

Letter to the editor

The incidence of “coring” during aspiration of propofol from a 50-ml vial

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To the editor: “Coring” means scooping fragments of rubber into a syringe from the rubber cap of a vial. These fragments may cause rubber emboli in patients. Anesthesiologists often use 50-ml propofol vials for intravenous anesthesia. In Japan a number of coring incidents associated with the use of 50-ml propofol vials have been reported [1,2]. In our hospital there have been several successive occurrences of coring in a comparatively short period due to the use of propofol vials. Our hospital nurses usually draw propofol into a syringe from a vial using an 18G injection needle (JMS, Hiroshima, Japan), and they have not been trained in advanced puncture techniques [1,2], which might decrease the incidence of coring. Therefore I examined the incidence of coring during the use of 100 propofol vials by carefully observing the used syringes, both at the time of aspiration and after administration. Fragments of rubber produced by coring were present in 18% of the syringes (18 of 100 vials). Most of the rubber fragments were easily detected when propofol was being aspirated. In one case, however, a rubber fragment was mistaken for an air bubble at the time of aspiration, and the rubber fragment was recognizable only by checking the syringe carefully after propofol administration (Fig. 1). The unexpectedly high incidence of coring in our hospital was surprising. If the advanced needle-puncture techniques were not adopted, coring would occur at such a high frequency as my result shows. I intend to examine the incidence of coring in our hospital again after encouraging our nurses to use the advanced needle-puncture techniques. Although improvements in needles and advanced puncture technique will help to decrease the incidence of coring, it will be difficult to eliminate it completely unless



Fig. 1. Rubber fragment and air bubble in the propofol syringe. A rubber fragment that is close to the piston of a syringe is potentially mistaken for an air bubble. (1) Air bubble, (2) rubber fragment

prefilled syringes are commercially available in Japan. Meanwhile, I would rather suggest that we should use 20-ml propofol ampules.

References

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