ACUTE LIVER FAILURE SPECIALIST INTEREST GROUP
MINUTES OF MEETING
THURSDAY 22ND JANUARY 2019

Present:	Professor Will Bernal (Chairman) Dr Joanna Moore (Secretary) Dr Kenneth Simpson Dr Jennifer Ryan Dr Nick Murphy Dr Mansoor Bangash Dr Abhishek Chauhan Dr Ahmed Elsharkawy Dr Banwari Agarwal Dr Mhairi Donnelly
Apologies:	Dr Juan Acevedo Dr. Steve Masson Dr. Vicki Snowden

		Actions
Item 1	**Welcome and Chairman's introduction** The Chairman welcomed everyone to the inaugural formal acute liver failure (ALF) special interest group (SIG) meeting. The attendees present introduced themselves. It was explained this was a BASL approved group. JM explained that our understanding is that BASL would support the cost of a one day meeting annually for each SIG.	
Item 2	**Minutes of last meeting/matters arising** The minutes were not formally reviewed but broadly agreed as correct. They have been previously circulated.	
Item 3	**UK ALF collaborations: Learning from previous success (and failures)** WB summarised that there were some randomised controlled trials in ALF and some small scale physiological studies. Through the nature of acute liver failure, it is rare, often heterogenous and outcomes compounded by liver transplant. The Euro ALF data base had over 50 variables and there has been	

	poor uptake and utilisation. WB remarked that simple protocols and simple data collection seem to work. Centres with the capacity to deliver should be targeted and ideally returns for the participating centres, for example publications, would be hoped. Existing data could also be interrogated. There was comment that an upfront agreement on authorship would be helpful. NM also agreed that ALF is rare and therefore, through the career cycle of fellows, continuity can sometimes be difficult. Governance procedures over the years have also changed. KS commented that the number of patients with ALF in a year can vary a lot, and also agreed that small, simple studies were the way ahead.	
Item 4	**Host's Perspective: Review of ALF experience in Birmingham** NM presented the Host's data on ALF from 1992 to 2018. He commented that admissions secondary to Paracetamol overdose had been stable over the last ten years, but overall there has been a steady fall in admissions prior to that. There was agreement by the group that management can be influenced by geography and the ability of the local teams in these areas. More remote locations are more likely to require transfer of patients. NM noted that in Birmingham the number of ALF patients secondary to sero-negative hepatitis has been consistent over the years. The number of ICP bolts has steadily been decreasing but he is not aware of any cerebral deaths. KS commented that the transplant centre in Edinburgh is no longer doing ICP bolts. There was consensus from the group to publish an opinion piece using our combined data on ICP bolts. MB presented the Host's protocol and initial data on plasma exchange. So far they have performed this in 7 patients, five of which had ALF secondary to a Paracetamol overdose. The protocol was written to target patients who are not eligible for liver transplant, although NM said in practice this is not always the case. They usually use it in patients also who have at least a Grade 2 hepatic encephalopathy. BA said at the Royal Free they have plasma exchanged 35 patients using standard volumes, with FFP or a combination of FFP and crystalloids. They tried using Albumin replacement but found that ADAMTS was significantly depleted.	**ALL**

Item 5	**Clinical Areas poorly addressed in EASL Guidelines; opportunities for BASL SIG Guidelines (KS)** There were a series of ideas presented. These included the utilisation of liver biopsy, improved tests for subtle hepatic encephalopathy, the use of thromboelastograms in ALF, INR/prothrombin time cut off for the definition of acute liver failure in the context of hyper-acute, acute and sub-acute liver failure. There was consensus from the group that again ICP monitoring was poorly covered, and also it was felt that it would be useful to consolidate antibiotic and anti-fungal outcome data from each centre. There has been interest to look at recommendations for transfer from a referring centre to the transplant centre and we could provide a set of standards for this. VS is keen to take this forward with KS. Other suggestions were to look at the appropriate indicators for starting renal replacement therapy and when liver transplantation might be thought too futile or conversely when the patients are improving and when they should be delisted. The conclusion was that all the transplant centres ALF guidelines would be collected with a view to compiling them into one national recommended document.	**VS and KS** **KS**
Item 6	**Research opportunities: Data** a. **Can collaboration work? Participant experience: Presentation of registry data (MD)** The initial EMO ((Epidemiology, Management and Outcomes) -ALF registry data was presented This looked at aetiologies and outcomes across Europe and this was with an aim to build collaboration. Unfortunately only 14 of the 33 registered centres contributed data. Interim analysis is planned incorporating data up until December 2018. The plan is then to switch to Redcap which will be hosted by the University of Edinburgh. Some redundant variables will be removed such as height. b. **Prognostication of ALF: Validation for Royal Free and new UKT criteria (WB)** It was proposed by WB that the SIG should look to validate the new UKT criteria. We could look at patients both who have had and who have not had a liver transplant and subdivide into aetiologies secondary to paracetamol overdose/ non paracetamol overdose. We can also look to validate the ALF organ failure score (ALF-OFs). The futility of liver transplant can be examined as part of this, looking in particular at physiological variables pre-transplant and correlate this with outcomes after.	**MD/KS**

	c. **Natural history and resource use (WB).** Current published data was presented. Upcoming data from the Edinburgh group ('Surviving ALF') was also presented. There was felt to be an opportunity nationally to widen this epidemiological data. This is initially looking at liver transplant survival, resource use and economics. There are unique national data sets and no international competition for this. It is felt that information needed is minimal - NHS number, date of birth and aetiology. There would likely be a section 251 exemption. Statistical experience would be needed and appropriate funding. d. **Pre-transplant centre care (KS/VS)** It was suggested that initial questionnaires could be emailed to referrers with details obtained from BASL. This would look at how they manage patients with ALF and also would aim to raise the profile of the SIG. The aim of this exercise would be to feed and inform guidelines for practice. e. **Validation of CT volumetric data** (JM). This was to validate the initial paper by Zabron A et-al in Liver International, 2018. Liver volumes and proportion of predicted liver volumes were proposed as a possible early predictor of outcome - particularly the development of high grade encephalopathy and death. Leeds have initially compiled data on 24 patients dating between 2010 to 2018 when the PACs system was available. Two of these had a liver volume less than $1000cm^3$. A possible opportunity would be for other centres to interrogate their databases. The radiologists in Leeds are happy for images to be transferred to them on CD for further analysis. It was remarked that this could be a relatively quick and simple paper for publication. f. **Plasma exchange: data and guidelines (JM).** It was proposed that we should compile a data set to help guide the use of plasma exchange. JM and MB have already produced a list of variables. Any centre which would like to submit their data could be involved in the forthcoming publication. We would hope this would guide further trials on mechanism.	**ALL**
Item 7	**Research Opportunities: interventional** MB briefly presented an interventional trial proposing looking at Albumin in ALF given its immunomodulatory characteristics (referencing the SAFE and ALBIOS trials). It was agreed given the productivity of the day already that this idea would be brought back formally for presentation next time, along with 2 to 3 other potential ideas for interventional studies.	**MB**

Item 8	**AOB** The next hosting centre will either be Leeds or the Royal Free. This will be agreed between them. We would aim to host it in May 2019. Again it was noted that BASL will only fund one meeting however formally a year. WB then summarised the meeting: 1. An opinion piece with a view to publishing in GUT will be prepared - this will be on ICP monitoring from a UK perspective. 2. Guidelines - the likely first guideline would be on the practicalities of a safe transfer (who, when and how). This could also include the use of antimicrobials. This will be compiled looking also at all the transplant centres current ALF guidelines. 3. A national registry - the aim is to use REDCAP and all the UK transplant centres would then collect the same minimum data set going forward. 4. Plasma exchange - we will look to establish a national data set (how it is used/what it does). This could be a stand-alone paper to follow on after the randomised controlled trial by Larson et-al. All centres who feel they could contribute data can do so. 5. The futility of liver transplant can be looked at using pre-existing ITU data sets. 6. CT validation - there are small numbers with one centre, but other centres could contribute data which could be compiled into a paper. The radiologists in Leeds would be happy to received CDs of scans. Any interested centres could contact JM/WB. 7. The group could look to validate the revised UKT criteria. All SIG members were encouraged to go back to their own data sets to see how they could contribute to this and indeed to other study ideas. 8. To develop data linkage/extend further the 'Surviving Acute Liver Failure' epidemiology study nationally Finally, all participants were thanked for helping to contribute to such a productive meeting.	**JM/JR** **ALL** **KS** **KS/MD** **JM/ALL** **ALL**