

The cryopreservation of canine small intestine with Lifor organ preservation solution?compared with UW solution



Poster Presentation

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The cryopreservation of canine small intestine with Lifor organ preservation solution?compared with UW solution Yousheng Li, Mingxiao Guo, Jian Wang, Lei Fan, Jieshou Li Department of Surgery, Jinling Hospital, Nanjing University School of Medicine, Nanjing, 210002, China Background and objective Organ preservation is one of three key techniques in transplantation, which is also the backbone of organ transplant. Ideal preservation solution is always one of the hot spot of organ transplant because it can provide suitably physiological and biochemical microenvironment and prolong the organ storage time. UW solution is regarded as the gold standard for organ preservation solution because of its better outcome in clinical transplantation. However, its high viscosity and could cause red blood cell aggregation—both negatively affecting wash-out and reperfusion. In order to prevent a transient increase in serum potassium concentration and cause cardiac arrest, the potassium-rich UW solution need to be flushed out from the organ prior to reperfusion. In addition, the price of UW solution is expensive. Therefore, above shortcomings make it not fully satisfied with the clinical demands and limit its widespread application. Lifor solution is a new kind of organ preservation solution, which is based on the merits of current various organ preservation solutions. The aim of current study was to investigate the cryopreservation of Lifor organ preservation solution in preserving canine small intestine. Methods A total of 24 canines were randomly divided into two groups: Lifor group and UW group. Canine in each group were preserved for 6 and 9 hours respectively. The preservation effect of Lifor solution was compared with UW solution in the swine segmental small bowel auto-transplantation model. After cold preservation, histological changes and the content of ATP in the small intestinal mucosa were analyzed. Then intestinal absorptive function was studied. Results After 6h and 9h cold preservation, pathological changes, the content of ATP in the intestinal mucosa and intestinal absorptive function in Lifor group had no significant difference from those of UW group. Conclusion The effect of 6h and 9h cryopreservation of canine small bowel with Lifor solution is similar to those of UW solution. Key words Small bowel transplantation; organ preservation solution; Canine.
