

1-1-2019

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TÛTÛNCÛ, AYŞE ÇİĞDEM (2019) "About "Efficacy of bispectral index monitoring for prevention of anesthetic awareness and complications during oocyte pick-up procedure", *Turkish Journal of Medical Sciences*: Vol. 49: No. 1, Article 64. <https://doi.org/10.3906/sag-1711-201>
Available at: <https://journals.tubitak.gov.tr/medical/vol49/iss1/64>

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About “Efficacy of bispectral index monitoring for prevention of anesthetic awareness and complications during oocyte pick-up procedure”

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Received: 28.11.2017 • Accepted/Published Online: 21.09.2018 • Final Version: 11.02.2019

To the Editor,

I read the article “Efficacy of bispectral index monitoring for prevention of anesthetic awareness and complications during oocyte pick-up procedure” written by Urfalıoğlu et al. (1) in the *Turkish Journal of Medical Sciences* with great interest. The authors have applied sedation with propofol infusion and sevoflurane during the oocyte pick-up (OPU) procedure and compared the efficacy of bispectral index (BIS) monitoring in preventing awareness during anesthesia. BIS level, amount of hypnotic consumption, and recovery period (beginning when patients woke after the procedure until the modified Aldrete score was ≥ 8 in the recovery unit) have been used as parameters of the study. The scoring system used during the recovery period is the Aldrete scoring system which is the most commonly used scoring system in the recovery units during the postoperative period after anesthesia procedures and evaluates respiration, circulation, and oxygenation besides the consciousness of the patient. If the primary objective of the study is considered to compare awareness possibility during the procedure, and the amount of hypnotic administered by using BIS monitoring or in the control group during propofol and sevoflurane sedation, we think that the use of scoring systems, such as Ramsay Sedation Scale, the sedation Visual Analog Scale, or the Observer’s Assessment of Alertness/Sedation Scale, that are recommended to be used in similar procedures, instead of the recovery scoring system, will be more suitable for the purpose of the study and will allow to perform goal-

directed evaluations both during the procedure and in the recovery period (2,3).

Moreover, it was indicated that 10–20 mg of propofol intravenous (IV) bolus was additionally used in the control group in the cases of conventional reactional responses after using the induction dose of propofol (2 mg/kg) in both groups. It was not indicated how this dose was determined (such as weight, body surface area), and again a BIS value of 60 and above was accepted as reference in the BIS group and the same dose has been administered; we think that indicating the additional dose of propofol given in table 1 in the form of drug dose/determined parameter is important as an indicator in terms of the hypnotic consumption.

Furthermore, the article did not indicate how many patients required an additional propofol dose and the number of patients who required multiple (repetitive) additional doses. We also think that comparing the number of patients who required additional hypnotic will be an important indicator in determining the efficacy of BIS.

We also would like to add that monitoring the end-tidal anesthetic gas concentrations in the control and BIS groups, and the comparison of these values for both groups, especially the changes in the end tidal gas concentration in patients requiring additional dose, will provide important information to the anesthesiologist in monitoring the sedation depth and awareness during the procedure (4).

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Reply to Letter to the Editor

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To the Editor,

We would like to thank the author for her valuable comments on our study. Oocyte pick-up (OPU) procedure, which is conducted during in-vitro fertilization (IVF) treatment and described as the collecting of oocytes following ovary stimulation, is a short-duration procedure where daily anesthesia is often applied. An insufficient level of anesthesia and occurrence of pain, which are possible outcomes in relation with the dosages of anesthetic agents used during an anesthesia application, may cause unwanted results by giving rise to intraoperative patient mobility as well as anesthetic alertness (1).

As is known, in our study and intraoperatively during the procedure; 10–20 mg IV push of additional propofol was applied to patients when BIS score was at and above 60 in bispectral index (BIS) group patients, and when parameters such as blood pressure and pulse having sudden onset of increase, spontaneous respiration gaining strength, extremities twitching, etc. occurred in the control group patients. In this application, in small dosages that authors point out as a cause of the inability to calculate the amount of anesthetic doses in minute detail, unspecified according to the body weight of the patient as in induction, the aim was to prevent possible oocyte-drug interactions that high dosages of medication might bring about, as well as relying on the short duration of the procedure, as it

was stated among the limitations of our study (2–4). The number of patients in the control and BIS groups with whom extremity movements occurred intraoperatively was stated in our study, along with their mean additional propofol consumptions. For this reason, the number of patients to whom additional dosages were applied, and the number of repetitive applications were not separately given, as the authors find appropriate to be stated. The application and tracing of end-tidal CO₂ as an important parameter of monitorization was carried out routinely especially in terms of ventilation sufficiency, and due to possible faulty measurement values that might arise from practical difficulties with the face mask application, the values were not stated in order to avoid misinterpretations.

As stated by the author as well, modified Aldrete scoring system which was widely preferred in compilation units for the postoperative period was used in our study (5). Also, as stated, instead of the said scoring system, it is possible to use the Ramsay sedation scale, visual analogue scale, and Observer's Assessment of Alertness/Sedation Scale for the same purpose. This option was chosen fully due to our preference, aiming to perform a total evaluation detecting not only the states of sedation or levels of the pain of the patients as with the other scoring systems, but also their levels of respiration, circulation, and activity as well.

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