Minutes Nordic Liver Transplant Group meeting (NLTG)

October 5th, 2021 - Microsoft Teams

Virge Pall opened and welcomed participants to the digital meeting.

1. **Minutes from the NLTG meeting in Helsinki April 19th, 2020**
   Presented by Arno Nordin
   Arno Nordin went though the minutes from last meeting and the minutes were approved.
   http://www.scandiatransplant.org/members/nltr/NLTGMinutesApril202021Helsinki.pdf

2. **Center-wise update**
   Stockholm: In total 53 liver tx of these 6 were DCD transplants, 2 combined liver-kidney, 6 paediatric cases, 6 splits and 4 re-transplants. 3 deaths on the waiting list and 3 urgent calls.

   Gothenburg: In total 73 liver tx including 2 re-transplant, 2 combined liver-kidney, 1 multiviceral and 1 paediatric transplantation with living donor.

   Oslo: In total 75 liver tx of which 7 were paediatric transplantations, 1 transplantation with living donor. Approval for DCD program.

   Helsinki: In total 56 liver transplantations incl. 5 paediatric, 5 re-transplantations. DCD pilot project has started for kidney procurement only.

   Copenhagen: In total 37 liver transplantations of which 3 were re-transplants, 1 combined liver-kidney, 4 paediatric patients and one of these with living donor. Currently low activity.

   Tartu: 3 liver transplantations

3. **Update from Scandiatransplant**
   Presented by Ilse Duus Weinreich

   NLTR registry survey:
   Data entry done on selected parameters each year from 2016 to 2020 per centre was presented.
   On many parameters the data entry is between 80-100% expect for Helsinki were data export from their own registry to NLTR has not been established.
   In general the number of 1-year follow up entries is lower than expected and missing from Copenhagen and Helsinki.
   Data entry is important both for studies and for the export of data to ELTR

Patient survival, quality control lists in YASWA:
In 2 weeks 2 new quality control lists will be introduced in YASWA to support the data quality on patient survival.
One of the quality control lists will bring forward liver patients that have been permanent withdrawn ≥ 3 months ago from the waiting list without death, survival, waiting list entry or follow up dates after withdrawal.
The other list contains patients that have been liver transplanted ≥ 1 year ago without death, survival, waiting list entry or follow up dates in specified intervals (1,3,5,10,15,20…. years) after transplantation.

In the beginning the will be a lot of patients on the list, but if they are updated over time by each centre the list will narrow down.

Payback and balance:
The data was centre to relevant centres prior to the meeting and data has been updated.

The balance sheet illustrated that Stockholm owed 9 livers, Gothenburg and Oslo 4, while Helsinki is waiting for 5 livers to be paid back and Gothenburg 4 livers.

In September 2021 there were 7 cases where payback had been pending for more than 6 months.

Action:
In the very long time pending payback cases the centres should communicate and if possible agree on offering paying back livers also of other blood type(s).

Paediatric exchange statistics
In 2020 there were 48 donors fulfilling the split criteria, which is 8,4% of all actual donors in Scandiatransplant.
Of the livers fulfilling the split criteria and that were procured 17,5% were used for transplanting paediatric patients with a split liver.
Most common reasons for not using the liver for split liver transplantation were refusal by recipient centre (14 cases) and medical reasons (9 cases).
Looking at the exchange balance between countries, when it comes to livers from adult donors used for paediatric liver patients, it is seen that Sweden (+6) and Estonia (+1) has imported more and Denmark (-3), Norway (-2) and Finland (-2) has exported more.
The waiting list flow - entries, transplantations and withdrawals - is stable over the years.
Only very few paediatric liver patients die on the waiting list. This number together with in situ /ex situ procedure will be included in the presentation for the next meeting.
Overall the system is working very well

4. **Optimization of the 'Paediatric liver and multivisceral waiting list'**
Presented by Monika Olofsson

The suggestion made by the coordinators in the working group on how to optimize the logistics around the waiting list is that organ offers on split livers will be sent electronically though YASWA simultaneously to all liver centres that have patients on the 'Paediatric liver and multivisceral waiting list' and that accepts the ABO on the liver offered.

It is suggested that whenever it is possible the offer includes AP measurements of the liver, liver volume, anatomical variations and CT scan description/pictures.

Concerns in regards to the workload in the evaluation process were discussed.

It is difficult to set a timeframe on responding on the offers, as they require more evaluation than other offers.

Pål-Dag Line presented how they in Oslo have tried to standardized the measurements. For paediatric recipients sagittal plane measurement is useful.
The liver size assessment guidelines are found on the Scandiatransplant homepage
http://www.scandiatransplant.org/organ-allocation/Liver_size_assessment.pdf

Action:
The Scandiatransplant office will move forward with making a solution for offering split livers. When it is introduced all potential split livers should be offered though this system, whenever possible together with AP measurements and CT scan description/pictures and with as many other details about the liver graft as possible. After introduction the system must be evaluated.

5. **Expanded paediatric outcome parameters to NLTR**
Presented by William Bennet

William has sent out a questionary to the working group to disclose what parameters could be relevant, the agreement was to limit the number of additional parameters. William went though the suggestions, whit especially adds more parameters to the follow up.

Action:
William will take the lead and call for an online work meeting with the working group, paediatric hepatologist and Ilse D. Weinreich to go through, clarify and decided on what parameters should be added.

6. **High lightning of potential donors for multivisceral transplant recipients for donors full filling split-criteria**
Presented by William Bennet on behalf of Gustav Herlenius

For some of the small children requiring an intestinal allograft the waiting time is very long, it is unclear why it is so. I could be an awareness issue in regards to the priority and allocation rules. According to the rules the recipients should have the same priority as the paediatric recipients waiting for 'liver only'.
It is a worry if organ offers to this patient group is sometimes missed.

It is suggest to look into data and see if offers are missed and also to make it more clear in the system what organs they are waiting for.
Furthermore, it is suggested to bring the issue up at the upcoming coordinator meeting.

Action:
Issue will be brought at the next NTCG meeting and again at the next NLTG meeting.

7. **Status on ELTR data export, data processor agreements**
Presented by Ilse Duus Weinreich

Data has been delivered to ELTR as planned. Ilse pointed out once more that the current agreement between ELTR and each centre does not fulfil the GDPR requirements. The centres are data controllers, those the legal responsibility for data lies here. Ilse made first draft for at joint data processor agreement in late 2019, all centres needs to proceed in this matter.

Action:
Ilse will send the draft to all centres again (attached)

8. DCD liver transplantation, a discussion and centre wise update
Stockholm, Carl Jorns:
A national project has started on DCD liver transplantation and NRP is mandatory in the protocol. 7 DCD liver transplantations with good outcome no primary non-function, does not have long term outcome yet. The livers have not been offered as payback, but will be offered to urgent cases.
Gothenburg, William Bennet:
Problems with identifying enough donors and are now trying to expand procedure to more hospitals.
Oslo, Pål-Dag Line:
Program is starting in Norway again. In the literature DCD donors are regards as extended donors, not standard donors, and this is how the livers have been treated in Oslo.
Helsinki, Arno Nordin:
Started with DCD kidney and the plan is to include livers later.

Copenhagen, Nicolai Schulz:
Work in the Danish DCD working group is ongoing and the program is expected to start within the next year, first with kidneys and followed with livers later.

9. **Ex vivo liver perfusion, a discussion and centre wise update**
Gothenburg, William Bennet:
National protocol on ECD donors, which includes all donors 70 years and above. Have used the procedure in 14 cases.
Copenhagen, Nicolai Schulz:
Not started yet, have bought a new perfusion machine and waiting for it to be delivered.
Stockholm, Carl Jorns:
Similar to Gothenburg. 12 cases so far, worked well technical.
Oslo, Pål-Dag Line:
Using the machine, but not for clinical perfusion, only for research. The future plans are to use it on livers that are currently being discarded and on DCD livers with long functional ischemia time.

Discussion about research on discharged livers, whether they should be sent to European research projects (Gröningen) or if a Nordic collaboration project is of interest.

Action:
There is interest in making a Nordic collaboration/protocol on the usage of discarded livers. The issue should be brought up at the upcoming NLTG meetings.

10. **Liver transplantation of refugees without permanent residence permit**
Presented by Bo-Göran Ericzon

The issue have been discussed in the Scandiatransplant board with the Competent Authorities. Council of Europe has tried to come up with guidelines, but there is very different attitudes towards the issue within Europe.
Transplanting refuges or not should not be left to the local doctor, there should be some general guidelines. In Sweden the Transplantation Society has come up with 10 principles (attached). Amongst others there is discrepancy in whether recipient follow up should be guarantied before transplantation.

Not many cases in the Nordic countries, but it is important to bring up and discuss these cases at the meetings to ensure that we treat the cases as similar as possible.

11. **Ongoing studies**
DSA study
Presented by Carina L. Sørensen

Stopped including patients to the study, as target of 1000 patients has been reached. Some yearly follow up data is lacking, especially on the early included patients.

Almost all samples have been analysed.

Action:
Missing data entry in regards to the yearly follow up must be completed

Factors associated with waiting time and waitlist mortality,
Presented by Carl Jorns

Some problems with statistics, but a manuscript will soon be ready. The plan is to send it around to all centres before the next meeting.

Results of Hepaticoduodenostomy in Norway/Denmark,
Presented by Nicolai Schulz

There is still interest in doing the study, but it has not started yet. It seems as if there is sufficient patient material to do the study.

Evaluation form of CT examination in deceased donors,
Presented by William Bennet

The results and outcome of the CT study done on 109 donors in Gothenburg was presented. More than 95% were evaluated with CT scan. 12.3% of donor procedures were abandoned due to findings of CT scan. In 9,4% of the cases malignancy was detected. In 26,2% of the cases this examination was useful in size matching. Based on this preliminary study cost benefit is marked.
At the last meeting it was decided to expand the CT scan study to all centers.
From July 2021 to September 2021 CT study data has only been completed on 1/3 of the donors in Scandiatransplant. Based on this it was discussed whether there is real interest in doing the study.
All agreed that the study should be done and that data must be filled in through YASWA. The study will be done as quality study.

Action:
Ulrika Samuelson, Gothenburg, will reach out to the centres that are missing data entry. Each centre must find their own work procedure in relation to when and who should do the data entry.

Nordic study on porto-caval shunt during LTx
Presented by William Bennet

Gothenburg have started to use porto-caval shunt procedures more frequently.
There is not much literature describing the procedure and there is a interest in doing a study to know if there is benefits in using the procedure. Endpoint needs to be defined which could be difficult.
Stockholm, Copenhagen and Helsinki do not use it as regularly routine.
Gothenburg will contact Oslo after the meeting.

12. **Next meeting**

Will beheld in Copenhagen 21st-22nd of March 2022

List of meeting participants

Oslo
Espen Melum, Pål-Dag Line, Monika Olofsson Storrø, Kristine Wiencke, Katrine Engesæter

Helsinki
Arno Nordin, Johanna Savikko, Aki Uutela, Ines Beilmann-lehtonen, Carola Schauman, Eija Tukiainen, Heikki Makisalo, Marko Vannas

Tartu
Andrei Uksov (controller of minutes), Andres Tein, Virge Pall, Riina Salupere, Janika Kuus

Gothenburg
William Bennet, Ulrika Samuelson

Copenhagen
Nicolai Schulz, Christian Ross, Ulla Plagborg, Carina Lund Sørensen

Stockholm
Carl Jorns, Antonio Romano, Gunnar Söderdahl, Bo-Göran Ericzon, Marie Tranäng, Björn Fischler

Scandiatransplant
Ilse Duus Weinreich (writer of minutes)