Celiac artery in new zealand rabbit: anatomical study of its origin and arrangement for experimental research and surgical practice

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Rabbits have been used as an experimental model in many diseases and for the study of toxicology, pharmacology and surgery in many universities. However, some aspects of their macro anatomy need a more detailed description, especially the abdominal and pelvic arterial vascular system, which has a huge variability in distribution and trajectory. The aim of this study was to describe the celiac artery origin and arrangements in New Zealand rabbits to give morphological aid and support for experimental research and for the clinical, radiological and surgical practice of this animal. Thirty cadaveric adult New Zealand rabbits, 13 male and 17 female, with an average weight and rostrum-sacral length of 2.5 kg and 40 cm, respectively, were used. The thoracic aorta was cannulated and the vascular system was filled with stained latex S-65. The celiac artery and its proximal branches were dissected and lengthened in order to evidence origin and proximal ramifications. The statistical analysis was made by the Qui-square (X2) test, with a 5% level of significance. Results: The celiac artery emerged between the 12th and 13th thoracic vertebra in 11 (36.7%) rabbits; at the level of the 13th thoracic vertebra in 6 (20%) rabbits; between the 13th thoracic vertebra and the 1st lumbar vertebra in 12 (40%) rabbits; and at the level of the 1st lumbar vertebra in only one (3.3%) rabbit. The mean length of the celiac artery was 0.5 cm. The celiac artery first branch was the lienal artery, the second branch was the left gastric artery and the hepatic artery arose from the left gastric artery in all the dissected rabbits. No relation was observed between the celiac artery length and the rostrum-sacral length in rabbits. The number of left gastric and lienal artery branches and the distribution of celiac artery origin are not gender dependent.