

# Comparative study of postoperative pain in elderly undergoing open hernia repair– spinal anesthesia vs. combined spinal and ilioinguinal block

Daniela Ologoiu, Marilena Negoii, Mihaela Vartic, Ana-Maria Cotae, Andreea Scriciu, Mirela Tiglis, Ioana Marina Grintescu  
Anesthesiology and Intensive Care Unit, Clinical Emergency Hospital of Bucharest, Romania

## Background

- The incidence of moderate or severe pain in inguinal hernia repair has a frequency from **30-75%**
- Chronic pain is a long-term complication of treating inguinal hernia - mean incidence of **11%**
- **Ilioinguinal / iliohypogastric (IHN)** -postoperative analgesia + preventing chronic pain
- *This study aimed to compare the efficacy of spinal and IHN block to only spinal block for better postoperative pain relief and extended analgesia in order to prevent chronic pain*

## Material and Methods

154 patients  
(open inguinal hernia repair)

- 1. **GROUP S** (SPINAL) → SPINAL ANESTHESIA – **77 patients** (bupivacaine 0.5%- 12 mg)
- 2. **GROUP I** (SPINAL+IHN) → SPINAL ANESTHESIA + IHN BLOCK – **77 patients** (bupivacaine 0.5%-12 mg) (ropivacaine 0.5%- 10 ml)

- Premedication: 0.03 mg / bw Midazolam 10 min before blocks
- Exclusion criteria:
  - ✓ no consent
  - ✓ BMI >35kg/m<sup>2</sup>
  - ✓ skin infection at puncture site
  - ✓ not able to use 100mmVAS scale
  - ✓ contraindication to spinal block or study medication
  - ✓ preexistent chronic pain
  - ✓ long term usage of pain medication

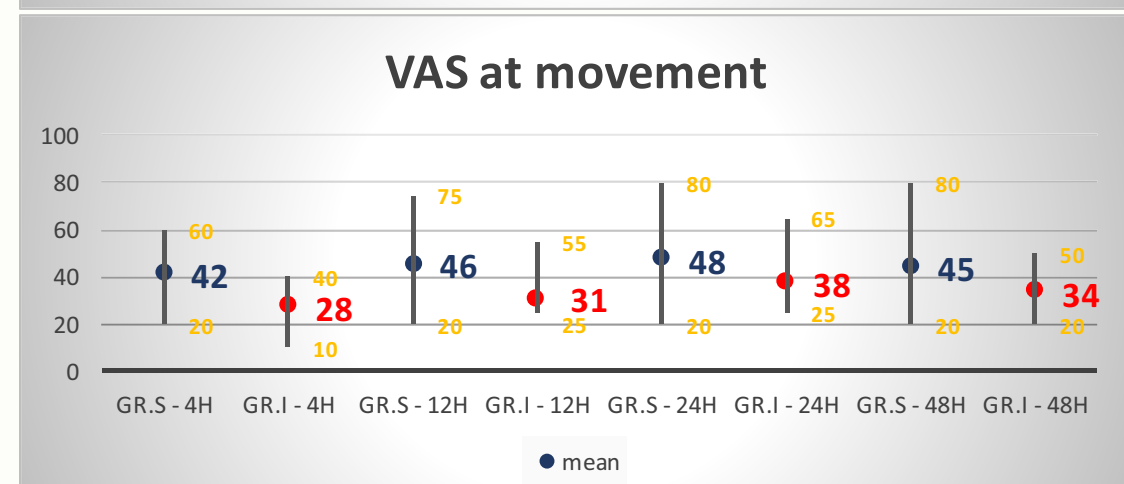
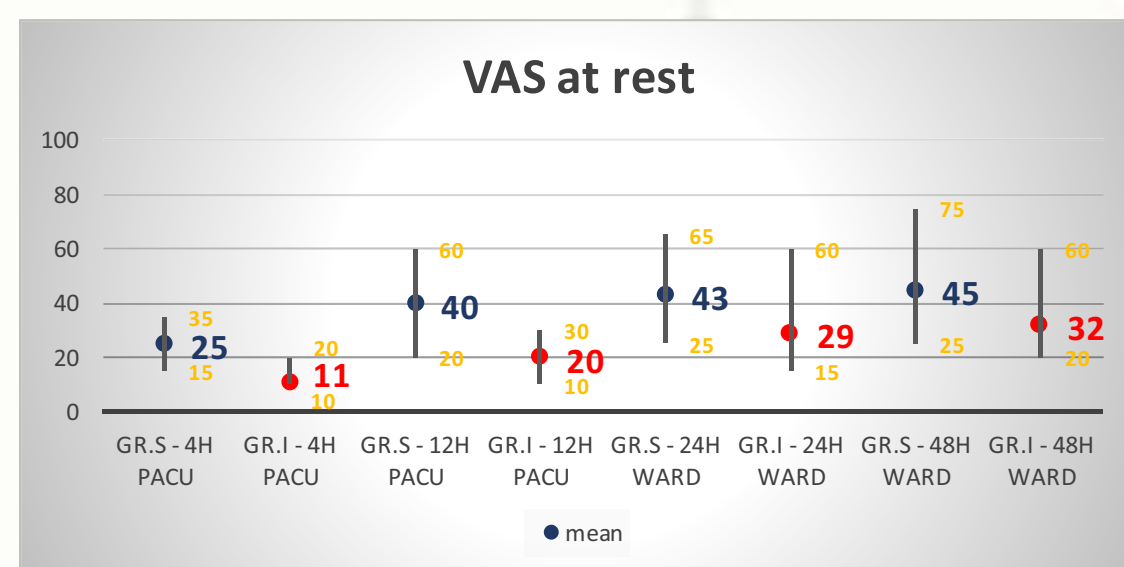
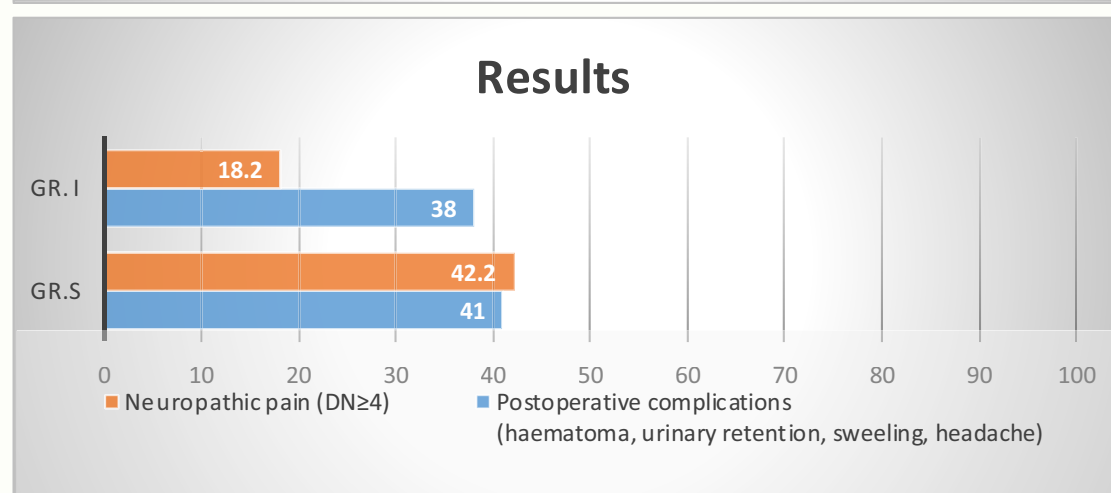
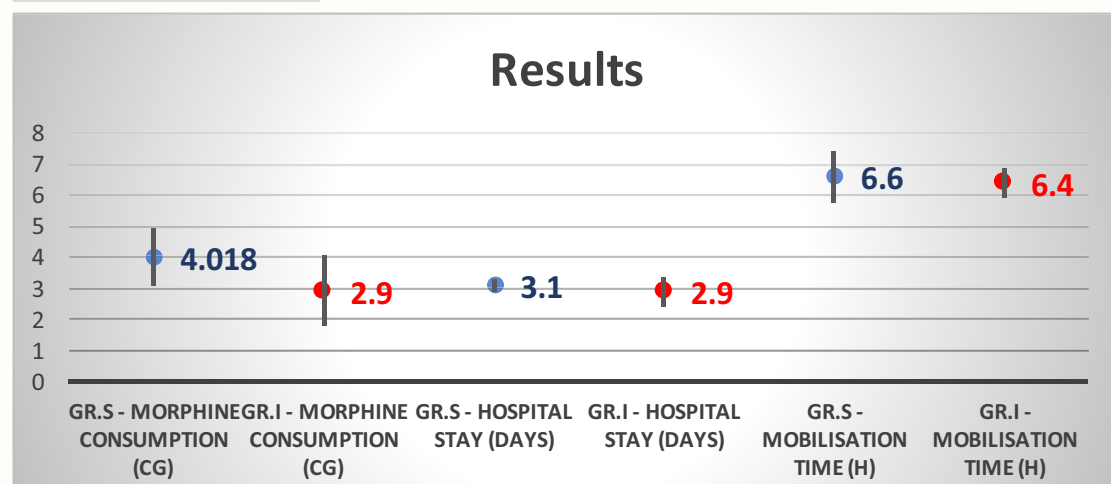


- Postoperative pain management: **morphine 1mg bolus at 5min** until VAS<40mm and after discharge to ward with **paracetamol 1g at 6h** and **ketorolac 30mg at 12h**
- Visual analog scale (VAS) scores at rest and cough (in PACU at 4 and 12h) and at rest, cough and movement (at 24, 48h and 1month)
- Rescue analgesia with **oral morphine 5mg at 6-8 h** for the next 24-48h
- Home discharge in 48-72h with VAS<40mm on coughing and instructed for completion DN4
- Pain at 1 month was assessed using the **DN4 questionnaire** for neuropathic pain

**Question 1:** Does the pain have one or more of the following characteristics? 1 – Burning 2 – Painful cold 3 – Electric shocks  
**Question 2:** Is the pain associated with one of more of the following symptoms in the same area? 4 – Tingling 5 – Pins and needles 6 – Numbness 7 – Itching  
**Question 3:** Is the pain located in an area where the physical examination may reveal one or more of the following characteristics? 8 – Hypoesthesia to touch 9 – Hypoesthesia to prick  
**Question 4:** In the painful area, can the pain be caused or increased by: 10 – Brushing  
 Total score: sum of 10 items and the cut-off value for the diagnosis of neuropathic pain -total score of 4/10.

Patients characteristics and surgical data	Gr. S	Gr. I	P-value
Age (years)	78±12.3	80±13.72	0.862
BMI ( bw / m <sup>2</sup> )	25±3.15	24±3.78	0.818
ASA ( II/III/IV)	26/47/4	34/41/2	0.849
Gender ( M/F)	75/2	74/3	0.838
Surgical duration (min.)	81±10.12	85±12.67	0.738
Preoperative pain score (VAS)	41±10.11	43±11.24	0.873

## Results



## Discussions

**Several limitations:** not blinded, no information about other techniques of regional anesthesia, sleep quality, dose of local anesthetics or patients satisfaction.

## Conclusion

1. as part of a multimodal analgesia strategy IHN block provides successful perioperative analgesia
2. comparison to only subarachnoid anesthesia, combined spinal with IHN block technique has proved superior and very effective providing better pain control and the occurrence of chronic pain.