



AAS PAIN MANAGEMENT CENTRE

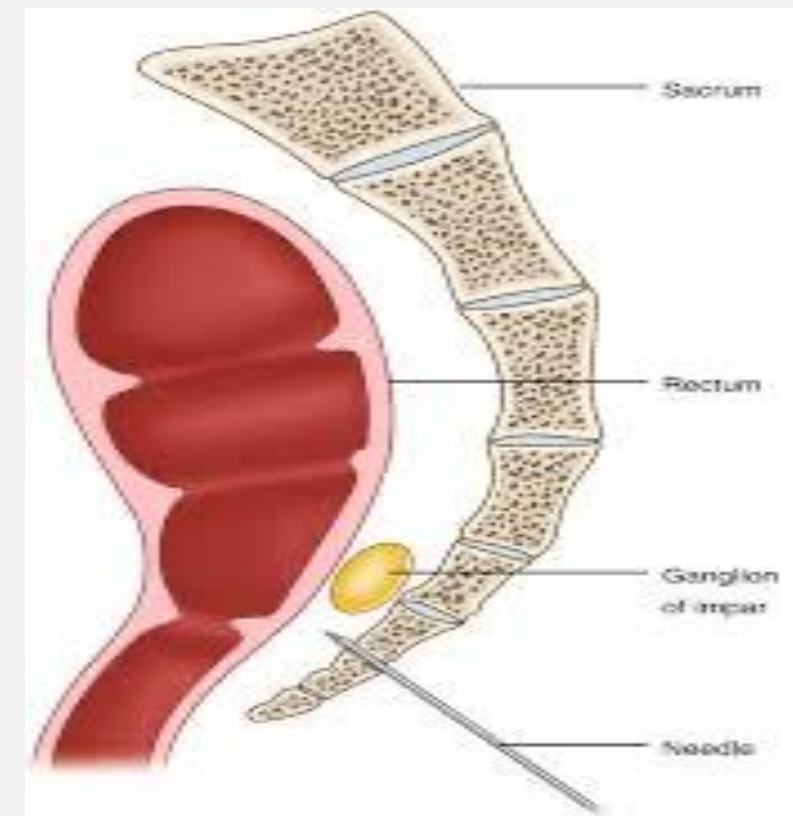
COMPARISON OF RADIOFREQUENCY THERMOCOAGULATION OF GANGLION IMPAR WITH COMBINATION OF LOCAL ANAESTHETIC AND STEROID IN POSTPARTUM COCCYGODYNIA

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INTRODUCTION

- ❖ Post partum coccygodynia develops in the postpartum period and the known risk factors are instrumental delivery, multiparity, mature age, short perineum, difficult delivery, coccyx morphology and body mass index. It is often associated with a difficult delivery, with the use of forceps in 50.8% of cases. Luxation and fracture of the coccyx are the two most characteristic lesions.
- ❖ **Typically the patient feels pain in coccygeal region in sitting position which gets relieved on standing.**
- ❖ Exquisite focal tenderness on palpation of coccyx and sacro-coccygeal junction. Diagnosis confirmed by clinical examination and X-ray of coccyx, seen as displacement, or may be even normal.
- ❖ Ganglion Impar or ganglion of Walther is a retroperitoneal structure formed by fused terminal ends of both right & left paravertebral sympathetic chains. Generally located just below the midpoint of line joining sacrococcygeal joint and tip of coccyx. Persistent over-activity of nerve cells within ganglion Impar can cause chronic severe pain in coccyx (coccygodynia). Blocking the signals of ganglion Impar can effectively reduce pain.

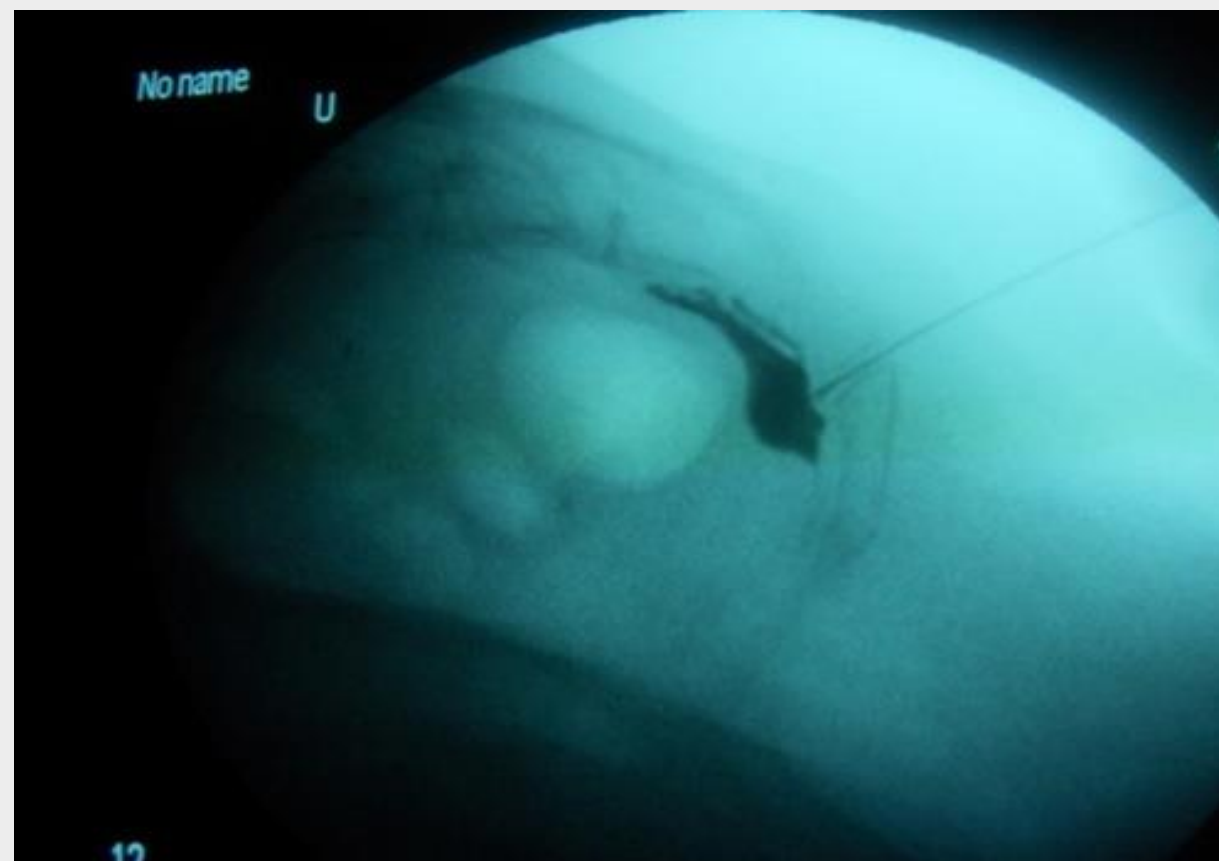


OBJECTIVES/AIMS

- ❖ To compare radiofrequency thermocoagulation of ganglion Impar with block using a combination of local anaesthetic and steroid for management of postpartum coccygodynia.
- ❖ Outcome assessment was done over the study period of one year with evaluation of pain using Numeric Rating Scale (NRS, 0-10), patient's self-reported belief about the efficacy of treatment using Patient Global Impression of Change (PGI-C) and side effects or complications, if any.

METHODS

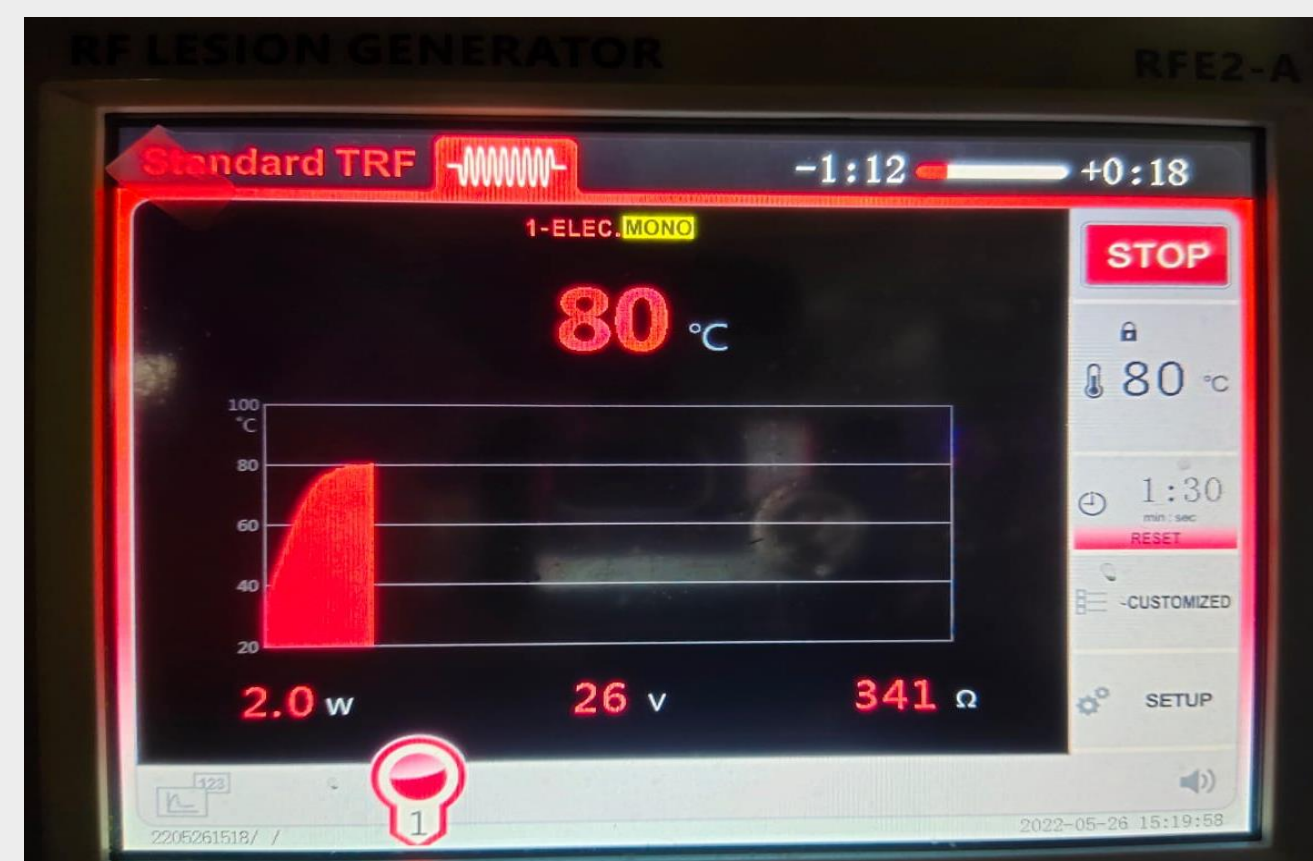
- ❖ **Sixty female patients in postpartum period** attending Pain Management Centre, in the age group 20-40 years with history, physical examination and pain pattern consistent with coccygodynia, who had been investigated to rule out malignancy and **failed to respond to six weeks of conservative treatment** with a combination of analgesics, anti-inflammatory drugs and physiotherapy were enrolled in the study.
- ❖ The patients were randomly divided into two groups of 30 each using a computer-generated randomization number table. Group-I (n=30): Patients were administered ganglion Impar block using drug mixture comprising of 8 ml of 0.25% bupivacaine plus 80 mg of triamcinolone acetate under fluoroscopic guidance. Group-II (n=30): Patients received conventional radiofrequency thermocoagulation (RFT) of ganglion Impar at 80 degrees Celsius for 90 seconds under fluoroscopic guidance.



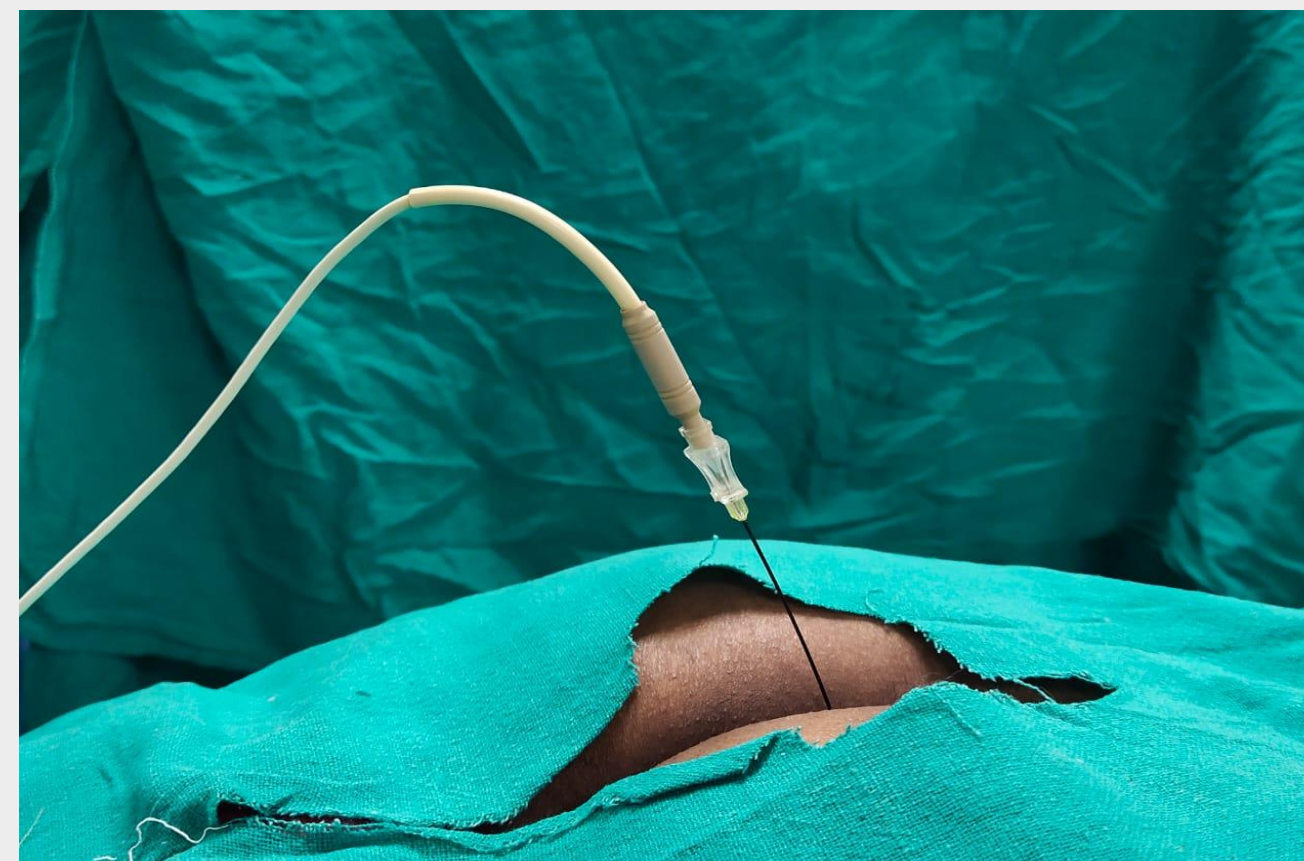
Site of needle insertion located by fluoroscopic guidance.



A 23-gauge, 3 1/2-inch Quincke type spinal needle inserted under fluoroscopic guidance through skin piercing the dorsal sacrococcygeal ligament in midline

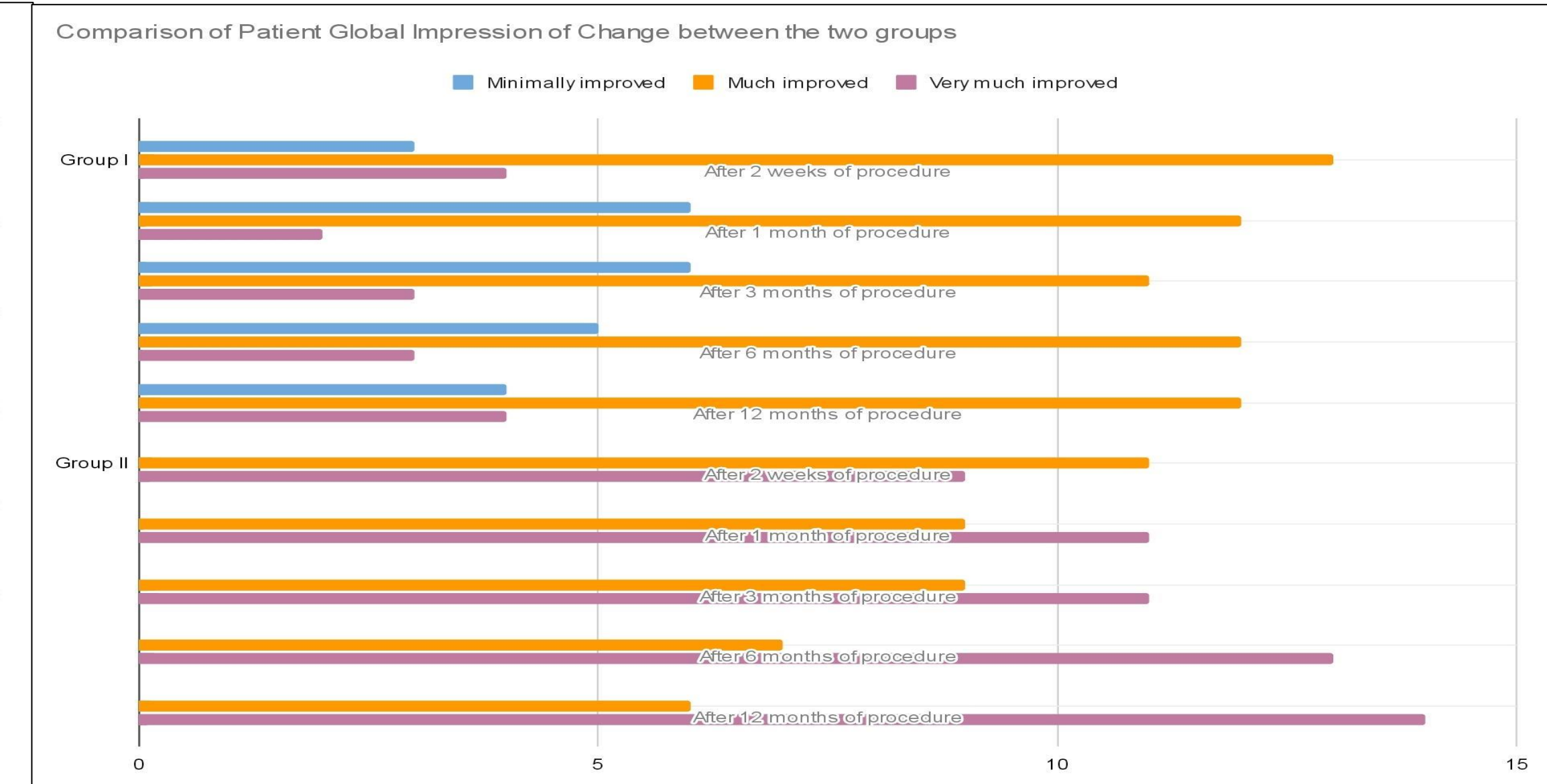
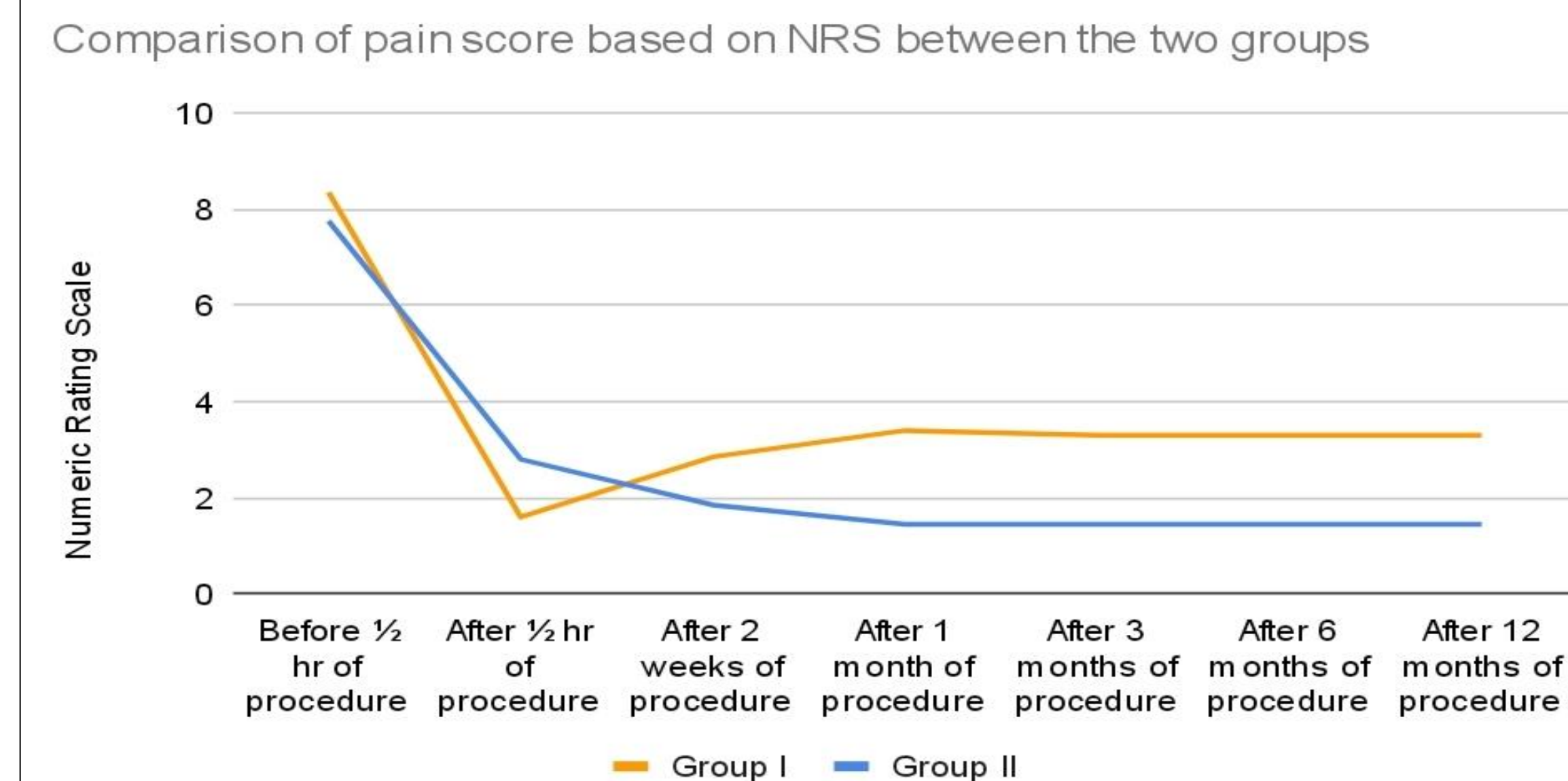


Radiofrequency Ablation of Ganglion Impar using 10cm, 22G radiofrequency needle with 5mm active tip



RESULTS

- ❖ Majority of the patients were in the age group of 26-35 years and weighed 60-70 kg.
- ❖ **There was statistically and clinically significant improvement in pain score after ganglion Impar block in both the groups at all time intervals during the study period (p<0.05).**
- ❖ Patient's self-reported belief about efficacy as per PGI-C was clinically and statistically better in group II as compared to group I at all time intervals throughout the study period (p<0.005).
- ❖ **Four patients in group I required second ganglion Impar block** during the study period.
- ❖ Most common side effect was temporary pain on injection which resolved spontaneously.



DISCUSSION

- ❖ The coccyx is a bone with its own morphology and mobility and pain can occur due to trauma such as a difficult or instrumental delivery.
- ❖ **Management includes analgesia and adjuvants, rehabilitation and pelvic floor massage, infiltrations, or psychotherapy, and or surgery**
- ❖ **Steroids are presumed to exert their effects by limiting inflammatory response from injuries**, inhibiting leukocyte aggregation and also by preventing degranulation of inflammatory mediators, **Whereas in RF, the electrode tip heats up the targeted local tissue** within few millimeters, generating a temperature of 60°C to 80°C causing **selective thermocoagulation of pain-carrying nerve fibers (A-delta and C fibers).**
- ❖ **The overall benefit of conventional radiofrequency ablation of ganglion Impar in management of chronic perineal pain in our study appears to be very good** and is likely due to several factors, including proper diagnosis based on clinical history, examination and imaging; the experience and training of the injecting practitioner; use of fluoroscopy; injection level with strong correlation to patient's painful site and ensuring appropriate spread of drug towards ganglion Impar.

CONCLUSION

- ❖ Both the techniques of ganglion Impar block provide good pain relief to the symptomatic patients.
- ❖ With respect to improvement in pain relief, patient's self-reported belief about the efficacy of treatment fluoroscope guided ganglion Impar radiofrequency thermocoagulation is better.

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