

Distribution of the femoral artery in rabbits

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Rabbits have been used as animal model in a variety of experimental procedures. The femoral artery and its branches provide an important access to the vascular system in order to carry out various modular methodologies. The objective of this work was to document the branching pattern of the femoral artery in rabbits. The femoral artery and its branches were studied in twenty pelvic limbs of ten rabbits, fixed with formalin. To make facilitate dissection, the abdominal aorta was used to fill the arterial system with red latex. The femoral artery and its branches were dissected and their distribution was recorded. The femoral artery is the continuation of the external iliac artery away from the inguinal ligament. Its first branch is the lateral circumflex femoral artery, which arises cranially from the femoral artery and divides in ascending, middle and descending branches. These branches supply the quadriceps femoris muscle, sartorius muscle and pectineus muscle. The second branch of the femoral artery is the superficial epigastric artery, which begins medially and irrigates the skin and the adjacent structures of the caudal abdominal region. After these first two large branches, there are three small muscular branches to the sartorius muscle, quadriceps femoris muscle and adductor muscle. Caudally, the femoral artery sends the proximal caudal femoral artery, toward the gracilis muscle. The next branch, the saphenous artery, runs medially on the thigh, supplying the skin and continuing toward the medial region of the pes. Just after the origin of the saphenous artery, the femoral artery sends the descending genicular artery to the stifle joint, muscular branches were provided to quadriceps femoris muscle and tensor fasciae latae muscle during its course. The middle caudal femoral artery leaves the femoral artery caudally and enters into the adductor muscle, supplying this muscle and the semimembranosus muscle. The distal caudal femoral artery is the last collateral branch of the femoral artery and passes throughout the biceps femoris muscle and semitendinosus muscle, supplying both of them. Then, the femoral artery ends as the popliteal artery, caudal to the stifle joint. There are large anastomoses between the lateral circumflex femoral artery and the cranial gluteal artery, and between the muscular branch to adductor muscle and the deep femoral artery. This detailed study will be useful to researchers doing experiments where access of the femoral artery is most important, especially for models using injections of medicines, ligation of artery to create ischemic areas or merely to access thigh structures safely.

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