immunosuppresives corticosteroids are those that are able to influence the host immunsystem at the earliest point. Nevertheless bioavailability has a latency of several hours, so that the usual time of application during operation is late to influence upregulation of the immun answer to the antigen. Purpose of our study was to compare the incidence of rejection episodes after preoperative application of corticosteroids with intraoperative application.

Methods: In 78 consecutive patients who recieved a kidney transplant the corticosteroid bolus (500 mg methylprednisolone) was applicated preoperatively. A historic group of 40 patients had recieved the same bolus intraoperatively. Any other therapy (operation technique, postoperative immunosuppression, etc.) was performed under standardized conditions in both groups. Parameter for success of the immunosuppressive regimen was the rate of acute rejection episodes during the first 30 days as well as the 1-year-function rate.

Results: In the study group the rejection rate was 18%, compared to 43% in the historic group ($p < 0.05$). After one year the function rate was 89% compared to 78% in the control group (not significant). Interleukin 2, the interleukin 2 receptor and interferon gamma were downregulated significantly at the time of operation compared to the control group.

Conclusion: The presented data underline the importance of an early induction therapy. Preoperative application of corticosteroids influences the rate of rejection episodes. An effect on the long term function rate can be assumed.

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Harvest and Preservation Injury of Small Bowel Grafts in Rats: Influence of the Surgical Technique and Preservation Solutions

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Aim of the Study: To determine the influence of the incidences concurring during the harvest and correlate it with the preservation injury in two different solutions commonly applied in clinical practice: UW and Collins.

Material and Methods: 120 WAG rats weighing 300 g were used as donors. Surgical time employed during the harvesting, arterial and venous incidences recognized during the procedure, intraluminal flushing and final macroscopic aspect of the graft were recorded in each animal. Group A ($n = 60$) were preserved in Collins solution. Group B was preserved in UW solution. At the end of a randomized preservation period (hour 0-2-4-6-8-10-12-14-16-18) segments of the ileal graft were processed for analysis and six grafts per group were transplanted. After 45 minutes of reperfusion another ileal segment of the graft was processed. Survival rate was noted 7 days after surgery. For statistical analysis Fischer test, correlation test of Pearson, and ANOVA tests were used. Only $p < 0.05$ was considered as significative.

Results: Surgical time, arterial and venous incidences as well as final macroscopic aspect influences the preservation and reperfusion injury of the graft ($p < 0.05$). Survival rate was influenced by all these factors. Histhologic injury was reduced in group B when the period of preservation was over 10 hours ($p = 0.05$). No difference was noted in the first 8 hours of preservation. Survival rate in group B was improved only when the period of preservation was longer than 10 hours (16.5% vs 0).

Conclusions: Small bowel harvesting in the rat influences preservation, reperfusion injury and survival rate of the animal. This injury can be amelliorated with the use of UW solution if the preservation period is over 10 hours.

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Significance of Blood Group Incompatibility in Porcine Heart Transplantation

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In experimental porcine transplantations blood and tissue typing are most often not performed in contrast to human transplantation protocols. The aim of our study was to assess blood groups and blood compatibility in an orthotopic heart transplantation model.

Methods: In 20 porcine orthotopic heart transplantations blood groups and crossmatch reactions were performed between recipient, donor and blood donor pigs. In the pig 16 blood groups and 81 serologic erythrocyte antigens are known. However, the most important is the A-O blood group. Blood groups were determined by polyclonal antisera and crossmatch reactions were performed in saline with the