

## The Minutes for the Nordic Liver Transplant Group Meeting Oslo October 24-25, 2016

### Venue:

Hotel Opera  
Dronning Eufemias gate 4,  
0191 Oslo

### Oct 24. NPLTG

**Welcome** (Pål-Dag Line)  
*The meeting was opened.*

**Minutes from NLTG meeting in Gothenburg on April 11. 2016.** *The minutes were approved without comments or changes.*

### Center wise update reports (all centers)

- Helsinki: 1
- Gothenburg: 7
- Stockholm: 7
- Oslo: 7
- Copenhagen: 7

### Status of our common paediatric waiting list and sharing of split criteria livers since October 2015 (Ilse Duus Weinreich/ Monika Olofsson Storrø/Pål-Dag Line)

*Ilse was prevented from taking part in the meeting. Monika and Pål-Dag gave a presentation on the data provided by Ilse on the utilization of grafts meeting the split criteria at each centre after the new guidelines were introduced. In total, there were 407 deceased donors in the time interval Dec. 7. 2015 to Sept. 7. 2016. Of these, 35 (8,6%) fulfilled the Scandiatransplant split criteria (BMI, ICU stay, age, transaminase levels). The potential pr country were as follows:*

	<b>Number</b>	<b>PMP</b>
<i>Denmark</i>	6	1,03
<i>Sweden (incl. Iceland)</i>	10	1,01
<i>Norway</i>	6	1,15
<i>Finland</i>	13	2,37

*The actual numbers and utilization per centre was:*

	<i>Aarhus</i>	<i>CPH</i>	<i>GTB</i>	<i>Helsinki</i>	<i>Skåne</i>	<i>Odense</i>	<i>Oslo</i>	<i>Reykjavik</i>	<i>Stockh.</i>	<i>Uppsala</i>
<i>Donors fulfilling Split criteria</i>	2	3	5	13	1	1	6	0	2	2
<i>Donor liver used as split</i>	0	0	1	1	1	0	2	0	1	0

Thus, only 6 of the total 35 split criteria grafts (17%) were actually used for splitting. The reasons for not splitting were:

	<i>Total</i>
<i>Not used for split</i>	29
<i>Not procured</i>	5
<i>No matching paediatric recipient</i>	5
<i>Logistics</i>	6
<i>Medical</i>	9
<i>Recourses</i>	1
<i>Payback</i>	2
<i>Urgent call</i>	1

The number of paediatric liver recipients waiting in the same period was 48, and 26 underwent a liver transplant (Copenhagen 4, Gothenburg 6, Helsinki 1, Oslo 9, Stockholm 6).

Transplanted paediatric recipients, where did the liver come from?

<i>Donor → Recip.</i>	<i>Aarhus</i>	<i>Copen-hagen</i>	<i>Gothen-burg</i>	<i>Helsinki</i>	<i>Skåne</i>	<i>Odense</i>	<i>Oslo</i>	<i>Stock-holm</i>	<i>Uppsala</i>	<i>Estonia</i>	<i>Recip. Transpl.</i>
Copen-hagen			1 (1)	1		1	1 (+1 pt. died)				4
Gothen-burg		1	2		2 (1)		1 (1)				6
Helsinki				1 (1)							1
Oslo			3		1		4			1	9
Stockholm			1		1			2 (1)	1	1	6
Donors	0	1	7	2	4	1	6	2	1	2	26

Blue indicates exchanges across borders  
(number) indicates livers fulfilling split criteria

*The NPTLG group agreed that there is a clear room for improvement in order to utilize a higher proportion of the split grafts that are available. There was also a discussion on the potential to publish the Scandinavian experience with common sharing obligations for split grafts and the implications for waiting times and waitlist mortality.*

### **Age limit for pediatric listing**

*The age limit for being listed to the paediatric liver transplant list is 18 years. From Copenhagen, the question was raised as to whether patients listed before the age of 18, but still waiting with an age above 18 years should be considered on the shared waiting list and be included in the split sharing program. After a brief discussion, the meeting reached a consensus that this issue is rare, and that it is acceptable to keep these patient on the paediatric list if they were listed before the age of 18. The NPLTG does not believe that this will be a significant problem in the future.*

### **Improving split liver collaboration to maximise utilisation of split donors? (William Bennet)**

*William B gave a presentation on the common split criterie and medical contraindications for splitting. It was emphasized that resources and missing manpower at the local centre should generally not be a reason not to split, since most centres are willing to cooperate and help each other in these situations. A brief overview of results after in-situ split and LD transplantation of S2+3 grafts were also given, and the results are comparable. Thus, a better utilization of the Scandiatransplant potential for splits could keep the need for living donor transplantation for children at a minimal level.*

### **Surgical Split liver technique in paediatric transplantation (William Bennet, Henrik Gjertsen, Pål-Dag Line)**

*William gave a presentation on anatomy of the left BD and surgical management of the bile duct in s2+3 grafts, emphasizing the importance of avoiding more than 2 ducts. The results in paediatric liver transplantation from Sahlgrenska was presented, and a clear reduction in the incidence of biliary complications was found. Henrik discussed the issue of replaced left hepatic artery and the implications for splitting with recent experiences from Stockholm. Pål-Dag presented the experiences from Oslo with mandatory back-table cholangiography in all split livers*

### **Common immunosuppressive protocol for children in the Nordic countries?**

*William had collected the IS protocols for paediatric liver transplantation in the Nordic centres. There is no uniform consensus, and in the discussion, no clear agreement was made with regards to a common standard. William B suggested that we could try to collect our common experiences with regards to EBV infection/PTLD, rejection incidence, renal function, growth rate and glucose tolerance in the Nordic paediatric liver recipients.*

### **Scientific presentations**

- *Metabolic monitoring of paediatric liver grafts by microdialysis (Håkon Haugaa)*
- *Effect of prophylaxis or pre-emptive treatment with ganciclovir on Epstein-Barr virus viremia after paediatric liver transplantation (Anniken Bjørnstad Østensen)*

## **Any other business**

- *William Bennet raised the issue regarding the format of the shared paediatric waitlist which makes it difficult to read.*

## **Oct 24. NLTG**

### **News from the Scandiatransplant Board meeting 19-20.09.16 (Pål-Dag Line)**

*Pål-Dag informed about an initiative from the Board to form a working group that should revise the causes of death for deceased donors in Scandiatransplant. One person from each country will be appointed to participate in the group, Kaj Anker Jørgensen will nominate 1 person from the office, and Runolfur Palsson will participate as a board member and a key person for the group.*

**Center wise update** on adult liver liver transplantation (*all centers*). *All centers reported satisfactory activity and results. Finland have experienced a significant increase in the number of deceased donors and have had a very high activity*

### **NLTR->ELTR data transfer (Vincent Karam, Espen Melum)**

*The Nordic Liver Transplant Group would like to be able to report data directly from NLTR to ELTR. Vincent Karam was invited to the meeting and gave a presentation on how this could work from an ELTR perspective. He emphasized the need for harmonisation. ELTR cannot remove variables from the common dataset due to all the other participating centres. The goal should be a future common registry. A data agreement between ELTR and each centre will be required. ELTR performs audit visits at the participating centres, and a techicial evaluates data capture.*

*The data forms for NLTR was revised the last time in 2007, and there is a need for a new revision anyhow, and this should consider a harmonisation with ELTR. Espen Melum gave a detailed presentation of the revisions needed regarding each of the NLTR forms. This should be one of the issues for discussion at the next NLTG meeting. It was suggested to; Start data transfer from one specific time-point and let what remains in ELTR and NLTR prior to this time-point remain as it is. Map variables as far as possible, include a few key variables in revised forms and leave out a few ELTR parameters.*

## **Presentations**

- ***Update on the randomized trial on LTx in CRC met patients in France (Vincent Karam): So far 2-3 patients randomized in the trial, mostly French centres***
- ***Liver transplantation as curative treatment of patients with neuroendocrine tumors (Espen Thiis Evensen): Presentation of the new Norwegian protocol for transplantation of liver metastases from neuroendocrine tumours***
- ***Update on studies on LTx in CRCmet patients in Norway (Morten Hagness): Current activity and results were presented.***
- ***Liver transplantation for Cholangiocarcinoma in the Nordic countries (Espen Melum/William Bennet): Current results and activity in NLTG was presented and discussed. None of the centres performing LTx with the Mayo protocol have been able to reproduce the results. William presented a recent paper that he has co-authored looking retrospectively at a cohort of patients that would have fulfilled the Mayo***

*criteria, but were treated with LTx alone. These patients had a very good overall survival as compared with patients that did not comply with the Mayo criteria. The question whether a prospective study could be performed in NLTG using this principle was raised. Gothenburg and Oslo were interested in the concept.*

#### ***Shipment of explant livers with metabolic disease for cell isolation at Karolinska***

*(Karolinska/Stephen Strom): Stephen strom had sent an e-mail asking for possible shipment of explant livers with metabolic disease to Stockholm. The issue was discussed, and all centres stated that consent must be given in each case in order to make shipment for research purposes possible. This will also require a formal protocol from Stockholm*

#### **Update on present/ongoing studies:**

- **Liver transplantation and cancer- Nordic Multicenter Study (Arno Nordin)**  
*Additional data analysis ongoing, manuscript in preparation. Hopefully ready for submission to journal early 2017.*
- **Alcohol Study on Liver Transplant Patients (Maria Castedal)- Short presentation, Manuscript in preparation.**
- **Nordic DSA study (Andreas Rostved)**  
*Denmark recruiting. Sweden awaiting ethical approval and hopes to start enrolling after the summer. The same applies for Finland and Norway, and all centres most likely able to recruit in early 2017. Allan informed about possible cooperation with the Happoran group in Canada.*
- **NAFLD/NASH as an indication for liver transplantation (Hannes Hagström)**  
*Espen Melum gave a short update on behalf of Hannes Hagström.*
- **Factors affecting long-term survival in patients transplanted due to alcoholic cirrhosis in the Nordic countries (Espen Melum/Christian Corwin)**  
*The principal aim of this study is to evaluate factors that affects the unexpected inferior long-term survival in patients transplanted due to alcoholic cirrhosis. Results will be compared to a group with non-viral, non-malignant liver disease transplanted due to chronic liver disease. Inferior survival in alcoholic patients seems to be attributable to cardiovascular disease, malignant disease and relapse of alcohol abuse.*
- **The influence of AB0-compatibility in liver transplantation: a Nordic Liver Transplant Registry study (Allan Rasmussen): A brief report was given**
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#### **New study proposals:**

- **Scandinavian liver donor risk score (Pål-Dag Line, Morten Hagness, Espen Melum)**  
*Donor risk scores have been introduced in the US and in Europe. It is likely, that these scores might be population dependent. Thus, there is a need to try to evaluate the relationship between donor factors and outcome in the Nordic transplant cohort. It was suggested that this could be explored retrospectively as a register study, based on this, a prospective evaluation of a risk score system could be performed as a prospective study. All centers agreed to take part. Oslo will come back with a suggestion for protocol*

**Any other business - None**

**Next meetings:**

*The next meeting for the NLTG was decided to be in Stockholm on Tuesday, April 4<sup>th</sup> 2017.*

Pål-Dag Line/ Host

