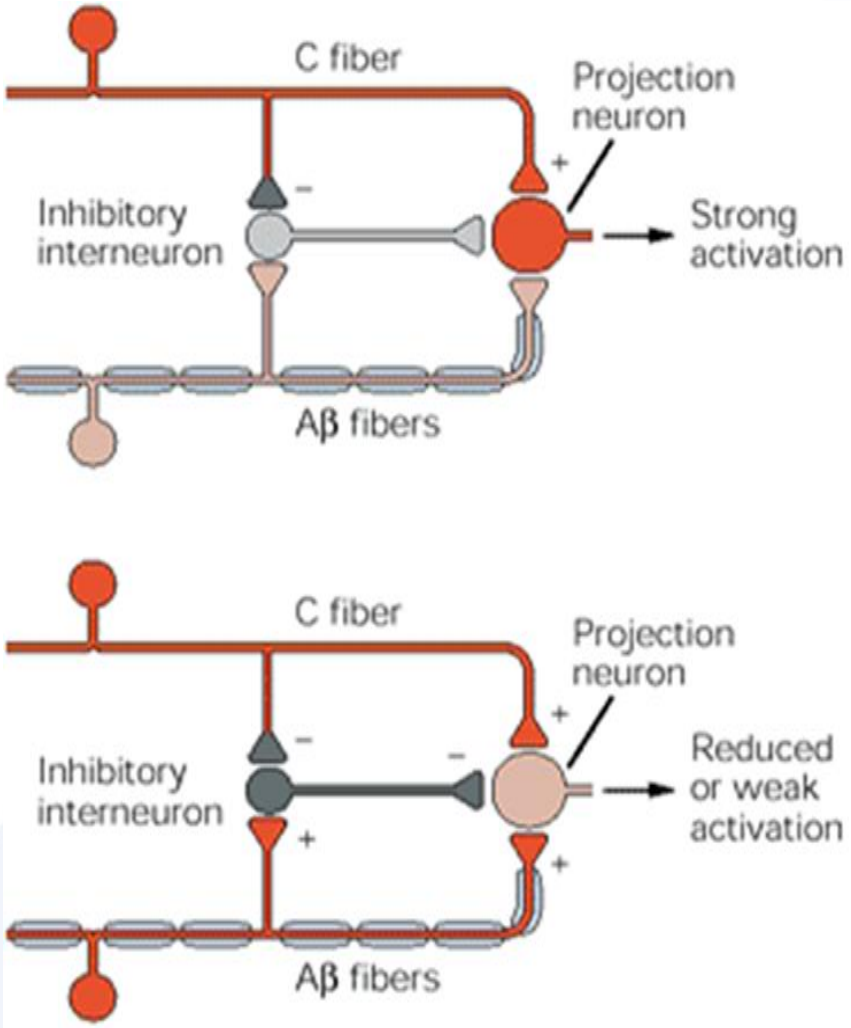
- has its basis in pain mechanism
- thought to be explained through the gate control theory of pain
- Melzack & Wall 1993





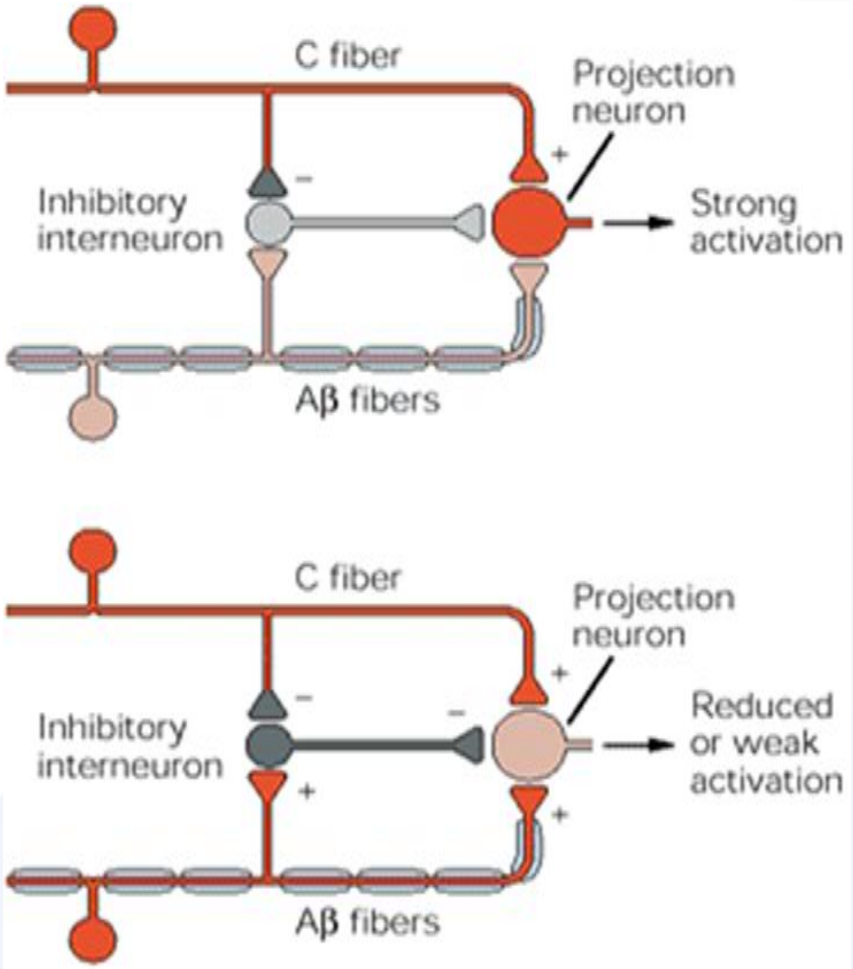
The gate control theory of pain

- information coming from the periphery of the body may transmit directly to the brain through the spinal cord
- the stimulation of the thin pain transmitting nerve fibres (A-delta and C) “opens the gate”



The gate control theory of pain

- as a result of e.g. cognitive factors the perception of pain is modulated by the interaction between pain-transmitting and non-pain transmitting neurons so spinal inhibition is dynamically regulated
- the activation of nerves or neurons that do not transmit pain signals (A-beta fibres) indirectly inhibits or modulates signals from pain fibres, “closing the gate”.
- Price et al. 2009



- The “gate” can also be closed by activating the inhibitory system by the use of nonpharmacological interventions

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)
- Patient education and guidance (can decrease patients' anxiety and depression before procedures)
- Stimulation of sense of seeing and hearing (can decrease unpleasant feelings in the abdomen)

- 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.

In my study

- Nurses used 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**

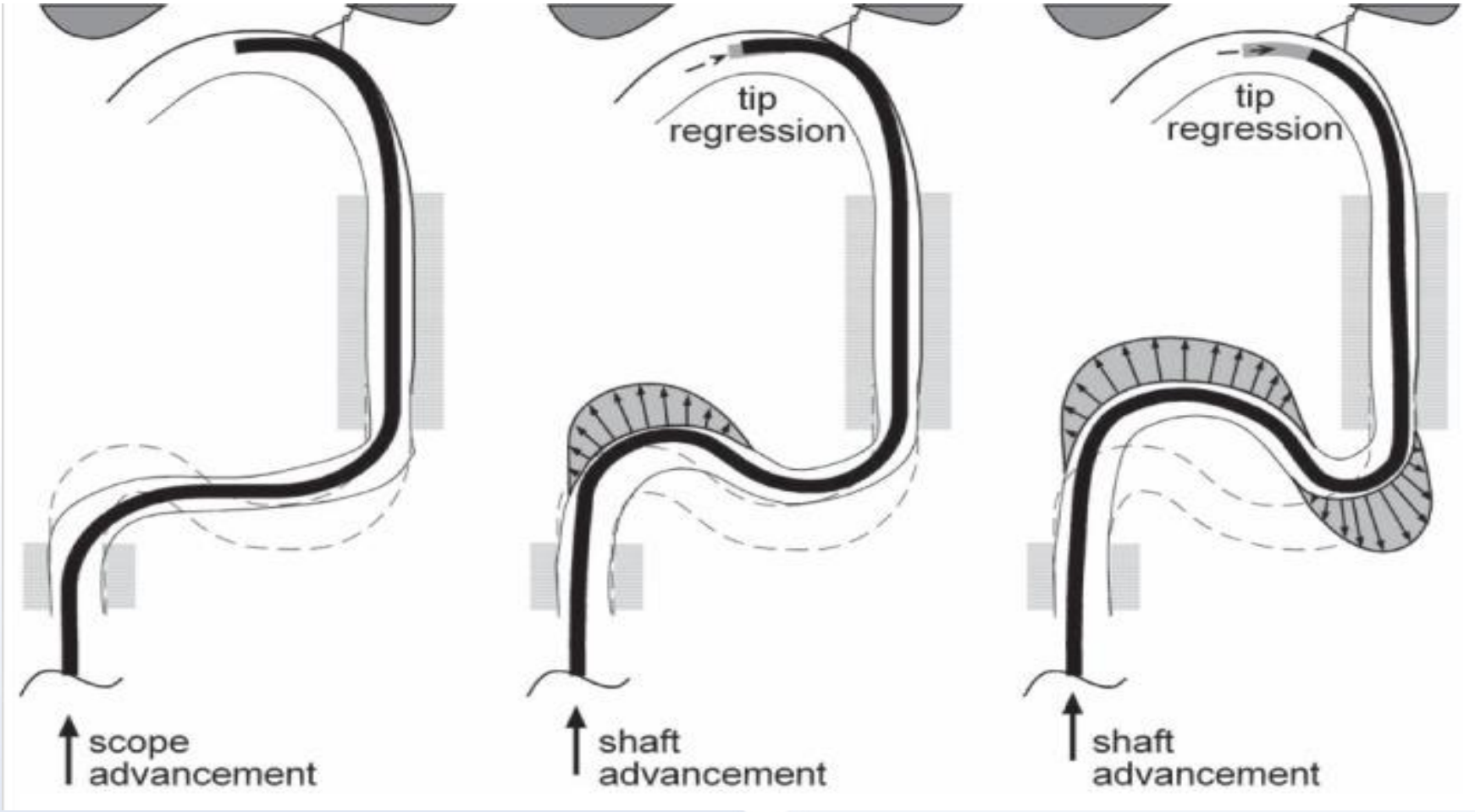
  - Ylinen et.al 2009

What to do?

- Keep the patient warm and dry and in a relaxed position (blanket + pillow+ horizontal position + examination pants+ hospital shirt and socks)
- Observe hyperventilation (paper bag if needed)
- Ask to give off gas, so that the bowel would not stretch
  - explain why
  - avoid embarrassment
- Act empathetically and calmly
- Create confidential relationship with the patient
- Use humor if possible
- Encourage satisfying interaction between the patient, the nurse and the endoscopist
- Change patient's position
  - enough large examination couch

Maneuvers

- **Straightening of the scope/ 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
- **Reducing bowel air**
- Holme et.al. 2013, Benjamin 2007, Takahashi et al. 2005, Waye 2004, Froehlich 2003, Thiis-Evensen et al. 2000, Ristikankare 2000,



Loeve, Fockens & Breedveld 2013, Can J Gastroenterol; 27(5): 293–302.

Maneuvers

- **Interrupting the procedure**
- **Patient repositioning**
- **Application of abdominal pressure**
  - Prop up the abdomen
  - Press down the abdomen

Holme et.al. 2013, Benjamin 2007, Takahashi et al. 2005, Waye 2004, Froehlich 2003, Thiis-Evensen et al. 2000, Ristikankare 2000

Is the mask and the gown necessary ?

http://gutcheck.cancer.gov/screenings/colonoscopy/print/index.html#uQvUs0aKGgs

Endoscopy staff

- be aware of the positive effects of nonpharmacological interventions
- acquire knowledge
- develop nonpharmacological interventions as a part of colonoscopy patients' pain management

Endoscopy staff

- pay attention to patients' previous pain experiences and their anxiety and gender differences(women) when preparing them for colonoscopy
- Interview colonoscopy patients before the procedure in order to detect anxious patients who are at risk of having a painful colonoscopy

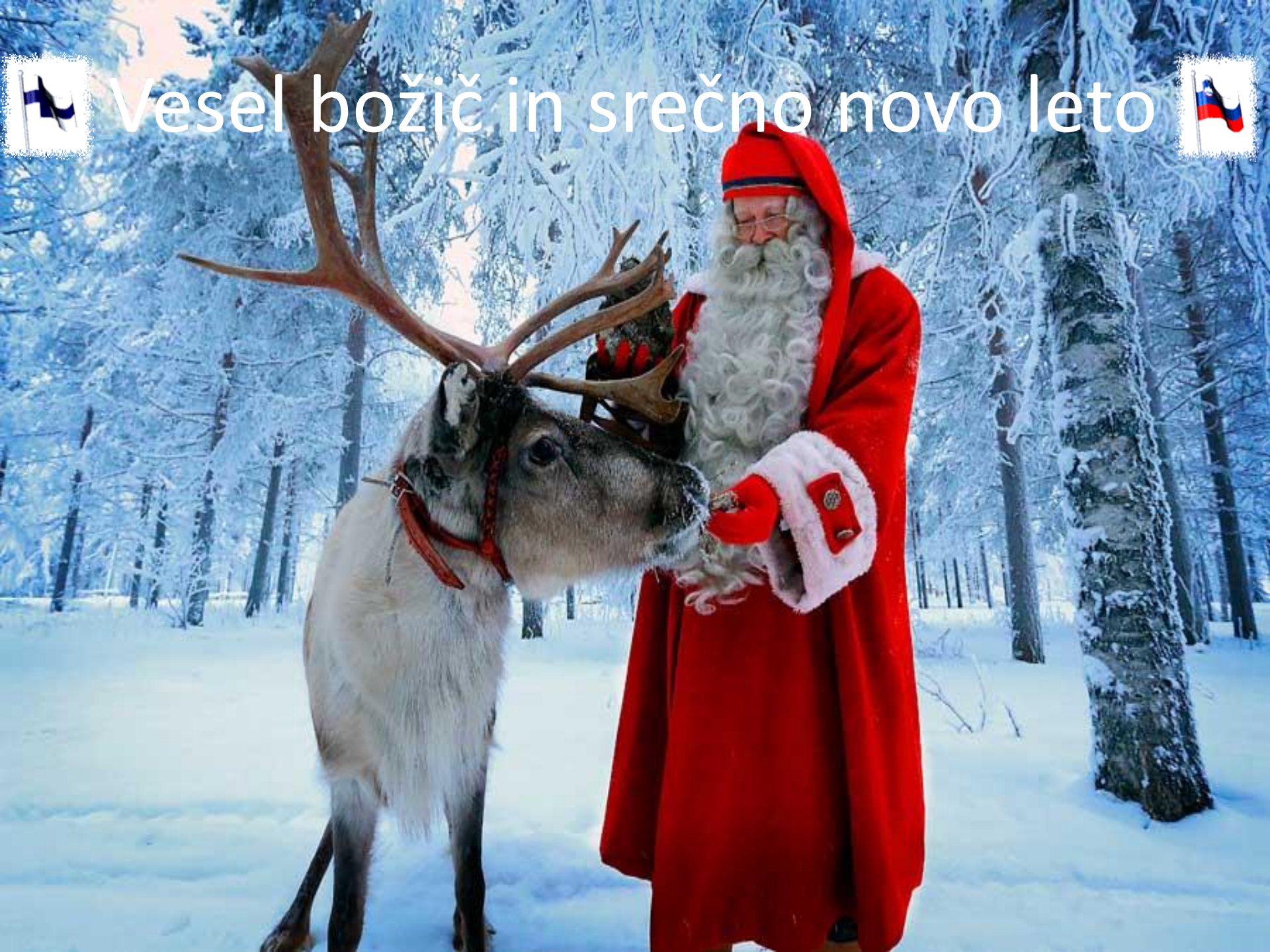
Conclusion

- It is important to properly select and present patients for a sedation-free colonoscopy, although the practice is acceptable for most colonoscopy patients

HVALA !

KIITOS!

THANK YOU!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