

Title: Case Series in three cosmetic surgery patients via a Hand-held Anesthesia Device (VapoJect™) in Japan

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Introduction: Anesthesia machines in ORs are often heavy and expensive. This limits the use of volatile anesthetics in the poorer countries, remote areas, and outpatient clinics. A new hand-held anesthesia device has been developed in Japan to meet this need.

Materials and Methods: Three healthy female patients underwent cosmetic surgery with anesthesia from this hand-held anesthesia device. Age, height, and weight were recorded. 5-7 cc of Sevoflurane was used in all cases to induce sleep followed by local anesthesia. One case was maintained using sevoflurane for the entire operation. Sevoflurane mean alveolar concentration (MAC) was monitored via a VeoMultiGas Monitor (Phasein, Sweden) and a desktop recorder software, Cam Studio (eHelp Corporation, United States of America). Anesthesia time and surgery time were recorded. Visual analog scale was used to assess pain/distress post-operation. Comfort with regard to the hand-held anesthesia was also assessed after the operation.

Results: Mean age, height, and weight were 38.7years (SD=9.1), 153.3cm (SD=10.7), and 50kg (SD=7) respectively. There were no emergencies during these cases and no use of the IV lines. Patients induced but not maintained on sevoflurane woke during the operation. They were alert enough to give feedback about implant comfort. The patient maintained on sevoflurane did not wake during the operation. No patient reported any discomfort from use of the Hand-held anesthesia device. Patients were not opposed to having the device used in future operations.

Discussion: A physician can safely use this hand-held anesthesia device for surgical operations in healthy patients.

FINANCIAL DISCLOSURE or CONFLICT OF INTEREST Dr. Naoyuki Ishikita is named in the patent for the VapoJect™ (Anesthetic inhalation aid device and attachment used for the same) US 9,072,859 B2, EP2589403 A4