

## CO 6 - GENERAL ANESTHESIA FOR CESAREAN DELIVERY – A NATIONAL SURVEY

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**Background:** Major advances in obstetric anesthesia have resulted in improved maternal outcomes. Regional anesthesia, with its high safety profile, is the most common method of providing anesthesia to the parturient. However, in a small percentage of women, general anesthesia (GA) is the only option. The hypnotic drugs available for anesthetic induction belong to several pharmacological classes and their use varies according to some factors, such as their availability, the woman's clinical history and the anesthesiologist's experience. Therefore, it is essential to consider the physiological changes of pregnancy and administer a safe GA that minimizes risks, such as failed intubation, aspiration and awareness. We carried out a national survey to identify the strategies used for induction and maintenance of GA for cesarean section (CS).

**Methods:** An online questionnaire was sent to the national hospitals with more than 2400 annual deliveries. 504 anesthesiologists and 212 residents were eligible to answer. It was available from July to October 2021.

**Results:** A total of 104 responses were obtained (33% from anesthesiology residents). Regarding the induction of GA, 62% of respondents use propofol and rocuronium as first option, while thiopental and succinylcholine are still an option for 16%. Regarding anesthesia maintenance most of the respondents (53%) use sevoflurane and nitrous oxide, 27% only sevoflurane and only 17% use propofol. The majority (97%) use anesthesia depth monitors and 87% also assess the degree of neuromuscular function.

**Discussion:** Traditionally, teaching of obstetric GA for CS has used thiopental, nitrous oxide, a volatile agent for maintenance and opioids following delivery of the baby. While thiopental is still the first option in some countries, in Portugal we assist a paradigm shift with propofol being used in most cases. The fact that propofol is nowadays widely used in non-obstetric surgery and the evidence that does not cause more adverse effects on neonate than thiopental makes it a more suitable option. Sevoflurane in association with nitrous oxide are still widely used as maintenance agents to reduce the risk of awareness and to permit lower concentrations of halogenated anesthetics (and hence less uterine relaxation). Depth of anesthesia and neuromuscular block monitors should be available in all places where obstetric anesthesia is practiced in order to avoid awareness and residual neuromuscular block, respectively.

**Conclusion:** Our survey suggests that while thiopental was traditionally used as the induction agent of choice, a reasonable number of anesthesiologists support the change to propofol. Also, the use of anesthetic depth monitoring and neuromuscular blockade are increasingly common. Considering that in the last 30 years, there has been a large reduction in the proportion of CS performed under GA, it is essential that all obstetric anesthesiologists use the anesthetic techniques with which they are most familiar.



