

62. 0.5% CHLOROPROCAINE FOR INTRAVENOUS REGIONAL ANESTHESIA (IVRA). 10 YEARS' EXPERIENCE IN SWITZERLAND WITH OVER 100,000 PATIENTS.

Palas, T. Dept of Anesthesia, Linde Hospital, 2503 Biel, Switzerland

Introduction: Chloroprocaine (cp) has a fast onset, lowest toxicity of all local anesthetic drugs, and is also rapidly metabolized by plasma pseudocholinesterase. Because of the high therapeutic index cp should be ideal for intravenous regional anesthesia (IVRA). Due to reports of postoperative thrombophlebitis with the use of cp for IVRA (1), FDA removed the product from the list of intravenously injectable local anesthetics. However, at the time of these findings cp was only available with methylparabene as a preservative. Sodiumbisulfite was used as an antioxydant. Since 1990 a preservative-and antioxydant free 0.5% cp solution is available in Switzerland(Sintetica, 6850 Mendrisio, Switzerland).

Methods: 40ml of the plain 0.5% solution is recommended for an IVRA of the upper limb, 60ml for the lower extremity. Exsanguination is always used. The local anesthetic is slowly (20ml/minute) injected through a small bore peripheral cannula. A double-cuff pneumatic tourniquet is not mandatory. The tourniquet pressure is held at least 150mmHg above the systolic blood pressure. At the end of the surgical procedure the deflation of the cuff is instanteneous. The minimum tourniquet time is considered to be 10 minutes prior to deflation.

Results: Since 1990 more than 240,000 0.5% 20ml cp ampoules have been sold in Switzerland. In 1990 five institutions started using this product for IVRA. In 1999 there were already 111. As of today there have been no reports on adverse reactions like allergies, CNS reactions or thrombophlebitis. An earlier Swiss multicentric study with 15 hospitals using the 0.5% cp solution confirmed the positive findings of this product (2).

Discussion: 0.5% chloroprocaine has also been compared to 0.5% lidocaine (3). The results proved 0.5% cp to be more advantageous. This plain, and additive free local anesthetic drug for IVRA is a registered product in Switzerland (IVRACAIN), and its use and popularity is annually increasing. It is a very safe drug for IVRA and it seems to be free of side effects. 0.5% cp may fullfill the acquirements of an ideal drug for intravenous regional anesthesia.

1. Dickler DJ et al., *Intravenous Regional Anesthesia with Chloroprocaine. Anesthesiology* 1965; 26:244

2. Palas TAR., *Clinical Assessment of a Plain Preservative Free 0.5% Chloroprocaine Soution for IVRA. A Swiss Multicentric Study. Acta Anaesthesiologica Helvetica* 1994; 2: 13-14

3. Palas TAR., *0.5% Chloroprocaine vs. 0.5% Lidocaine for Intravenous Regional Anesthesia (IVRA) of the Lower Extremity. Regional Anesthesia Suppl.* 1993; Vol 18