

Analgo-sedation during transcatheter aortic valve implantation: Review and protocol at University Hospital Centre Split

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Background and aims: Periprocedural analgo-sedation during transcatheter aortic valve replacement (TAVR) has evolved significantly over the past decade. First procedures were done in general anaesthesia under the supervision of an anesthesiologist, while recent trends suggest periprocedural analgo-sedation performed by interventional cardiologists/TAVR operators¹. This method often includes different medications and protocols, depending on the site-specific preferences. Here we present a review of propofol effects along with the protocol utilized at the Catheterization Laboratory (Cath Lab) at the University Hospital Centre Split.

Review and protocol presentation: Our primary used anaesthetic medication is propofol due to its beneficial pharmacologic properties including short action and titratable effects leading to effective sedation with amnesia, well-being and anti-emesis². In addition, it shows a good correlation with bispectral index (BIS) allowing for easier titration during longer procedures. However, due to its insufficient analgesia, we utilize high dose-volumes of local anaesthetic and optionally a systemic bolus-doses of fentanyl in selected individuals (**Figure 1**). To this date, this protocol provided a safe, effective and reproducible periprocedural analgo-sedation during TAVR. Importantly, this protocol was successfully performed by the Cath Lab Team, without the need for additional healthcare resources or staff allocation³. To avoid large radiation to the staff, we have also adjusted the equipment (use of long intravenous lines; rotation of X-ray tube; monitor orientation) and modified the staff position (**Figure 2**).

Conclusions: In conclusion, there are different regimens for periprocedural analgo-sedation. Periprocedural analgo-sedation with propofol in the bolus-continuous infusion scheme proved to be safe, effective and reproducible during TAVR. Interventional cardiologists and specialized Cath Lab team are trained to provide all aspects of management and care to these patients.

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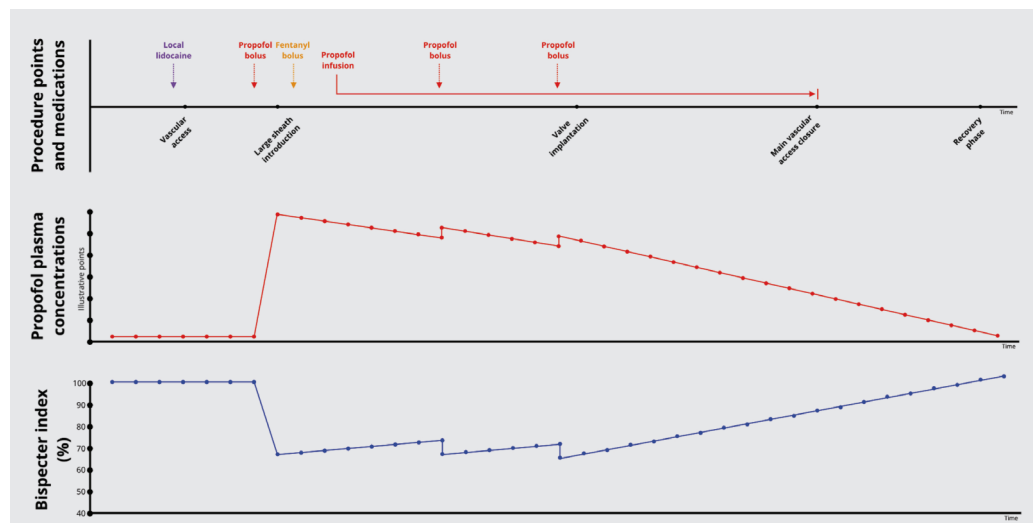


FIGURE 1. Illustrative overview of propofol plasma concentrations and bispectral index in relation to procedural phases (Split protocol).

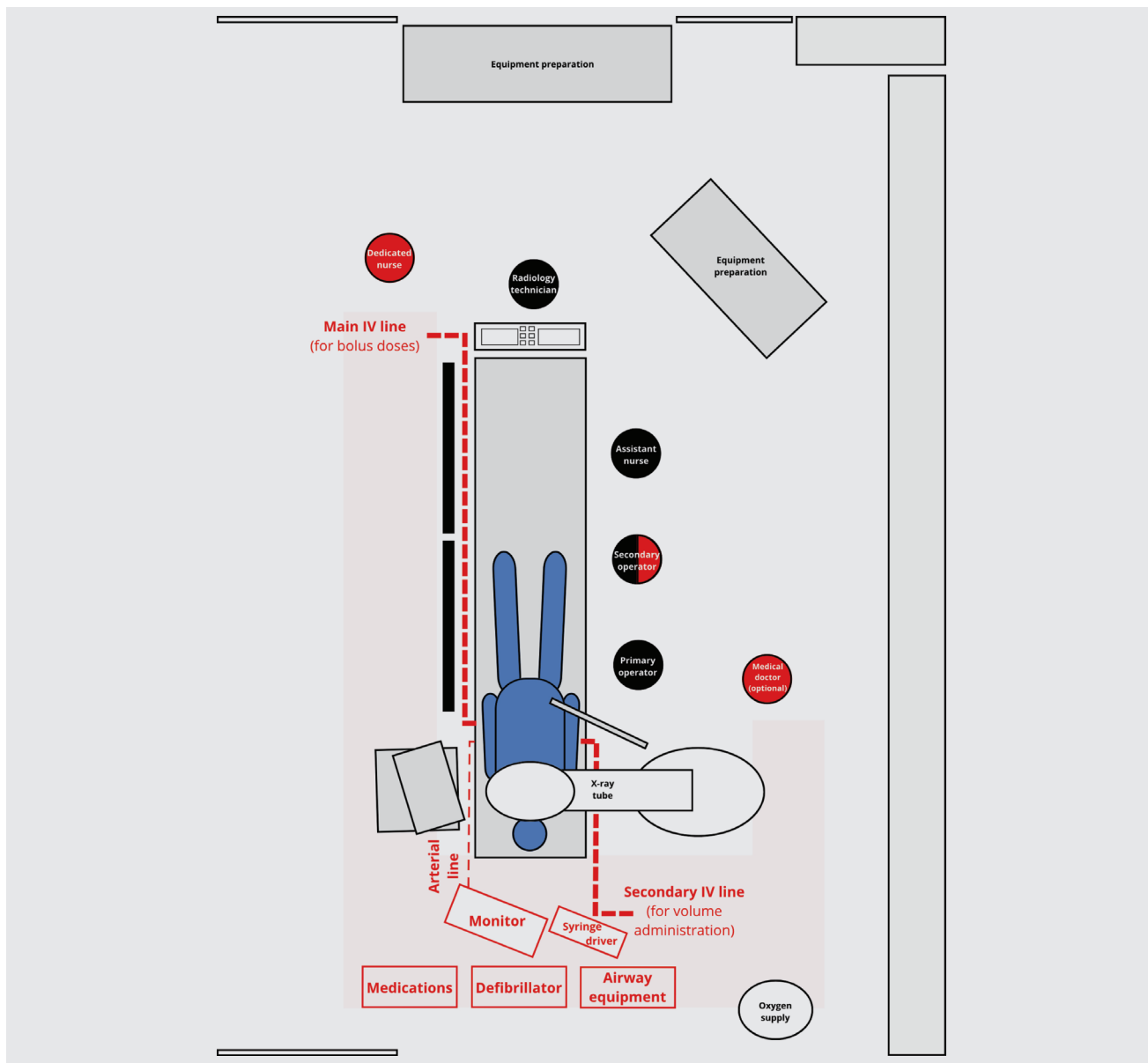


FIGURE 2. Schematic layout of the equipment/staff in the Cath Lab with regard to analgo-sedation.

LITERATURE

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