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**"A COMPARTIVE STUDY OF ROBOTIC ASSISTED CT GUIDED INTERVENTIONAL PAIN MANAGEMENT WITH CONVENTIONAL FLUROSCOPY APPROACH"**

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**Aim:**

To prospectively evaluate the accuracy, speed of needle placement and patient comfort in performing interventional pain medicine procedures for acute and chronic pain during robotic assisted CT-guided procedures and C-arm fluoroscopy guided procedures

**MATERIALS AND METHODS**

After obtaining Institutional Ethical Committee approval and written informed consent from participating patients, 200 patients were enrolled in the study between January 2012 and January 2014. 120 male and 80 female patients with a mean age of 49.8 years (range 18-80 years) were enrolled. Patients underwent various procedures such as Celiac plexus block, Lumbar sympathetic block, Dorsal root ganglion block, Lumbar epidural injection, Thoracic sympathetic block, Facet joint block, Stellate ganglion block, Vertebroplasty, Ozone neucleolysis, Superior hypogastric plexus block, Sacro-iliac joint injection, Ganglion Impar block, Sacral foraminal injection and Caudal injection. Patients were randomly assigned to two groups. Group 1 (G1)received CT Guided Robotic Assisted needle placement and Group 2 (G2) received C-arm fluoroscopy guided needle placements. The injected medications were standardized in both groups. Accuracy of needle placement, speed of needle insertion and patient comfort were documented.

**RESULTS:**

Statistical analysis of the collected data showed no significant difference in the accuracy of needle placement (G1 = 99.8%, G2 = 98%). Significant difference in the speed of needle placement was observed (G1 = <420 seconds, G2 = > 600 seconds). Patients’ positional comfort also showed significant difference (G1 = 8-10/10 Avg.: 9/10; G2= 1-8/10 Avg.: 5/10). The procedures were performed by the same physician trained in interventional pain procedures.

**CONCLUSION**

**Robotic assisted CT-Guided needle placements for interventional pain procedures are considerably superior to C-arm fluoroscopy guided needle placements in terms of speed for needle placement and patient comfort.**