Abstract

【Objective】 We reviewed the literature on analgesic methods for peripheral venipuncture in adults to examine the usefulness of EMLA®.

【Methods】 Literature was retrieved from the PubMed, EMBASE, Cochrane Library, and ICHUSHI databases. The search strategy included articles concerning analgesia for peripheral venipuncture in which pain was evaluated by scale or score. For EMLA®, we selected only placebo-controlled studies that used VAS or NRS to evaluate pain.

【Results】The search yielded 2516 articles. After excluding 708 duplicates, the full text of 222 articles screened by title and abstract were assessed. 88 articles were extracted. Among these, 12 articles compared the analgesic effect of EMLA® and control.

The most common analgesic method was patch application, reported in 45 of 88 articles. Analgesia by injection needle was used in 17 articles, and nonpharmacological analgesia in 22 articles.

EMLA® was the most frequently used topical application, with 23 articles. 9 out of 12 articles showed significant differences in VAS or NRS value between EMLA® and control, indicating analgesic effect of EMLA®. Side effects were described in 9 of 12 articles. 8 mentioned skin symptoms, and 1 mentioned paresthesia, though both were minor. Five articles described puncture difficulty level, with two indicating no significant difference in difficulty between EMLA® and control.

Vasovagal reaction and anxiety were described in one article each. Patient testimonials were included in two articles.

【Discussion・Conclusion】 For analgesia of venipuncture pain in adults, the use of EMLA® patch was the most studied. EMLA® is effective in adults, and application time of 60 minutes is necessary to achieve a definite analgesic effect. There were no serious adverse reactions associated with the use of EMLA®. Puncture difficulty with EMLA® use may be affected by puncture technique and the anatomical nature of the puncture site. We believe that EMLA® can help prevent vasovagal reflex. Noninvasive and effective analgesia is desired. We believe studying effective analgesic measures from the perspective of peri-anesthesia nursing can help alleviate venipuncture pain across disciplines.