

Conference Abstract

DAY 1 15th September 2023 (Friday)

ORAL 2

3.30-5.00 pm

Scientific Session 2

Anatomic Evaluation to Compare the Dye Spread with Ultrasound - Guided Pericapsular Nerve Group (PENG) Injection with or Without an Additional Suprainguinal Fascial Iliaca (SIFI) Injection in Soft Embalmed Cadavers**Sandeep Diwan, Shivaprakash S, Pushpalatha K, Manjunath H N**

1) Department of Anaesthesiology, Sancheti Hospital, Pune

2) Department of Anatomy, JSS Medical College JSSAHER, Mysuru

Email: shivaprakash.sps@gmail.com

Background: Novel interfascial plane blocks like Pericapsular Nerve Group (PENG) and Suprainguinal Fascia Iliaca (SIFI) blocks are effective for management of hip fracture pain.

Aim: To compare the difference in the distribution of the dye injected and nerves stained by the addition of the SIFI block to the PENG block.

Methods: A total of 24 designated dye injections was performed in eight soft-embalmed cadavers. Under ultrasound guidance 20ml green ink injected bilaterally in PENG block and 30ml methylene blue dye was injected in SIFI block on the right side. The cadavers were dissected 24 hr later to assess the extent of dye spread.

Results: Extensive spread of dyes was seen on both side of iliatus muscle on the right side, but blue dye was not visible medial to psoas tendon. The subcostal and iliohypogastric nerves were stained green in the infra-inguinal region. On the left side (PENG alone), the anterior division of the Obturator nerve, Femoral nerve, Saphenous nerve (7/8) and iliohypogastric nerves (3/8) were stained in infra-inguinal region. In the supra-inguinal region, Femoral nerve (5/8), Accessory obturator nerve (3/8), Lateral Femoral cutaneous nerve (1/8) and nerve to rectus femoris (4/8) were stained. The main Obturator nerve trunk was spared with both injections while its anterior branch and accessory obturator nerve were stained with the PENG injection.

Conclusion: The study findings indicate that combined PENG + SIFI injections lead to an extensive craniocaudal and longitudinal spread along the iliatus muscle bilaterally. We perceive that the combination of these two injections will have a superior clinical outcome.

Keywords: PENG, SIFI, Ultrasound