

ABSTRACT

Introduction: The lumbar plexus involves the L1 – L5 spinal segments which is formed within the psoas major muscle and is one of the main nervous supply of lower extremity. Recently, retroperitoneal endoscopic surgery has been applied to various spinal disorders. When the psoas major muscle is separated during retroperitoneal endoscopic surgery, there is potential risk of injury to lumbar plexus or nerve roots. Hence looking to the applied significance of lumbar plexus in the form of its involvement in various injuries and entrapment, it is imperative to have a thorough knowledge about its formation, branching pattern and its variations.

Materials and Methods: This study was carried out in 25 formalin embalmed cadavers in the Institute of Anatomy, Madurai Medical college, Madurai. Lumbar plexus of both male and female cadaver was dissected and studied in detail bilaterally. All organs in front of the peritoneum was cleared to expose the posterior abdominal cavity. The fibres of psoas major muscle was meticulously dissected piece by piece and the formation and branching pattern of lumbar plexus was observed.

Results: The variable origin of iliohypogastric nerve from T12 was found in one specimen. The nerve was found to be absent in 1 specimen. Ilioinguinal nerve was found to arise from L1L2 in 4 specimens, from L2 in one specimen. Double ilioinguinal nerve was seen in one specimen. Genitofemoral nerve was seen on posterior aspect of psoas major muscle in 2 specimens. It was seen as separate branches in 5 specimens. Lateral femoral cutaneous nerve was found to arise from femoral nerve in 5 specimens. Double LFCN found in one specimen. High form or prefixed plexus found in one specimen. The incidence of accessory obturator nerve was found in 8% cases. Psoas minor muscle was found unilaterally in 1 cadaver on the right side.

Conclusion: Knowledge of the normal anatomy and possible variations is essential to the Surgeons, Orthopaedic surgeons, and Anaesthesiologist for surgical procedures like retroperitoneal endoscopic surgeries and anaesthetic applications like lumbar plexus block. **Keywords:** lumbar plexus, iliohypogastric, ilioinguinal nerve, femoral nerve, genitofemoral nerve, obturator nerve.