

Medical imagological assessment in hind limb of lanyu pigs after ligation of femoral arterial

S30004

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At present, most of the imaging medical instruments are used in the human body. However, in recent years, due to the development of drugs and disease research needs in experimental animals, it is also necessary to use imaging medical instruments for monitoring. Hence, the apply imaging medical analysis to the animal model of sustained limb ischemia aim in providing accurate and timely data to enable researchers to correct and improve different drugs or biomedical materials, thereby accelerating the development of new drugs and related research processes, has become the biggest issue at present. The object of the study was to leading-in Angiography (AG), Computed tomography (CT) and Doppler ultrasound to assess of vascular perfusion, arteriogenesis, collateral development and lower extremity systolic and diastolic blood pressure before and after ligation of pig femoral artery. Immediately after ligation the femoral arterial was no longer present the blood flow by confirming through the AG and CT. Depressed limb blood pressures were also observed. Results of arteriogenesis and collateral development were quantifiable and visible in limb femoral arterial ligated 4 weeks post-ligation. The existed collateral development after ligation may explain that the operated hind limb still have normal behavior. We demonstrate a technique for non-invasive and tracking via AG and CT and these tools provide validation for further improving and developing a more success limb ischemic animal model.

Key words: Lanyu pig, Medical imaging, Hind limbs, Femoral ligation