

HTK vs UW for pancreas preservation: a case control series

Authors: Almoosawi B, Kourounis G, Wilson C*

* Consultant Surgeon

HPB & Transplant surgery at the Freeman hospital, Newcastle upon Tyne, United Kingdom

Introduction

Outcomes of pancreas transplantation are highly dependent on the quality of organ preservation. University of Wisconsin (UW) fluid was developed for pancreas transplant in the 1980's and has been used historically, however, due to recent shortage Histidine-Tryptophan-Ketoglutarate solution (HTK) has been used as an alternative. This study looks at the clinical outcomes of pancreas transplants that were preserved using HTK solution.

Financial disclosure: There are no financial conflicts of interest to disclose.

HTK vs UW for pancreas preservation: A case control series

Authors: Almoosawi B, Kourounis G, Wilson C*

* Consultant Surgeon

HPB & Transplant surgery at the Freeman hospital, Newcastle upon Tyne, United Kingdom

Method

Data was collected on simultaneous pancreas kidney transplants (SPK) performed in our unit between 2013-2023. The outcomes of those preserved with HTK versus UW were compared. Continuous outcomes were compared using Mann–Whitney U tests, and binary outcomes using Fisher’s exact tests.

HTK vs UW for pancreas preservation: A case control series

Authors: Almoosawi B, Kourounis G, Wilson C*

* Consultant Surgeon

HPB & Transplant surgery at the Freeman hospital, Newcastle upon Tyne, United Kingdom

Results

49 SPK transplants were included; 8 were preserved with HTK and 41 with UW. The median cold ischaemia time for UW cases was 9.8 hours, versus a median of 11.16 hours for HTK. This study demonstrates that there has been increased need to return to theatre within the first post-operative week from 21.95% with the use of UW, to 37.5% with HTK (P -value=0.38). (Fig1)

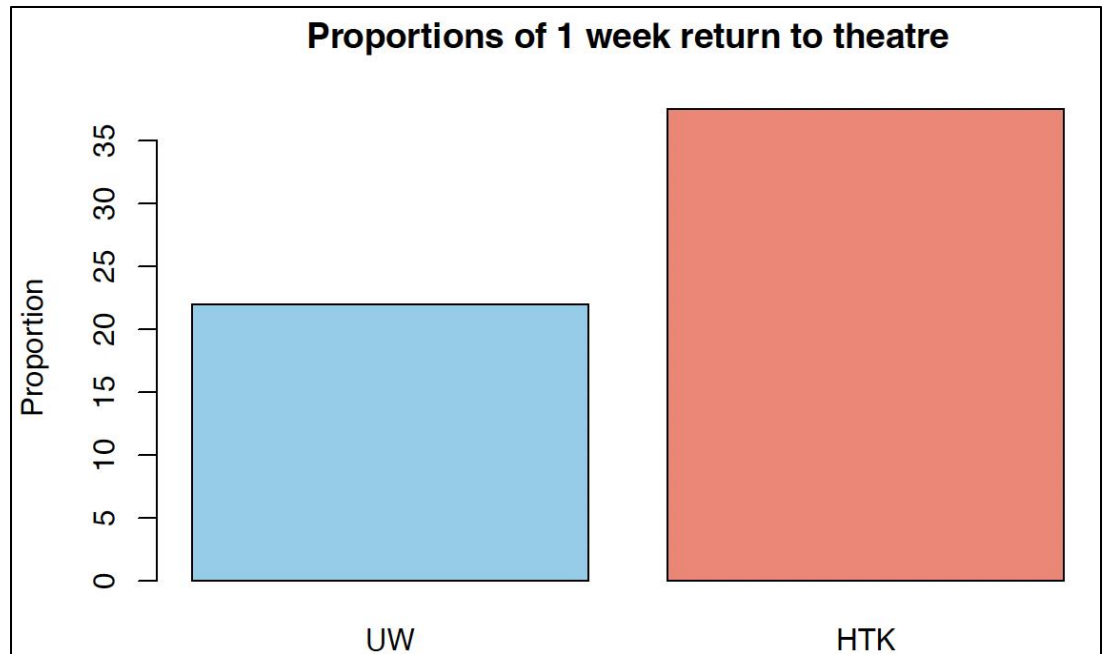


Figure 1 Proportions of 1 week return to theatre
1 week return to theatre (UW): 21.95%
1 week return to theatre (HTK): 37.5%

HTK vs UW for pancreas preservation: A case control series

Authors: Almoosawi B, Kourounis G, Wilson C*

* Consultant Surgeon

HPB & Transplant surgery at the Freeman hospital, Newcastle upon Tyne, United Kingdom

Results

Moreover, there was a non-significant trend to a rise in CRP levels in the immediate post-operative period. The median CRP level at 3 days was 123.5 mg/L with HTK, versus 80 mg/L with UW (P -value = 0.44). (Fig2) A slight increase in median hospital stay has also been noted (P -value=0.97), although again this was not significant. (Fig3)

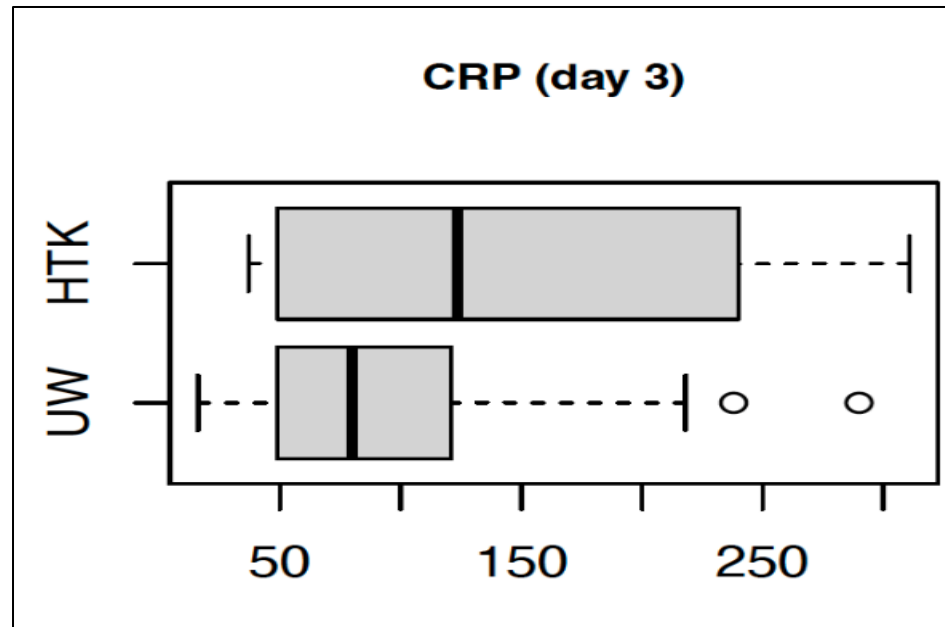


Figure 2 CRP levels on day 3 post-operatively

Median CRP (day 3) (UW): 80 mg/L

Median CRP (day 3) (HTK): 123.5 mg/L (P -value = 0.44)

HTK vs UW for pancreas preservation: A case control series

Authors: Almoosawi B, Kourounis G, Wilson C*

* Consultant Surgeon

HPB & Transplant surgery at the Freeman hospital, Newcastle upon Tyne, United Kingdom

Results

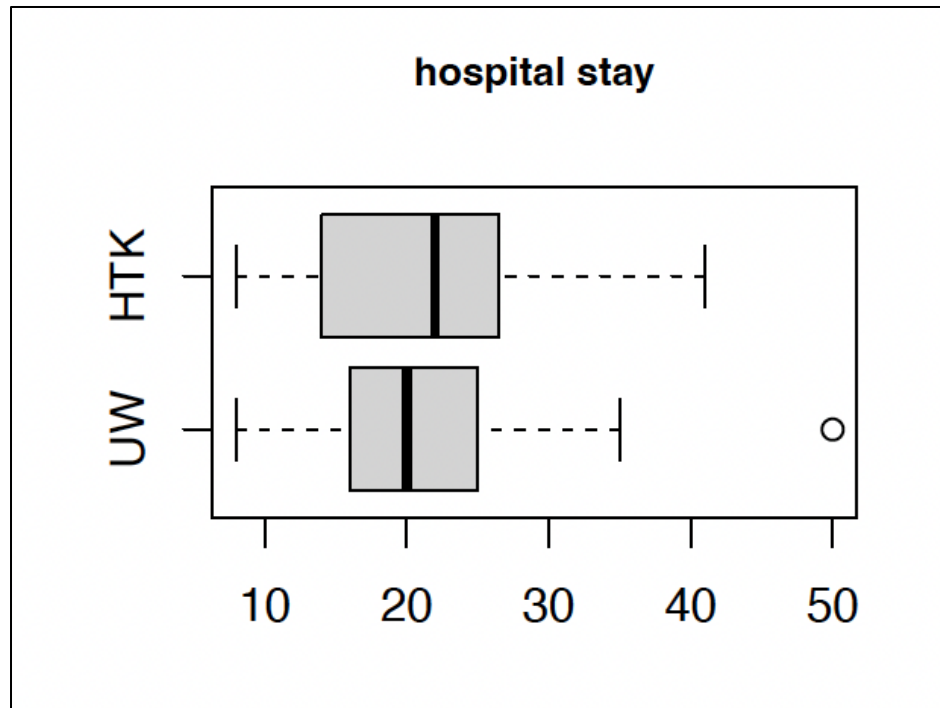


Figure 3 hospital stay

Median hospital stay (UW): 20
Median hospital stay (HTK): 22

Conclusion

We find a trend towards inferior clinical outcomes when the HTK solution was used, compared to the UW solution. Although this study is limited by a small sample size, the findings suggest UW remains the most effective solution for pancreas preservation.