



Travel Grant Report Form

Name and origin of applicants

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Purpose granted

The Travel Grant was granted to visit and learn from the most experienced centers that have conducted studies on ex-situ liver perfusion machines and are implementing its use in the clinical setting.

Amount granted

45.000

Time and place of visit

Cambridge Transplant Centre, Liver Transplant Team, Addenbrookes Hospital, UK.

8th of October to 8th of November 2019.

Report

The need for liver transplant exceeds the number of available livers across the world and in the Scandiatransplant region. Consequently, increasing the donor livers for transplantation is essential. One approach is to extend the criteria for donor acceptance as more marginal donors may be utilized. However, assessing liver donor quality is notoriously difficult. Donor livers may be discarded for various reasons as a sufficiently function of the liver allograft is the primary concern. Technological advances in ex-situ liver perfusion have proved it to be useful in assessing the liver function and the newest results have shown it to increase the number of utilized liver donors. The liver function in previously discarded marginal donors can now be assessed in an ex-situ setting. Furthermore, ex-situ liver perfusion decreases the risk of early allograft dysfunction after liver transplantation.

Ex-situ liver perfusion has been thoroughly evaluated by the National Institute of Health and Care Excellence in the United Kingdom and is considered a safe procedure. However, due to limited quantity of evidence it is recommended that patients consent to receiving these livers and the use should be monitored and quality assessed. In Copenhagen we will implement these recommendations.

Evaluation

The Liver Transplant Team at Addenbrookes is one of the most experienced in using ex-situ liver perfusion and are using it clinically both to improve grafts and extend the donor pool. During my stay I experienced the procedure firsthand and assisted in the use of the machine.

Furthermore, I gained important knowledge in donation after circulatory death and normothermic regional perfusion, both theoretically and by assisting in the procedures.

Overall, I've gained knowledge on implementation of these new procurement technologies. The most valuable lesson is protocols should be developed with experienced centers, strict adherence and monitoring of the outcome will be necessary. Importantly ex-situ perfusion, donor after circulatory death and normothermic regional perfusion will be feasible to conduct in Denmark and within the Scandiatransplant region, but it would be preferable to develop a shared protocol.

The experiences learned from this travel grant will be essential in implementing ex-situ liver perfusion and donation after circulatory death in Denmark and hopefully in the Scandiatransplant region. Rigshospitalet has recently granted money for purchasing a machine for ex-situ perfusion for which this grant has been essential.
