Composite piriformis-sciatic nerve anomalies in the etiopathogenesis of piriformis syndrome & sciatica of non-discogenic origin: A case report & literature review.

AMEET KUMAR JHA*

***Asst. Professor**

ABSTRACT:

The aim of the present study is to highlight the anomalous union of the pre & post axial division of sciatic nerve and its relation with piriformis muscle, all of which may play a role in etiopathogenesis of piriformis syndrome leading to sciatica of non-discogenic origin.

During routine cadaveric dissection, variations pertaining to sciatic nerve branching pattern and piriformis muscle were found on two male cadavers. Hence, we systematically reviewed and analysed the previously published literature to study the prevalence of piriformis and sciatic nerve anomalies in humans. A further review was conducted to determine the prevalence of anatomical abnormalities in surgical case series of patients suffering from piriformis syndrome.

An unusual anatomical variation in the piriformis muscle and sciatic nerve was noted. Sciatic nerve division proximal to its entrance in the gluteal region was observed. The common peroneal component was passing through, and the tibial component was passing below a double piriformis muscle. Double piriformis muscles with two different arrangements of its two heads were also noted.

It is extremely important to be aware of these variations while planning a surgery in the gluteal region as these nerves are more liable to be injured during surgeries. A detailed anatomical study of such variation aids in the understanding of increase in pain in various test positions.

In sciatic neuropathies, level of sciatic nerve division plays a major role in the distribution of neurological deficits. Sciatic nerve division into tibial and common peroneal components at a higher level can result in manifestations pertaining to only one out of the two divisions in sciatic neuropathy. Description of such variations in relationship between sciatic nerve and piriformis muscle may be useful for diagnosis and treatment of piriformis syndrome and sciatica of non-discogenic origin. Attempted sciatic block at standard anatomical landmark may fail due to the anomalous union of the pre & post axial division of the sciatic nerve.

Key words: Sciatic Nerve, Piriformis muscle, Piriformis syndrome, Sciatica.

Biography:

I have completed my Master's in Human Anatomy from Manipal University & Bachelor in Medical Laboratory Technology from Rajiv Gandhi University of Health Sciences, Karnataka, India. I am an Assistant Professor in Dept. of Anatomy & Neurosciences, College of Medicine, Texila American University, Guyana, India. I have published around 4 papers in the international reputed journal. I am presently serving as a Faculty Adviser & Curriculum Developer for MD-1 in Texila American University.

Presenting Author Details:

Ameet Kumar Jha, Asst. Professor, Department Of Anatomy& Neurosciences, College of Medicine, Texila American University, Lot A, Goedverwagting, Sparendaam, East Coast Demerara, Guyana, South America. Email: ameetjha1980@yahoo.com, ameetjha197@gmail.com.