

Total Intravenous Anesthesia (TIVA) in an Infant with Werdnig-Hoffmann Disease. Case Report

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I read the article "Total Intravenous Anesthesia (TIA) in a Patient with Werdnig-Hoffman Disease. Case Report", of Resende et al.¹, published in this journal with great interest. First, I would like to congratulate the authors for their initiative. However, two points called my attention. The first one refers to the definition of infant, which comprehends the period from 1 to 12 months of age. From 12 months on, it defines preschooler or just child. In the article, the author states the age of the patient as 1 year old, but he does not specify months or days. Probably, this patient has more than 12 months of age and, therefore, calling him an infant is inappropriate. The second and most important point refers to the technique used and to the title of the article. In the title, the expression "total intravenous anesthesia" was used, but in the report it was stated that besides propofol and remifentanyl anesthesia was maintained with oxygen and N₂O. If a gas with anesthetic properties (N₂O) was used, it would not be correct to call this technique total intravenous anesthesia. Besides, he mentioned the article of Crawford et al.², who defined the doses of remifentanyl for intubation in children. This study was undertaken using 100% oxygen, since the authors probably understand that the addition of gases with anesthetic properties would interfere with the results obtained.

REPLY

Dear Editor:

In response to the letter sent by Dr. Otávio Luís Esteves. It is very important to receive criticism because it is a sign

that the text was read. Indeed, other critics could be cited as the one that refers to the system without CO₂ absorber (Baraka), or the dose of cephalosporin used.

Regarding the points raised by a colleague from Campinas:

A) The Aurélio dictionary defines *lactente* as a breastfeeding child. As determined by the World Health organization (WHO), the Ministry of Health, and the Brazilian Society of Pediatrics, breastfeeding should be promoted up to 2 years of age¹.

Currently, the period up to 24 months of age is acceptable for the term lactate. Therefore, even an age over 1 year does not cause difficulty for the context. In English, the word 'infant' already reflects the development of children up to 24 months. The child of the case report was exactly 1 year and 20 days old when the anesthetic-surgical procedure was performed.

B) The statement claiming that total intravenous anesthesia (TIVA) is a technique exclusively for induction and maintenance with intravenous drugs is correct, thus avoiding the use of volatile anesthetics and nitrous oxide. In our report, nitrous oxide was actually used as an adjunct to analgesia without interfering with the safe and rapid awakening from anesthesia, and diluting the flow of inspired oxygen.

The use of nitrous oxide associated with propofol and remifentanyl in abdominal surgery has been mentioned in literature in order to show variation in remifentanyl concentration that inhibits somatic response². Latest research done in India on the use of nitrous oxide in anesthesia revealed that nitrous oxide was used by 59.44% of respondents to supplement total intravenous anesthesia³. However, in *strict sense*, the idea of supplementation prevents recognition of the technique as being given only with intravenous agents, therefore, the title of our work was misused.

Sincerely,

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02. Crawford MW, Hayes J, Tan JM – Dose-response of remifentanyl for tracheal intubation in infants. Anesth Analg, 2005;100:1599-1604.

Resumen: Esteves LO – Anestesia Venosa Total (AVT) en Lactante con Enfermedad de Werdnig-Hoffmann. Relato de Caso. Rev Bras Anesthesiol 2010; 60:2:170-175.

Fue con un gran interés que leí el artículo "Anestesia Venosa Total (AVT) en Lactante con Enfermedad de Werdnig-Hoffmann. Relato de Caso", de Resende y col. ¹, publicado en esta revista. Y de hecho quiero, en primer lugar, felicitar a los autores por la iniciativa. Sin embargo, dos puntos me llamaron la atención. El primero, se refiere a la definición de lactante, la cual abarca el período de 1 a 12 meses de edad. A partir de los 12 meses, se define como preescolar o apenas como niño. En el artículo, el autor coloca la edad del paciente como de 1 año, pero no especifica meses o días. Tal vez, ese paciente tenga más de 12 meses y entonces la definición de lactante sería inadecuada. El segundo y el más importante de mis cuestionamientos, versa sobre la técnica usada y sobre el título del artículo. En el título, se usó la expresión "anestesia venosa total", pero en el relato se dijo que, además del propofol y del remifentanyl, la anestesia se mantuvo con oxígeno y N₂O. Si fue usado un gas con propiedades anestésicas (N₂O), no sería correcto clasificar esa técnica como venosa total. Además, él cita el artículo de Crawford y col. ², que definió dosis de remifentanyl para la intubación en niños. Ese estudio fue realizado utilizando la oxigenación en la concentración de 100%, porque los autores probablemente entienden que la adición de los gases con propiedades anestésicas interferiría en los resultados obtenidos.