

Accessory renal allotransplantation with internal or external urinary drainage. An experimental model in pig

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Abstract

This study describes an experimental model of accessory renal allotransplantation in the big laboratory animal (pig). A total of 24 common-breed pigs were used. All allografts were transplanted in an accessory manner and revascularized at the level of the infrarenal abdominal aorta and inferior vena cava. The urinary drainage was performed either through an external urethronostomy at the ipsilateral lumbar region (Group A - n=8) or by internal urethrocystostomy (Group B - n=8). All transplants were monitored for 8 days postoperatively using translumbar ultrasound-guided biopsies at 1, 4, 7 days. A total of 16 transplants were performed. 1 ectopic donor kidney was found and transplanted in the same fashion. Mean operative time was 125 minutes, immediate postoperative survival was 100% and at 72 hours, 87,5%. The onset of acute rejection was at day 4, by massive lymphocyte infiltration and was directly correlated with the abrupt decrease of the allograft diuresis in Group A, at day 3. At day 7, the rejection was complete. Both methods of urinary drainage are functional and can be employed. This experimental model is a useful tool for training of the transplant surgeons or for transplantation research. The surgical technique for accessory renal allotransplantation in pig is easy to learn and offers the possibility for allograft monitoring until complete rejection without influencing the receptor health condition.

Key words: experimental model, transplantation, renal, accessory, acute rejection

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