



The two main **goals** of the **Fluid Therapy and Hemodynamic Monitoring Working Group** are:



Promoting continuous training



Promoting clinical research

Moderator: Dr. Ane Abad Thursday, May 11, 2023 7pm – 8.30pm | Sevilla Room 3 + 4

# 1. TRAINING PROJECTS OF THE FLUID THERAPY AND HEMODINAMIC MONITORING WORKING GROUP. PLATAFORM, IFAD, E. UNIVERSITY

#### Dr. Patricia Galán Menéndez

In a wide survey carried out to assess prescription patterns and find out what physicians (1045 participants) know about fluid therapy in the operation room and ICU, it was found that the knowledge degree was below average in 56% of participants, and poor in 9.5%.

In Spain, during Fluid Day –an initiative promoted by the Hemostasis, Transfusion & Fluid Therapy section of SEDAR to assess the management of fluid therapy in our environment,– it was found that hemodynamic monitoring is limited, and it was performed in just 5% of patients during the perioperative period, and 10% in the postoperative period<sup>2</sup>.

### CURRENTLY, THE WORKING GROUP HAS FIVE ACTIVE TRAINING PROJECTS:

### **Edwars Hemodynamic University**

- · Platform offering training tools.
- · In cooperation with the pharma industry.
- · Online tutor support and training advice.
- · Program aimed at young assistant doctors and residents.

### Three update clinical sessions at the SEDAR campus

- · 5 hemodynamic principles by Dr Pinsky (October 2022)
- · From macrohemodynamics to microdynamics (May 2022)
- · Hypotension manifest! (June 2022)

# Fluid Therapy Guideline

· Physiology-based recommendation guideline.

### Fluid News

· First meeting on fluid therapy and postIFAD hemodynamic monitoring (February 2023).

### Training Platform on Fluid Therapy in Surgical Patients

- · From September 2023
- In the SEDAR training space
- · Modules: Basic principles, non-critical surgical patient, hemodynamic monitoring and control, CKD patient, critical patient, cardiac patient, patient with liver damage and patient with multiple trauma.





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# 3. RESEARCH PROJECTS BY THE FLUID THERAPY AND HEMODINAMIC MONITORING WORKING **GROUP. HYT, BIGPACK2, NIMON**

Dr. Paula Fernández Valdes-Bango

Research is a fundamental task in Anesthesiology departments, together with teaching and healthcare.

Between 2001 and 2015, under 20 articles on Anesthesiology per million of inhabitants were published in Spain, whereas in countries such as Austria or the Scandinavian countries, the figure was over 50. Furthermore, the average impact factor of Spanish publications is low<sup>3</sup>.

Nevertheless, in a study showing a post-surgery mortality rate of 4%, it is found that in Spain many patients are recruited for large trials, in spite of the low publication rate<sup>4</sup>.

The most important aspects research should focus on are:



Improving intraoperative quality of care



Reducing complications



**Improving** postoperative results

# New ongoing studies researchers can take part in:

· BigpAK-2: Currently recruiting, open (RapNET ESAIC)

# **Multi-center international RCT**

1302 patients with non-cardiac surgery admitted to the ICU or with high dependency

HYT: Currently recruiting, open (RapNET ESAIC)

# Goal:

Studying the impact of KDIGO measures in patients at high risk of acute kidney damage identified through urinary biomarkers

Multi-center international RCT

958 patients with abdominal major surgery

Goal:

Studying whether the hypotension prediction index (HPI) improves hemodynamic management and lowers the incidence of postoperative kidney failure

· niMON: Currently recruiting, open (SIAARTI)

**Multi-center international RCT** 1204 patients with moderate-risk surgery Goal:

Assessing the impact of intraoperative monitoring pressure in myocardial and kidney injuries

· HeCoMo: Protocol in preparation, pending CEIC in Spain (ESICM)

Multi-center international observational trial 20-25 patients/center high-risk surgery

Assessing the impact of intraoperative hemodynamic monitoring in complications and mortality

# Projects 1



Moderator: Dr. Ane Abad

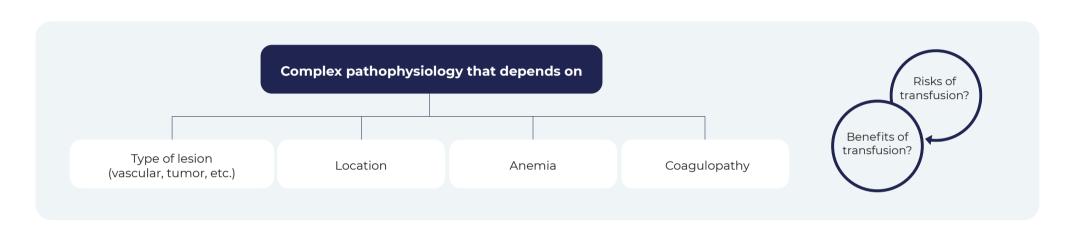
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# 4. TRANSFUSIONAL SURVEY IN NEUROSURGERY. HOMOGENEOUS PRACTICE?

Dra. Paola Hurtado

Control and management of intracranial bleeding is vitally important in neurosurgery. Transfusion may be necessary in the context of neurosurgery.

Currently, there is no evidence-based consensus on how transfusion practice should be handled in neurosurgery.



This is why a **Transfusion survey in neurosurgery** was promoted, with the following goal:

Obtaining information to assess the current status of Patient Blood Management (PBM) in adult patients undergoing scheduled or urgent cranial surgery

It was done through an online questionnaire, among physicians from Anesthesiology and Resuscitation in Spain, between June and October, 2022. Several areas of interest were covered:

- · Pre-anesthetic visit
- · Preoperative assessment of hemostasis
- · Monitoring of hemostasis/coagulation
- · Peri- and post-operative use of drugs and blood products.



Main results

65% Absence of correction protocol of preoperative anemia

20% Assessment of perioperative state

82% < 3 weeks to surgery

Routine blood reserve for all patients is not a cost-effective measure, and it should only be done with high-risk patients<sup>5</sup>.

91% Routi blood reser

76% Acceptable platelet limit 100 000/mcL to scheduled craniotomy

**Transfusion threshold:** 

- < 100 000 in 34%
- · Platelets + algorithm Rotem/TEG in 27%
- < 75 000 in **20**%

78% Verbalization of the chances of bleeding during the routine check-list

Identifying patients at a high risk of bleeding in the pre-operative setting allows the implementation of multidisciplinary measures<sup>6</sup>. 65% Rotem/TEG

19% classic postoperative test with signs of bleeding

Lack of evidence in neurosurgery, but not in other fields of use for TEG.

# Projects 1



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# 7. GUÍA SETS/SEDAR

### Dr. Maria José Colomina

The latest version of the *National Guideline of the Transfusion of Blood Products and Plasma Derivatives* was published by the Spanish Society of Blood Transfusion and Cell Therapy (SETS) in 2015<sup>7</sup>. Therefore, SEDAR, together with SETS, starts the process for the publication of a new guideline with up-to-date information on transfusion practice, to facilitate clinical decision-making to all specialists involved. The goal is to obtain an agile, easily-transportable document that can be published.

### **Systematic Review**

Gathering evidence and recommendations from other already published documents, with a short-term horizon (2016-2022). For that purpose, relevant useful documents will be used:

- Educational modules on clinical use of blood, published by the WHO8
- Transfusion handbook by JPAC<sup>9</sup>
- $\cdot$  Systematic review by the clinical transfusion medicine committee at AABB $^{10}$
- Guidelines from the Birtish society<sup>11</sup>

### Relevant article selection

- Meta-analysis
- Cochrane indications
- RCT
- · Controlled observational studies, mainly prospective with a high N

# Grading of recommendations using GRADE

Assessment of evidence strength and quality

## **Drafting of modules**

- · Perioperative transfusion
- · Massive hemorrhage
- · Transfusion in intensive care
- · Transfusion in special situations
- · Implementation of PBM in the hospital setting

**Publication in 2024** 

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