

Study the Conflict about Using Propofol Safely by Non- anesthesia Providers?

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Propofol (Diprivan) was first prepared in early 1970s in the UK by Imperial Chemical Industries as ICI 35868 [1,2].

Clinical trials followed in 1977, first by Kay and Rolly, using a form soluble in cremophor EL confirmed the fact of propofol as an anesthetic to induce anesthesia. The emulsified form was re- introduced in 1986 by ICI (now AstraZeneca); named Diprivan (abbreviated form of di-isopropyl IV anesthetic) [3]. Then used as sedative-hypnotic in U.S.A in 1989.

Propofol is an ideal agent for relatively short outpatient procedures such as upper endoscopy and colonoscopy [3,4].

Propofol is best agent of making patient asleep (sedation), predictable loss of memory and decreased tension; stress (anxiolysis), while providing for a rapid recovery with minimal side effects. Propofol has recently been approved by the Food and Drug Administration for use as a sedative during local and regional anesthesia. Preliminary studies [1-3] with low-dose propofol infusions suggest that it possesses many of these preferred functions. Shafer et al. [5] suggested a good correlation between the blood levels of propofol. It is Non barbiturate short acting intravenous anesthetic agent, alkyl phenol [3].

Structure: 2,6 di-isopropylphenol, the color of solution is Milky white and is available in 1% and 2% concentration.

The form also contains soybean oil, Egg, Lecithin & glycerol. So injection is painful. Propofol should not be assorted with other medications prior to administration. Exact mechanism of action of propofol is still not clear; it is Ultra short-acting anesthetic.

-Research study is a prospective, randomized clinical trial** case study.

Assessment of data on using propofol by non-anesthetists is complex due to many factors, mostly lack of strong evidenced studies that support the conclusions made. In addition, a direct comparison among the different specialties cannot be made. Procedural needs, patient clinical features, and defined endpoints are totally different for each specialty. Gastrointestinal tract endoscopy has evolved from minor procedures such as colonoscopy and diagnostic EGD that require only light sedation, to more invasive and complex ones as ERCP and EUS [6-9].

The traditional approach was to use a benzodiazepine with or without a narcotic and these is the combination against which propofol-based sedation protocols with or without adjuvants is compared. Similarly, emergency medical service physicians always need to make patient to be asleep with no pain to perform minor, painful procedures as the reduction of a dislocated joint or closed fracture. Starting radiologic procedures for pediatrics led to the development of pediatric sedation units (PSUs). The teams concerned with sedation are sometimes supervised at a distance by pediatric intensive caregivers or emergency medical service physicians [10,11].

As these cases sometimes take long time of sedation, propofol is one of several options used. Finally, dentists started to do painful procedures either under local infiltration or blocking peripheral nerves supplying teeth and mouth. However, patients may need sedation with the procedure, especially with blocking the nerve supply or giving local anesthetic. All new studies recommend sedation to be given during the whole procedure with maintained good response [12-14]. Using Propofol by non-anesthetists started to increase because of more demand by both patients and physicians and more procedures being done out of the operation rooms [15-18].

Conclusion

Using propofol by non-anesthetists may not stop. Generally, propofol can be used safely than other well known drugs.

However, teaching non-anesthetists who are giving care for the patient is needed to manage patient without any harm. Considering complications for non-fasted patients and providing good practice to avoid and rescue from deep levels of sedation are essential. Monitoring must be standard and adequate. The medical branches that use sedation should come together on fixed definitions of level of sedation. The sedation related adverse events in patients administered propofol by non-anesthesiologists are extremely low. We cannot compare such outcomes with anesthesia providers, as similar studies are not available. Anesthetists need to be ready to clarify the use of these strong drugs by non-anesthetists in a more controlled behavior [14]. The American society of anesthesiologists (ASA) has already settled all needed documents to explain any coming events clearly.

References

1. Smith I, Monk TG, White PF, Ding Y (1994) Propofol infusion during regional anesthesia: sedative, amnestic, and anxiolytic properties. *Anesth Analg* 79: 313-319.
2. Tan G, Irwin MG (2010) Recent advances in using propofol by non-anesthesiologists. *F1000 Med Rep* 2: 79.
3. Coté GA (2011) The debate for nonanesthesiologist-administered propofol sedation in endoscopy rages on: who will be the "King of Prop?". *Gastrointest Endosc* 73: 773-776.
4. Vargo JJ, Cohen LB, Rex DK, Kwo PY (2009) Position statement: nonanesthesiologist administration of propofol for GI endoscopy. *GIE* 70: 1053-1059.
5. McCallum RH, Beverly KP Evidence based Ch. 47. Mackenzie N, Grant IS (1987) Propofol for intravenous sedation. *Anaesthesia* 42: 3-6.
6. Smith I, White PF, Nathanson M, Gouldson R (1994) Propofol. An update on its clinical use. *Anesthesiology* 81: 1005-1043.
7. Raoof AA, van Obbergh LJ, de Ville de Goyet J, Verbeeck RK (1996) Extrahepatic glucuronidation of propofol in man: possible contribution of gut wall and kidney. *Eur J Clin Pharmacol* 50: 91-96.
8. Ito Y, Izumi H, Sato M, Karita K, Iwatsuki N (1998) Suppression of parasympathetic reflex vasodilatation in the lower lip of the cat by isoflurane, propofol, ketamine and pentobarbital: implications for mechanisms underlying the production of anaesthesia. *Br J Anaesth* 81: 563-568.
9. Smith I, Monk TG, White PF, Ding Y (1994) Propofol infusion during regional anesthesia: sedative, amnestic, and anxiolytic properties. *Anesth Analg* 79: 313-319.
10. Swanson ER, Seaberg DC, Mathias S (1996) The use of propofol for sedation in the emergency department. *Acad Emerg Med* 3: 234-238.
11. Bosslet GT, Devito ML, Lahm T, Sheski FD, Mathur PN (2010) Nurse-administered propofol sedation: feasibility and safety in bronchoscopy. *Respiration* 79: 315-321.
12. Khan HA, Umar M, Tul-Bushra H, Nisar G, Bilal M, et al. (2014) Safety of non-anaesthesiologist-administered propofol sedation in ERCP. *Arab J Gastroenterol* 15: 32-35.
13. Zacny JP, Lichtor JL, Coalson DW, Finn RS, Uitvlugt AM, et al. (1992) Subjective and psychomotor effects of subanesthetic doses of propofol in healthy volunteers. *Anesthesiology* 76: 696-702.
14. Coté GA, Hovis RM, Ansstas MA, Waldbaum L, Azar RR, et al. (2010) Incidence of sedation-related complications with propofol use during advanced endoscopic procedures. *Clin Gastroenterol Hepatol* 8: 137-142.
15. Fanti L, Agostoni M, Arcidiacono PG, Albertin A, Strini G, et al. (2007) Target-controlled infusion during monitored anesthesia care in patients undergoing EUS: propofol alone versus midazolam plus propofol. A prospective double-blind randomised controlled trial. *Dig Liver Dis* 39: 81-86.
16. Fanti L, Agostoni M, Casati A, Guslandi M, Giollo P, et al. (2004) Target-controlled propofol infusion during monitored anesthesia in patients undergoing ERCP. *Gastrointest Endosc* 60: 361-366.
17. Gouda B, Gouda G, Borle A, Singh A, Sinha A, et al. (2017) Safety of non-anesthesia provider administered propofol sedation in non-advanced gastrointestinal endoscopic procedures: A meta-analysis. *Saudi J Gastroenterol* 23: 133-143.
18. Feng AY, Kaye AD, Kaye RJ, Belani K, Urman RD (2017) Novel propofol derivatives and implications for anesthesia practice. *J Anaesthesiol Clin Pharmacol* 33: 9-15.