Quantitative Sensory Testing and Correlation of Pain Threshold in Patients Undergoing Laparoscopic Inguinal Hernia Repair

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Background

- Post operative pain - one of the most important outcomes
- Pain threshold- varies with individuals
- No studies on objective measurement of pain threshold

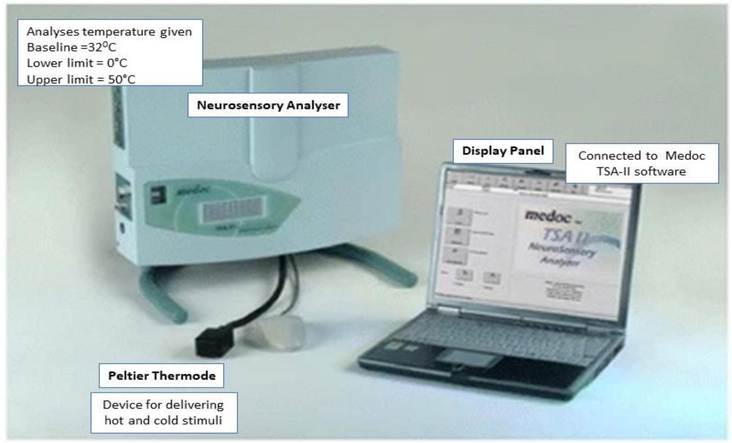
Aims and Objectives

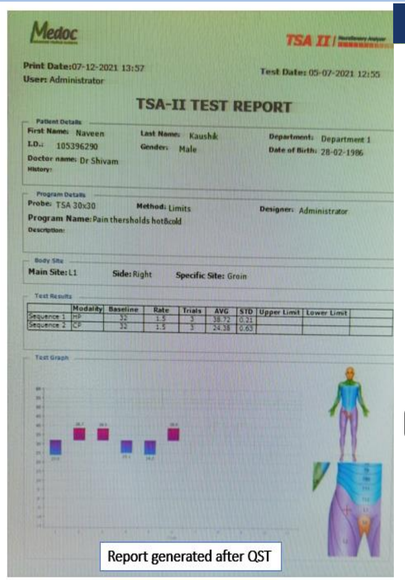
1. Compare pain threshold on QST with thermal (hot and cold) stimulus in patients with groin hernia and healthy controls.
2. Correlate pre-operative pain threshold with post-operative pain scores (VAS).

Materials and Methods

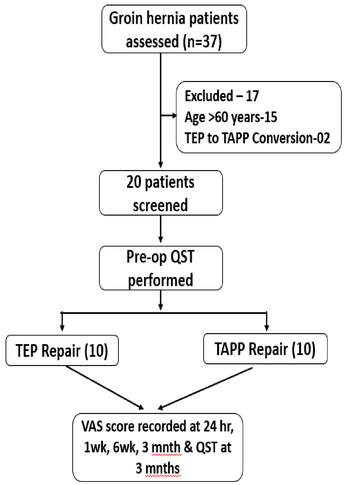
- Case control prospective study, Jan2020 to June 2021
- Sample Size: Cases (20) and Controls (20)
- Preoperative pain
  - VAS score
  - Pain threshold on QST
- Post operatively pain
  - VAS at 24 hrs, 1 wk, 6 wk and 3 months.
  - QST at 3 months

Figure : Quantitative Sensory Testing (QST)



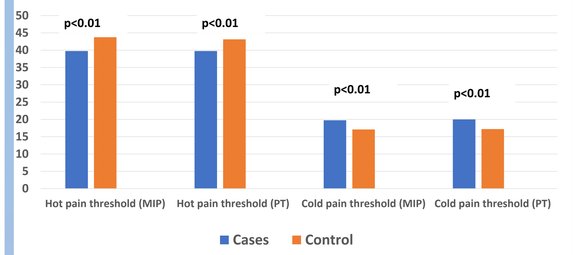


CONSORT

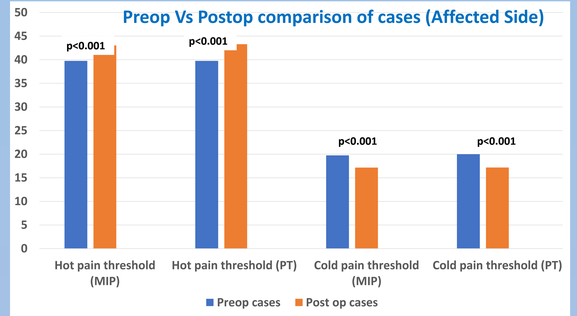


Results

Comparison of pre operative QST data (Affected side)



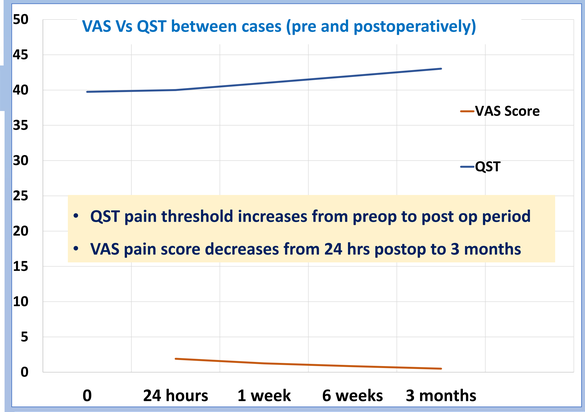
Preop Vs Postop comparison of cases (Affected Side)



Low thermal thresholds are seen in cases on affected side as compared to controls Implies more pain on the side of hernia

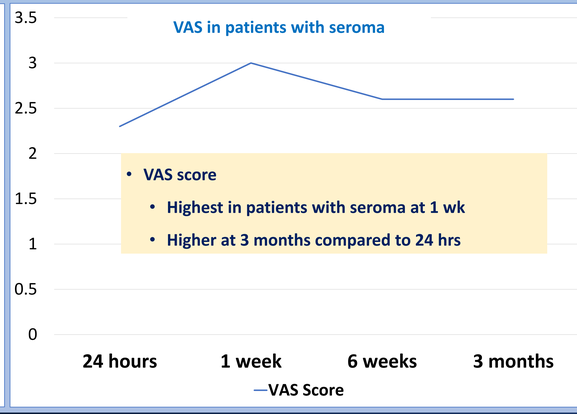
Thermal thresholds is higher for post-op patients as compared to their pre-op status

VAS Vs QST between cases (pre and postoperatively)



- QST pain threshold increases from preop to post op period
- VAS pain score decreases from 24 hrs postop to 3 months

VAS in patients with seroma



- VAS score
  - Highest in patients with seroma at 1 wk
  - Higher at 3 months compared to 24 hrs

Conclusion

- Thermal pain threshold is inversely proportional to postop pain.
- The pain threshold increases significantly in the post operative period suggesting that hernia repair improves the pain threshold of the patient.
- Patients with seroma have lower threshold and higher pain score
- No difference in pain on non affected side