Target Controlled Infusion (TCI) and Total Intravenous Anesthesia (TIVA)

Introduction
The aim of this Course is to refresh participants on their knowledge and skills related with multimodal Total Intravenous Anesthesia (TIVA), Target Controlled Infusions (TCI). Worldwide known experts in the field will cover the basic applied pharmacology of intravenous anesthetic drugs reviewing the foundations of TCI and new PkPd models for propofol, opioids and dexmedetomidine. In addition, how to do TIVA for special populations will be reviewed. The simulation app TivatrainerX will be used throughout the Course to show several PkPd features of TCI of different IV anesthetic drugs.

Course objectives
- understand pharmacokinetics and pharmacodynamics of IV anesthetic drugs
- apply PkPd to the concept of Target Controlled Infusion (TCI)
- rationale use of TIVA/TCI in special populations of patients
- use of TivatrainerX to simulate different scenarios and TIVA modalities

Basic Organization
Date: 3-5 November 2023
Time: Morning time (10:00 am – 13:00 pm)
Participants: 12 / session
Course outline

Day 1
10:00 - 10:45 Doing multimodal TIVA: advantages and general principles - Francisco Lobo
10:45 - 11:15 Pharmacokinetics made simple - Anthony Absalom
11:15 - 11:45 Pharmacodynamics: effect-site and Ke0s for dummies - Frank Engbers
11:45 - 12:15 Allometric Scaling - Hernan Boveri
12:15 - 13:00 Discussion

Day 2
10:00 - 10:30 Target Controlled Infusions: foundations and clinical application - Gavin Kenny
10:30 - 11:15 New models for propofol, opioids and dexmedetomidine - Michele Introna
11:15 - 12:00 Common mistakes when doing TIVA - Siarrhei Kastsiuchenka
12:00 - 13:00 Discussion

Day 3
10:00 - 10:30 TIVA TCI in elderly - Andreia Costa
10:30 - 11:00 TIVA TCI in pediatrics - Patrício González Pizarro
11:00 - 11:30 TIVA TCI in the very obese - Alex Ruzhyla
11:30 - 12:00 Playing with TivatrainerX - Francisco Lobo
12:00 - 13:00 Discussion

Conclusion
This workshop will provide an advanced education on the pharmacology and pharmacokinetic of the sedative agents used for sedation and anesthesia. The participants to this course will be involved in simulations on administration of different sedative and analgesic agents according to the latest models applied in the operating rooms and in ICU.