

Supplemental Digital Content 2

Data Collection Questionnaires, Variables, and Definitions

Variables recorded on enrollment

- Diagnosis leading to surgery
- Description of surgical procedure
- Type of surgery: scheduled or emergency
- Sex
- Age in years
- Place of birth (Spanish autonomous community)
- Date of surgery
- Employment status
- Education in years of formal schooling

Variables recorded in the preoperative assessment visit with anesthesiologist

- Weight and height
- Alcohol intake: positive if >24 g/d (>3 glasses of wine, or >3 beers or ≥2 glasses of hard liquor)
- Smoking:
 - No
 - Current
 - Exsmoker (>3 months since last smoke)
- Chronic obstructive pulmonary disease: answer “yes” or “no” to the question “Has any physician told you that you have a chronic respiratory disease?”
- Heart disease declared by the patient, stable or unstable
- Hypertension: answer “yes” if the patient reports this diagnosis or is on an antihypertensive drug
- Peripheral circulatory disease declared by the patient or recorded in the chart
- Neurologic disease declared by the patient or recorded in the chart
- Chronic kidney failure with or without dialysis
- Liver disease declared by the patient, recorded in the chart, or observed (previous jaundice, hepatomegaly or ascites)

- Diabetes mellitus: treated with dietary measures, with oral antidiabetic therapy alone, insulin alone, or an oral antidiabetic agent plus insulin
- Cancer: Karnofsky score >50% or ≤50%
- Immunosuppression declared by patient (treatment) or disease recorded in chart
- American Society of Anesthesiologists physical status classification (1-4)

Preoperative pain assessment

- Drugs used for reasons other than pain
 - Benzodiazepines
 - Anticonvulsants: ongoing treatment or only preoperative
 - Antidepressants
 - Corticosteroids
 - Street drugs (cannabis, cocaine, heroine, *etc.*): If cannabis is being used for therapeutic purposes, record “no” or if ≤2 cigarettes/d are smoked
- Presence of pain at the site of the intervention or other parts of the body during the 24 h prior to surgery, with intensity expressed on a verbal numerical rating scale (VNRS) (0 = no pain, 10 = the worst imaginable pain to 10) (Values > 3 were considered positive in the bivariable and multivariable analyses)¹
- Use of analgesics or other agents for pain: paracetamol, nonsteroidal antiinflammatory drugs, metamizole, low-dose opioids, strong opioids, antidepressants, anticonvulsants
- Previous experience of intense postoperative pain
- Family history of chronic postoperative pain: grandparents, parents, siblings, children
- Short Form Health Survey-12 (SF-12), for quality of life (version 2; time frame, 4 weeks) (Spanish version)²
- Hospital Anxiety and Depression Scale (Spanish version).³ The 14 items are scored on a 4-point Likert scale. Seven items measuring anxiety and seven measuring depression over the last week provide a total score of between 0 and 21 for each subscale. The cut-off point for anxiety or depression is 8

Intraoperative variables

- Surgical incision
 - Direct inguinal hernia repair:

- Anterior inguinal repair, Liechtenstein mesh hernioplasty
 - Anterior preperitoneal repair, Nyhus or Stoppa technique
 - Repair with plugs (Rutkow/Rutkow-Robbins/Gilbert)
- Femoral hernia repair:
 - Open repair
 - Repair with plugs (Ruklow/Rutkow-Robbins/Gilbert)
 - Meshless repair with suture anchoring (McVay technique)
- Abdominal hysterectomy:
 - Pfannenstiel incision
 - Medial, infraumbilical, or infra-supraumbilical laparotomy
- Vaginal hysterectomy, with or without plasty repair
- Thoracotomy:
 - Unilateral or bilateral
 - Muscle-sparing or not
 - Rib-sparing
 - With resection and/or fracture of a rib
 - With resection and/or fracture of more than one rib
 - Anterior, cartilage-sparing
 - Anterior, with resection of cartilage
 - Anterior, with sternotomy (clamshell incision)
 - Axillary
 - Posterolateral
- Length of incision (except abdominal hysterectomy)
- Nerve-sparing (only in inguinal hernia repair)
- Type of anesthesia (general, including combined with regional anesthesia, or spinal, epidural, plexus nerve block, local)
- Drains
- Opioid doses (fentanyl, remifentanil, alfentanil, morphine)
- Corticosteroids
- Ondansetron
- Ketamine
- Type of spinal anesthesia: intradural, epidural, combined
- Level of sensory blockade

- Spinal opioid doses (morphine, fentanyl, methadone)
- Type of local anesthetic injected spinally: bupivacaine, mepivacaine, lidocaine, ropivacaine, levobupivacaine, prilocaine
- Results of spinal anesthesia: good, moderate, poor
- Blood loss, in milliliters
- Duration of surgery in minutes (from skin incision to skin closure)
- Destination on discharge from the surgical area: home (major ambulatory surgery), hospital ward (*via* recovery room), critical care unit, exitus

Postoperative variables

- Pain 24 h after surgery (VNRS)
- Postoperative length of stay (number of days from the intervention day to discharge)
- Analgesics (oral or parenteral): paracetamol, nonsteroidal antiinflammatory drugs, metamizole, opioids, tramadol, ketamine, neuroleptics, gabapentinoids
- Infusion and infiltration techniques to manage postoperative pain: epidural or paravertebral infusion, wound infusion, peripheral nerve block
- Surgical wound complications during hospitalization (abscess, fistula, dehiscence, seroma, hematoma)
- Reoperation, using a different incision

Variables recorded at the follow-up visit between 3.5 and 4.5 months

- Date of visit
- Anatomical site of pain
- Brief Pain Inventory (BPI-Spanish version)⁴ (Values > 3 on a scale of 0 to 10 were considered positive indications of interference caused by pain)
- Neuropathic Pain questionnaire (version 4, Douleur Neuropathique 4 [DN4]) (Spanish version)⁵ (cut-off point of 4 out of 10)
- SF-12 questionnaire (version 2, time frame of 4 weeks (Spanish version))
- Analgesic treatments used: paracetamol, nonsteroidal antiinflammatory drug, metamizole, weak opioids, strong opioids, paracetamol-tramadol combination, anticonvulsants, antidepressants, topical analgesic, nerve block, other

Questionnaire for telephone interviews (between 1 and 1.5 months, 2.5 and 3.5 months, at 12 months and at 24 months)

Note the number of days since the operation before the interview.

Ask the patient:

- Do you have (or continue to have) pain related to the operation?

If yes, ask the following questions

- Have you had any problems with the incision?
- Have you had radiotherapy or chemotherapy?
- Have you had to have another operation for any reason, an operation different from the one you had when you joined this study?
- Is the pain you have now like the pain you had after the operation?
- Is the pain continuous or does it come and go?
- If the pain is intermittent, how long does it last? Seconds? Minutes? Hours? Days?
- How bad is the pain on a scale of 0 (meaning no pain at all) to 10 (the worst pain you can imagine)?
- What do you take for your pain?

Allow the patient to express the medication names freely, by active principles or brand names. Classify the replies into the following categories:

- Paracetamol
 - Nonsteroidal antiinflammatory drugs
 - Metamizole
 - Weak opioids
 - Strong opioids
 - Paracetamol and tramadol in combination
 - Anticonvulsant
 - Antidepressant
 - Topical treatment
 - Nerve block
 - Other
- Would you say the treatment you're using is effective in relieving your pain?
(Not at all? A bit? Somewhat? Pretty well? Very well?)
 - Are you still employed or working on your own?

If yes, ask:

- Have you returned to work yet?

Results of the telephone call:

- Exitus
- The patient could not be reached.
- The patient was reached but did not adequately complete the interview.
- The patient was reached and successfully interviewed.

References

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3. Herrero MJ, Blanch J, Peri JM, De Pablo J, Pintor L, Bulbena A: A validation study of the hospital anxiety and depression scale (HADS) in a Spanish population. Gen Hosp Psychiatry 2003; 25:277-83
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5. Pérez C, Galvez R, Huelbes S, Insausti J, Bouhassira D, Diaz S, Rejas J: Validity and reliability of the Spanish version of the DN4 (Doleur Neuropathique 4 questions) questionnaire for differential diagnosis of pain syndromes associated to a neuropathic or somatic component. Health Qual Life Outcomes 2007; 5:66