

## Anatomical Characteristics of Superior Gluteal Artery

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**Abstract :** Superior gluteal artery is one of the largest branches of posterior division of the internal iliac artery. It passes between the lumbosacral and first sacral root to escape from the pelvic cavity through the greater sciatic foramen just above the piriformis. The current study includes 41 cadaver investigates the origin and branch of the superior gluteal artery and clarify the clinical significance. In present study, the superior gluteal artery arises from the posterior division of the internal iliac artery directly in 82.5% whereas it arises indirectly as from the sciatic artery in 15.9%. However, it is congenital absence in 1.6% which is compensated by sciatic artery. The sciatic nerve gains vascular supply from superior gluteal artery in two ways either during its course or giving lateral sacral artery in 27% and lumbar branches in 1.6%. It also supplies the adductors group and iliacus via giving obturator artery in 14.3% and in 1.6% respectively. The superior gluteal artery usually passes between lumbosacral trunk and first sacral root in 82.5% whereas it does not passes the sciatic roots as it arises behind them in 15.9%. With a variability of the superior gluteal artery origin, there is a variability of sciatic nerve roots supply. Further, the superior gluteal artery arising from sciatic artery behind the sciatic roots carries a high risk of intra-pelvic bleeding in case of posterior pelvic fracture. Prolonged ligation of the superior gluteal artery which gives lateral sacral artery may result in sciatic neuropathy. Therefore, surgeons have to be aware of the superior gluteal artery variation in origin, course and branches to reduce the iatrogenic faults.

**Keywords :** internal pudendal artery, inferior gluteal artery, superior gluteal artery, internal iliac artery. sciatic neuropathy, sciatic nerve

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