

Online Meeting

Minutes June 01, 2022 2:00-3:00pm

Minutes of the FREM section meeting on Working Groups 01 06 2022

Attendance: Zudin Puthucheary, Aileen Hill, Danni Bear, Gunnar Elke, Annika Reintam, Michael Casaer, Mark Plummer, Jan Gunst, Jean-Charles Preiser, Stefan Josef Schaller, Gennaro Martucci, Angelique de Man, Giuliano Bolondi, Xavier Forceville

Excused: Mette Berger, Claudia Heidegger, Arthur Van Zanten

The session is attended by 20 plus active FREM members: thank you very much!

As a general principle we agree to share the mail addresses of the different working group leaders so that members who would like to contribute can mail the leaders. This solves the issue of ESICM not being allowed to share individual mails with us and, more importantly, we hereby update the working group list avoiding to contact members who are no longer interested in a given WG.

Annika Reintam Blaser kindly accepts to continue leading the **GI function working** group and provides us with an overview of the most recent achievements of this very active working group. This includes, iSOFA, biomarkers of intestinal injury and now also focus on diarrhea... (See PowerPoint)

Annika also wonders if we would take a principle position on whether or not to request ESICM endorsement for our projects. This may indeed be a time-consuming process and obviously doesn't guarantee publication of the results in the Societies journal upon completion given the scientific independence of the reviewers and editors. We suggest to consider ESICM endorsement project by project, all appreciated the logistic support by the Research Collaborators in the organization of surveys and in this context, it does encourage colleagues to participate. The added value of ESICM support or a research grant in organizing prospective clinical studies is merely in attracting additional funding by larger funding bodies.

Annika will organize a WG meeting on-line by the end of the summer, please mail Annika if you would like to be involved: annika.reintam.blaser@ut.ee

Angélique De Man accepts to lead the **Micronutrient working group**, as Michael judges it better not to accumulate this with being FREM chair. Angélique is raising money for project measuring micronutrients in serum versus circulating blood cells. She's in collaboration with a Dutch lab. Several additional possibilities for collaboration with experts in Biochemistry are raised. Among them Alan Shenkin (some participants point out that Alan might no longer be interested) other collaborators introduced by Mette Berger in the Micronutrient Guidelines might also be good candidates, such as Serge Rezzi from Switzerland. *On the longer perspective, the main question will be how to validate the added value of such measurements in the perspective of improving therapy and clinical outcome, probably this will require integration of these techniques in larger prospective trials?*

The ESPEN Micronutrient guideline, recently completed under direction of Mette Berger, and just published provide a perfect framework (together with info on current practice in VITATRACE) orienting how to proceed with clinical micronutrient research in ICU.

Xavier Forceville is very enthusiastic to join any efforts in applying micronutrient quantification in clinical practice and is happy to share his recent publications in this perspective.

Angélique will organize a WG meeting on-line in the end of the summer, please mail Angélique if you would like to be involved: ame.deman@amsterdamumc.nl

The muscle working group will be renamed “Rehabilitation working group” stretching from muscle integrity and composition to recovery of physical function and potentially attracting a broader group of experts. Zudin accepted to lead this working group in the process of defining priorities in this broad field of interest. *Zudin will decide once the priorities and directions are clear if he feels like continuing to take the lead. The recently completed CONCISE study defining a Core Outcome Set for nutrition research was certainly a nice achievement in this perspective. Michael checked with the Health-Related Outcome Section leadership whether our new focus on Rehabilitation wasn't a problem for them, it wasn't.*

Zudin will organize a WG meeting on-line in the end of the summer, please mail Zudin if you would like to be involved: z.puthucheary@qmul.ac.uk

We aren't certain if Valentin Fuhrman is still aiming to lead the Liver Working group, Valentin don't hesitate to confirm if you are going on as leader! Other candidates to lead this Working Group, please mail Gunnar Elke, the very well organized co-chair of the FREM section. Gunnar Elke: gunnar.elke@uksh.de. Thank you!

*We realized that there is no **Education Working Group**, the names in the EXCEL are all members willing to contribute to education. Our educational efforts are coordinated by Danni for Clinical Training: Danielle.Bear@gstt.nhs.uk and Sjoerd Van Bree for the on-line platform: BreeS@zgv.nl*

For those considering to contribute to the on-line platform be assured that the process from writing/reviewing modules to seeing them on-line became very lean and fluid! Don't hesitate!

Based on the suggestions by Pierre Singer, Guillaume Besch, Gunnar Elke and Jan Gunst, we might consider one additional working group “Nutrition & Metabolism in clinical translational investigation”. All present agreed that it might be wise to re-launch all above WG first and look for active volunteers for the new WG thereafter. Our section is rich in good idea's but due to our size we should be careful not to dilute our energy in too many simultaneous projects.

We propose to have a formal on-line meeting assessing progress in the working groups shortly before LIVES 22 PARIS (date will be announced timely in advance) and also to try and meet *de visu* in Paris for additional brainstorming with those available.

Wishing you all a great summer,

Gunnar and Michael

Enclosure: FREM meeting slides

WG GI function

FREM section meeting 01.06.22

Members

1	Guillaume Besch
2	Matthias Kott
3	Michael Casaer
4	Jean-Charles Preiser
5	Annika Reintam Blaser
6	Vasiliki Koutsoukou
7	Sandra Stapel
8	Maria Giuseppina Annetta
9	Gunnar Elke
10	Teodoro Grau
11	Thomas Lescot
12	Mar Juan
13	Hakan Tekguc
14	Jan Gunst
15	Zudin Puthucheary
16	Marcel van de Poll
17	Heleen Oudemans-van Straaten
18	Danielle Bear
19	Jan Wernerman
20	Claudia Heidegger

21	Anne-Berit Guttormsen
22	Sonja Fruhwald
23	Juan Montejo
24	Joel Starkopf
25	Kursat Gundogan
26	Cecilia Loudet
27	Arthur van Zanten
28	Carlos Torruco-Sotelo
29	Yaseen Arabi
30	Stephan Jakob
31	Olav Rooyackers
32	Pierre Singer
33	Alexander Wilmer
34	Adan Deane
35	Brenno BNS Campos
36	Jörn Schäper
37	Ingmar Lautenschläger
38	Valentin Fuhrmann
39	Manu Malbrain
40	Giuliano Bolondi

Completed projects

Original article

Development of the Gastrointestinal Dysfunction Score (GIDS) for critically ill patients – A prospective multicenter observational study (iSOFA study)

Annika Reintam Blaser ^{a, b, *}, Martin Padar ^{a, c}, Merli Mändul ^{d, e}, Gunnar Elke ^f,
Christoph Engel ^g, Krista Fischer ^{d, e}, Mikhael Giabicani ^h, Thomas Gold ⁱ, Benjamin Hess ^b,
Michael Hiesmayr ^j, Stephan M. Jakob ^k, Cecilia I. Loudet ^l, Dennis M. Meesters ^{m, n},
Wasineenart Mongkolpun ^o, Catherine Paugam-Burtz ^{h, p}, Martijn Poeze ^{m, n},
Jean-Charles Preiser ^o, Mattias Renberg ^q, Olav Rooijackers ^q, Kadri Tamme ^{a, c},
Jan Wernerman ^q, Joel Starkopf ^{a, c}

Original article

Enteral nutrition and dynamics of citrulline and intestinal fatty acid-binding protein in adult ICU patients

Martin Padar ^{a, b, *}, Joel Starkopf ^{a, b}, Liis Starkopf ^c, Alastair Forbes ^d, Michael Hiesmayr ^e,
Stephan M. Jakob ^f, Olav Rooijackers ^g, Jan Wernerman ^g, Sven Erik Ojavee ^h,
Annika Reintam Blaser ^{b, i}

Intensive Care Med 2022 Jan;48(1):119-120. [Letter](#)

doi: 10.1007/s00134-021-06536-6 **Cardiovascular SOFA score may not reflect current practice**

Kaspar F Bachmann¹, Yaseen M Arabi^{2,3,4}, Adrian Regli^{5,6}, Joel Starkopf^{7,8}, Annika Reintam Blaser^{9,7}

Impact of intraabdominal hypertension on kidney failure in critically ill patients: A post-hoc database analysis. Accepted by J Crit Care

Kaspar F. Bachmann MD^{1,2}, Adrian Regli MD^{3,4,5}, Merli Mändul MSc^{6,7}, Wendy Davis MPH,
PhD⁴, Annika Reintam Blaser MD, PhD^{1,2} on behalf of the IROI & iSOFA Study Investigators



Studies with iSOFA data

1. GRV - practices and outcome (leading M. Lindner, KF Bachmann, G. Elke)
2. Validation of the GIDS (**TO DO!**)

Studies with iSOFA + IROI study database

1. IAH prediction tool (ARB)

RESEARCH

Open Access



32 study proposals and 6 consensus processes = our next tasks

Top ten studies based on Delfi process

Table 3 Top ten study proposals for future research on GI dysfunction (what we need to know)

Final rank and acronym	Research questions/aims	Study design	Study population	Indicator/Intervention	Suggested outcome variables	Points
1. Diarrhoea prevention	Does routine use of fibre-enriched EN reduce diarrhoea?	RCT	Critically ill patients with EN with a standard protocol	Fibre-enriched vs non-fibre EN	Bristol stool chart GI symptoms*	400
2. Opioid antagonists for bowel paralysis	Do opioid antagonists reduce time to defaecation and GI symptoms? Potential substudy: study the impact on intestinal absorption	Multicentre RCT	Adult ICU patients with opioid requirement above a minimal dosage	MethylNaltrexone (or other opioid antagonists) vs placebo	Time to the first defaecation COS# GI symptoms* Infections Substudy: absorption	373
3. Diarrhoea management	Does reduction or discontinuation of EN reduce diarrhoea?	RCT (3-armed study)	Patients with severe diarrhoea during EN Severe diarrhoea = requiring interventions (fluids and electrolytes).	1. Continuation of EN 2. Reduction of EN (50%) 3. Trophic EN + supplemental PN (after 3–7 days)	Bristol stool chart GI symptoms* LOS infections	343
4. Prophylaxis vs treatment of upper GI intolerance	Is the prophylactic use of prokinetics superior to therapeutic use?	Multicentre RCT	Adult ICU patients at high risk for gastroparesis (e.g. patients with high doses of opioids, post-GI surgery)	Two study arms, the same drugs (e.g. erythromycin, metoclopramide, alizapride) and dosages, different timing (routine administration or only in confirmed gastroparesis)	COS# safety outcomes Long-term outcomes (prolonged QT, extrapyramidal side effects, colonization with multi-resistant microbes)	335
5. Prophylaxis vs treatment of lower GI intolerance	Does the prophylactic use of motility agents (prokinetics and laxative drugs) reduce time to defaecation and improve feeding tolerance and GI dysfunction based on AGI grading?	Multicentre RCT	Adult consecutive ICU patients with an expected ICU stay of ≥ 3 days?	Two study arms, the same drugs (e.g. macrogol, laxatives) and dosages, different timing (routine administration or only in confirmed constipation/bowel paralysis)	Time to defaecation AGI dynamics COS (clinical outcomes) Infections Diarrhoea Mesenteric ischaemia	323

Diarrhea and paralysis

French group: study on prophylactic application of laxatives

Top 10 continued

Table 3 Top ten study proposals for future research on GI dysfunction (what we need to know) (Continued)

Final rank and acronym	Research questions/aims	Study design	Study population	Indicator/Intervention	Suggested outcome variables	Points
6. IAH-GI + NOMI-AGI	1. Does protocolised monitoring of IAP and management of IAH improve outcome? 2. Is increased IAP associated with GI dysmotility?	1. RCT 2. Observational substudy	MV patients at risk of IAH	Intervention: monitoring and management of IAP based on the protocol (bundle of preventive measures) Control: standard care US in the intervention group	Mesenteric ischaemia Incidence of infections/sepsis Mortality 90 days, LOS, GI symptoms* Observational substudy: correlation between IAP and GI motility as assessed by US	312
7. Indication of post-pyloric feeding	Is post-pyloric feeding superior to PN in case of gastroparesis?	Multicentre RCT	Adult ICU patients with gastroparesis (e.g. GRV > 500 mL with prokinetics)	Post-pyloric feeding vs PN	Infections Mortality GI complications (including non-occlusive bowel ischaemia), meeting nutritional target	290
8. GI and IAP	Which GI symptoms* should trigger IAP measurements? Which IAP values should trigger specific monitoring of GI?	Post hoc analysis of combined databases (prospective observational)	Patients in performed studies	Identification and merging of existing databases	Association of GI symptoms with IAH, mesenteric ischaemia and mortality	274
9. AGI prospective	Does AGI score (AGI I-IV) predict the outcome?	Prospective observational	Consecutive ICU patients being mechanically ventilated for non-elective reason (planned MV after elective surgery excluded)	AGI score documented daily Decisions for diagnostics or treatment taken based on daily assessed GI symptoms* documented daily Preferably similar feeding protocol in all centres	GI symptoms* Pneumonia COS [#] ICU outcome 90-day outcome Long-term patient-centred outcome NOBN GI anastomosis leakage (if relevant)	272
10. PPI and dysbiosis	Does use of PPI vs no PPI alters the intestinal microbiome?	RCT	Mech. ventilated ICU patients in need of EN and without an absolute indication for PPI	PPI vs no PPI	Faecal microbiome pattern Incidence of <i>Clostridium difficile</i> colitis	249

We need people to take a lead for specific task!

- **Enteral Feeding Intolerance (EFI):** to identify the clinical importance of EFI and refine management strategies
- **Core set of daily monitoring of GI function:** compare studies on prevalence and clinical relevance of GI symptoms
- **Core set of outcomes (COS = Core outcome set) for GI (dys)function:** to unify outcomes to conduct meta-analyses
- **Protocol of abdominal ultrasound (US) to assess GI function:** protocolized US to supplement the clinical assessment of GI
- **Descriptive definition of non-occlusive mesenteric ischemia (NOMI):** Consensus definition of NOMI is needed for studies
- **Reference methods** to be used to measure **gastric emptying, absorption of nutrients, and barrier dysfunction** in studies

Action plan WG on GI function

WG meeting in August 2022 (Doodle in June)

- Define priorities within the group
 - Studies (short presentations of study proposals)
 - Consensus processes
- Define responsibilities
 - Ask for ESICM endorsement?
- Please send your thoughts any time!
- WG action plan to be presented at ESICM in Oct