Sub-study Zoom May 23rd 2024

Time 9-10 AM CET

Present: Markus Skrifvars (chair), Manoj Saxena, Marion Moseby Knappe, Matt Wise, Niklas Nielsen, Peter McGuigan, Anna Tippett, Eno-Martin Lotman, Frances Bass, Janus Jacobsen, Joe Riddell, Johanna Hästbacka, Judith White, Marjaana Tiainen, Matthias Hängi, Michael Reade, Pedro Garcia, Pirkka Pekkarinen, Sophie Harris

Protocol:

1. **A brief introduction of all present**

2. **General presentation of the current status of the STEP CARE trial**

3. **Sub-study SOP document**

   Manoj Saxena has prepared a SOP document on how the STEP CARE study handles sub- and posthoc studies. This will be circulated very soon. The process will be to send all suggestions to Manoj Saxena at stepcare@georgeinstitute.org.au
   Manoj will have a look and have these approved by the international management group. All previously submitted ones will be forwarded to Manoj and approved, but additional information will be asked for if needed. The important thing is that each sub-study has a clear document that can be posted at the STEP CARE website in order to attract other centers.

4. **General statistical considerations**

   Janus Jacobsen: Consider using the TRIPOD statement where applicable. Also make some assessment of the sample size for each study. Also take into the account the three different interventions. Is it possible that the interventions will influence result of the sub-study?

5. **Data collection for sub-studies**

   Ideally we could have additional eCRF pages for each study. However, the work with the eCRF has focused on getting the eCRF sorted out for the main trial. The situation is not ideal but “it is what it is”. Fran will discuss with SPIRAL about the possibility to include this in the next few months. But in order to not waste time and not miss patients we should proceed. The possibilities include REDCAP or simply collecting the data in an EXCEL file locally and then proceed with sending/recording data at a later stage. The latter is an “emergency option”.

6. Presented and discussed individual studies.

Joe Riddel and Matt Wise
Acute cor pulmonale post cardiac arrest: Validation of the ACP score, previously validated in ARDS, in post cardiac arrest patients. Ideally certain admission characteristics would prompt the clinician to do an ECHO investigation and assess right ventricular function. This ECHO study is key to the study. It needs to be decided if the ECHO will be performed only prompted or if all ECHO:s done can be included. Peter mentioned that one option would be to use a standard ECHO protocol. Importantly this study should be aligned with all other ECHO studies. A general STEP CARE ECHO protocol/data form could be useful for other sites as well.
Joe and Peter will liaise with Josef D. Naepean Hospital in Australia as well some other sites may take part.

Action points:
1. Discussion Joe, Peter and Josef and other ECHO experts about aligning the ECHO part.
2. Check that the protocol is up to date and send to Manoj for approval.

Derived indices of mechanical ventilation: A study associating mechanical ventilator settings with outcome. Most of this data is available and can be collected. The eCRF includes some limited data. Some additional data will be needed and we need a list of this data. Data in EXCEL (locally) or REDCAP?

Action points:
1. Send the protocol/two page to Manoj for approval.
2. Liaise with Chiara Robba about the mechanical ventilation studies. She has submitted some suggestions and see if these can be combined into one large study looking at all aspects of mechanical ventilation?

Transpulmonary pressure and duration of mechanical ventilation, incidence of pneumonia and failure to wean from ventilation: The focus will be on the spontaneously breathing patients. As above, most data can be collected from ventilators and patient data collection systems. This study will, however mandate a expiratory hold for the calculation of these pressures. This can probably be considered as general ICU care and will not mandate a separate consent.

Action points:

1. Send protocol/two page to Manoj for further actions.
2. Liaise with Chiara Robba as above.

Chest trauma and weaning post cardiac arrest: To assess the prevalence of chest trauma following cardiac arrest and see whether this predicts prolonged mechanical ventilation. The key-data point is the results of the chest CT. This study only include those who have a chest CT based on clinical grounds. This will of course be a

“selected” cohort. Johanna Hästbacka mentioned the issue of long-term chest pain in some patients, related to chest injuries? Markus mentioned Guiseppe Rostagno and the topic of lung injury related to the use of mechanical chest compression devices? This should be included a one variable.

Action points: Matt will finalize the two page protocol. In addition we will need data on what should be collected from the chest CT. If this is clear the images can be scored locally. This makes things easier.

Brain death and organ donation: Previous data suggests that OHCA patients are not always included as organ donors. Researchers from Gothenburg may also be interested.

Action points: Finalize/send the two page summary to Manoj. Make a list of additional data that needs to be collected.

Pepsin and VAP after OHCA: A sub-study looking aspiration and VAP after cardiac arrest. Questions include use of prophylactic antibiotics, looking at associations between gastric aspirates and VAP, pepsis analysis and VAP. Some of this data can only be collected in the UK. But the question of antiobiotics is interesting and would be easy to perform. Currently we do not collect this data! Niklas stated that this is being looked at for TTM2. Manoj agreed that this is very important.

Action points: Matt will send/finalize/prepare a two page summary to Manoj. In addition with a suggestion of what additional antibiotics data would be useful.

Pedro Garcia

Inotropic therapy: A study recoding with more granular data the use of inotropes in PCAC patients. Is there a difference in choice of inotrope? The main additional data needed are the doses of inotropes.

Action points: Pedro will modify the two-page plan and send to Manoj. Prepare a clear list of what additional data will be needed.

7. Meeting end

The meeting was ended at 10 AM CET. In Helsingborg Peter McGuigan will present his planned studies. In addition if there are other suggestions, they can be included.