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RESEARCH ARTICLE

A CASE REPORT ON THE BILATERAL PSOAS MINOR MUSCLES WITH CLINICAL SIGNIFICANCE

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Abstract

The Psoas Minor is a thin paired muscle of the posterior abdominopelvic region, placed in front of the Psoas major.The psoas minor muscle is considered inconstant and is often absent, only being present in about 40% of human specimens studied.The psoas minor muscle originates from the vertical fascicles inserted on the last thoracic and first lumbar vertebrae. From there, it passes down onto the medial border of the psoas major and is inserted to the innominate line and the iliopectineal eminence. Additionally, it attaches to and stretches the deep surface of the iliac fascia and occasionally its lowermost fibers reach the inguinal ligament.

Introduction:-

Psoas minor muscle is present in about 40% of the cases. This muscle lies anterior to the psoas major, entirely within the abdomen. It arises from the sides of the bodies of the twelfth thoracic and first lumbar vertebrae and from the disc between them. It ends in a long tendon attached to the pecten pubis and iliopectineal eminence while laterally to the iliac fascia. The muscle is a weak flexor of the trunk and is innervated by a branch from the first lumbar nerve. Though an inconstant muscle, if present and gets strained, can be a cause of psoas minor syndrome causing pain in the lower quadrants of the abdomen mimicking abdominal emergencies. It can also lead to difficult ambulation. This study was done to find the prevalence of psoas minor muscle in our region and to discuss its clinical implications which can be of importance to Surgeons, Orthopaedists, Physiotherapists, and Radiologists.

Case Report

During routine dissection for the first MBBS students, we observed the presence of bilateral psoas minor muscles in 70 years old, donated embalmed male cadaver in the Department of Anatomy Indira Gandhi Medical College, Shimla, Himachal Pradesh India. The muscles were present anterior to the psoas major muscles and were easily distinguished {Fig.1}.

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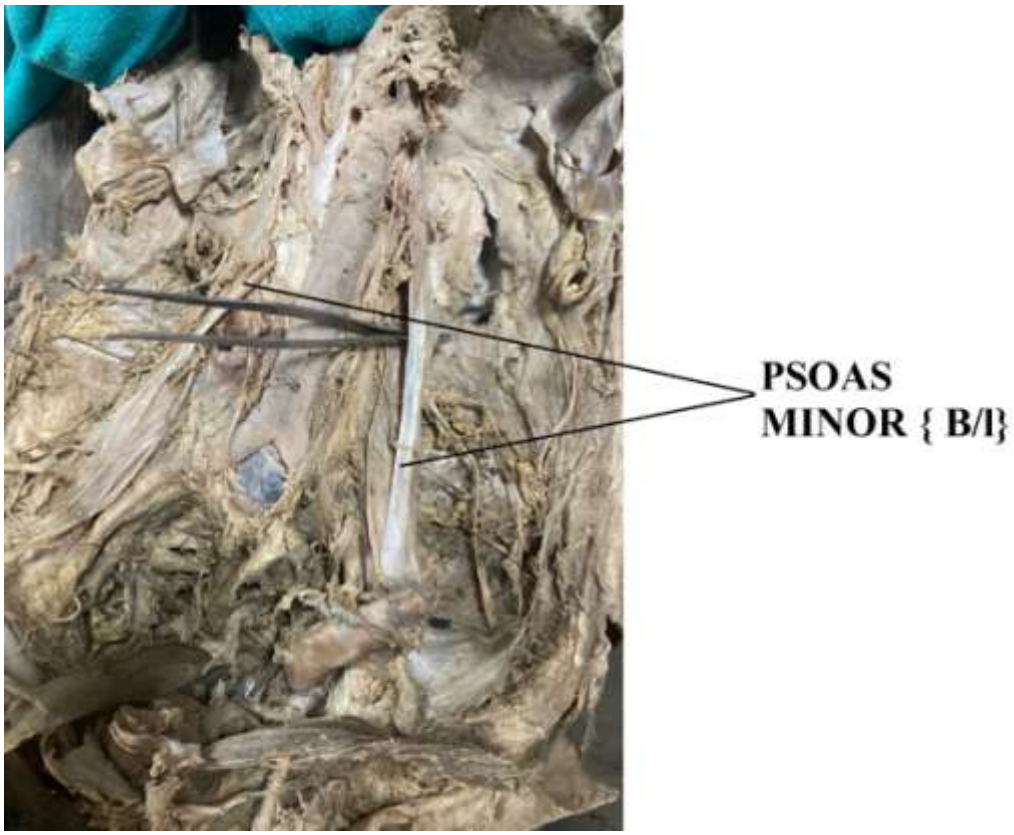

Fig.1:- Showing bilateral Psoas minor muscles.

The psoas minor muscles originated from the lateral aspect of the bodies of the **T12 and L1 vertebrae**, as well as the intervertebral disc found between them. The psoas minor muscles were located entirely on the anterior surface of the psoas major muscle and thus share a lot of its anterior relations.The muscles then extend inferiorly and taper into a long, flat tendons, which is often longer than the muscle belly.The tendons inserted onto the **pecten pubis** (pectineal line of pubis) and the **iliopubic eminence** via a thickened band of fascia.They were innervated by the anterior ramus of the spinal nerve **L1.**

Clinical Significance

The psoas minor muscle's main function is to assist the larger psoas major muscle in flexing and rotating the hip joint. When these two muscles work together, they play an important role in maintaining the stability and alignment of the pelvis and lower back during movement.

Psoas minor syndrome:

Clinically, patients with the psoas minor muscle may develop a disorder called psoas minor syndrome, which is characterized by a deficit in the growth of the muscle. The syndrome is characterized by a reduction in movement, generating substantial pain, as it is more easily overly subject to tension.

Discussion:-

Psoas minor muscle is absent in about 60%. Bilaterally the presence of Psoas minor muscles is very rare. In our case, we found a case of bilaterally Psoas minor muscle anteriorly to Psoas major during routine dissection.

Conclusion:-

Knowledge of psoas minor muscles should aid surgeons in locating the nerves as well as avoiding potentially unnecessary complications. clinical implications which can be of importance to Surgeons, Orthopaedists, Physiotherapists, and Radiologists.

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