

Gluteal nerves in rabbit

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The rabbit has been used as a model for the development of the orthopedic surgeries, particularly of the hip joint. Anatomical reports of this region in rabbits are limited. Therefore, a detailed study of the gluteal region was needed to support surgeons on experimental procedures. The aim of this work was to determine the gluteal nerves branching pattern, as well as the nerve supply of the gluteal muscles in rabbits. Twenty pelvic limbs, obtained from ten healthy rabbits were fixed with 10% formalin and then dissected. The cranial gluteal nerve arose from the lumbosacral trunk after its exit from the pelvic cavity through the major ischiatic foramen. Just after its origin, it divided into cranial and caudal branches. The cranial division ran between the accessory gluteal muscle and the deep gluteal muscle, and gave branches to supply the accessory gluteal muscle, the middle gluteal muscle, the cranial head of the superficial gluteal muscle, the deep gluteal muscle and the tensor fasciae latae muscle. The caudal division of the cranial gluteal nerve passed dorsal to the ilium and branched into the deep gluteal nerve. The caudal gluteal nerve left the lumbosacral trunk just caudal to the cranial gluteal nerve's origin. It ran between the accessory gluteal muscle and the piriformis muscle, passed under the caudal head of the superficial gluteal muscle and terminated in the gluteofemoralis muscle. The caudal gluteal nerve gave branches to supply all these muscles and the middle gluteal muscle. Bensley and Craigie² reported that the cranial gluteal nerve supplied only the middle gluteal muscle, deep gluteal muscle and piriformis muscle. Barone and colleagues¹ demonstrate the same branching pattern for the gluteal nerves, but they did not point out the deep gluteal muscle, the piriformis muscle and the tensor fasciae latae. Similar from horses, the superficial gluteal muscle is supplied by branches from both cranial and caudal gluteal nerves. The piriformis muscle was supplied just by the caudal gluteal nerve, like cats, but different from dogs, where this muscle receives branches from both gluteal nerves. The detailed anatomical features of the gluteal nerves of the rabbits, demonstrate the relationship between nerves and muscles, as well as the nerve supply. This information will be helpful to researchers, making access for experimental orthopedic procedures easier and safer.

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References

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