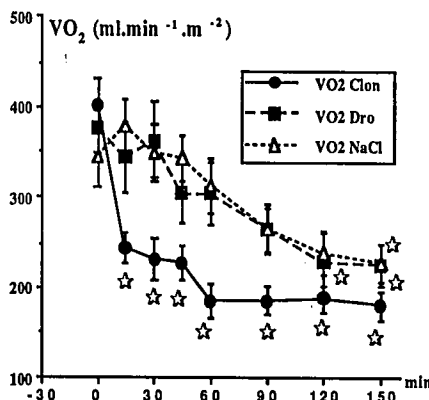


**TITLE:** EFFECT OF CLONIDINE ON POSTOPERATIVE OXYGEN CONSUMPTION IN HUMANS: A DOUBLE BLIND STUDY.  
**AUTHORS:** G. Goldfarb, M.D., E.T. Ang, M.D., B. Debaene, M.D., S. Chhim, M.D., P. Jolis, M.D.  
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It has been reported that clonidine was efficient in suppressing postoperative shivering in humans (1,2). However in these studies, postoperative oxygen consumption (VO<sub>2</sub>) was not measured. The purpose of the present study was to assess the effect of an intravenous bolus of clonidine on postoperative VO<sub>2</sub>. 30 patients (ASA I-II) without cardiovascular disease were included in this study after ethical approval and informed consent. After general anesthesia and extubation, in recovery room, they were randomly divided in three groups; in group A (n=10), patients received clonidine, 150 µg IV, while they received either droperidol, 5 mg IV in group B (n=10) or chloride saline, 5 ml IV in group C (n=10). The drugs were administered in a double blind fashion when postoperative shivering appeared. The following parameters were studied over a 150 min period, before (T<sub>0</sub>) and after IV injection (T<sub>15</sub> to T<sub>150</sub>): mean arterial pressure (MAP), heart rate (HR), continuous pulse oximetry (SaO<sub>2</sub>), rectal temperature (T<sup>o</sup>) and VO<sub>2</sub> with an Engström Metabolic Computer (Engström™, Stockholm, Sweden). All patients were breathing spontaneously *via* an anesthetic face mask (FiO<sub>2</sub>: 40%). Statistics were done with an analysis of variance and a Scheffe F-test. At T<sub>0</sub> there were no differences among the 3 groups. All patients were hypothermic (34.1 ± .1 °C). After injection of clonidine, an

immediate decrease in VO<sub>2</sub> occurred in group A, while it occurred at T<sub>120</sub> in group B and at T<sub>150</sub> in group C (Fig 1). Time course of T<sup>o</sup> was similar among groups; T<sup>o</sup> was above 36°C at T<sub>150</sub> in all patients. No adverse effects on PAM, HR and SaO<sub>2</sub> were seen in any group. In conclusion, clonidine, 150 µg IV, reduces postoperative VO<sub>2</sub> without compromising warming and hemodynamics.

- References:**  
 1- ANESTHESIOLOGY 71: A650, 1989  
 2- ANESTHESIOLOGY 67: 11-19, 1987



☆: different from T<sub>0</sub> value (P<0.01).

**A318**

**TITLE:** COMPARISON OF INTRAOPERATIVE COURSE AND RECOVERY FOLLOWING ANESTHESIA WITH ETOMIDATE OR PROPOFOL IN PATIENTS OVER 80 YEARS  
**AUTHORS:** F.Servin,MD, R. Pommereau, MD, C. Rowan, MD, M. Nimier MD, J.M. Desmonts, MD.  
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Etomidate (E) and propofol (P) both present some theoretical advantages for anesthesia of elderly patients, such as a good hemodynamic stability for the former and the speed of recovery for the latter. This randomized study was designed to investigate intraoperative course and recovery in patients over 80 years when E or P was used as the main anesthetic agent.

17 ASA class 2 patients aged 80 to 89 years, proposed for elective abdominal surgery were allocated into 2 groups after giving informed consent to receive either E or P as the main agent to induce (bolus) and maintain (infusion) anesthesia. The patients were premedicated with hydroxyzine, 100mg, N<sub>2</sub>O, alfentanil and vecuronium were used as adjuvants when required. At the end of surgery, residual curarisation was reversed as needed. Monitoring included blood pressure measurement, ECG, pulse oxymetry and PetCO<sub>2</sub> monitoring. Recorded data included: pain on injection, time to loss of consciousness, dosage required to induce and to maintain anesthesia, systolic blood pressure (SBP), heart rate (HR), time from end of infusion to opening eyes and to extubation. Sedation (S) and mental state (MS) were evaluated as previously described [1] the day before surgery and 0.5, 1, 1.5, 2, 3 and 24 hours after the end of infusion by an anesthetist blinded to the anesthetic protocol. Statistical analysis used t test with p<0.05 considered significant.

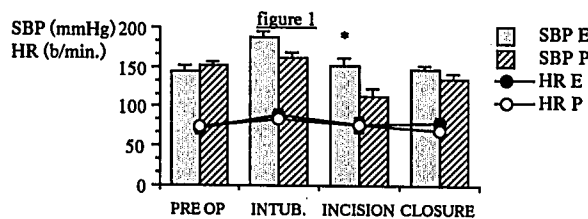
8 patients received E and 9 received P. No difference regarding age (E: 83 ± 3 yrs, P: 85 ± 3 yrs, mean ± SD), duration of anesthesia (E: 111 ± 59min.; P: 93 ± 57 min.), alfentanil requirements (E: 0.42 ± 0.26 µg/kg/min; P: 0.33 ± 0.16 µg/kg/min.) and pre operative MS (E: 27±6; P: 30±1) was found. The main intraoperative characteristics are displayed in the table. BP and HR values are shown in figure 1. The time course of S and MS is shown in figure 2. During the early postoperative course 1 patient in the P group complained of mild nausea while 4 patients in the E group complained of severe nausea.

E and P both appeared as suitable agents to induce and maintain general anesthesia in elderly patients. Recovery from P anesthesia was significantly more rapid and complete than from E anesthesia.

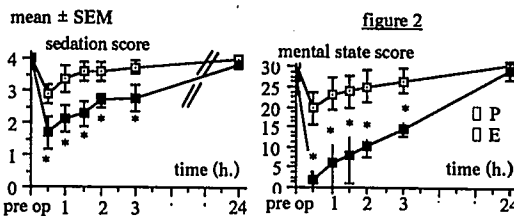
**Table:**

	bolus, dose mg/kg	pain on injection	induction time min.	infus. rate µg/kg/min	open eyes min.	extubation min.
etomidate	0.2 ± 0.1	4	0.9 ± 0.3	12.5 ± 4.5	10 ± 5.3 *	36 ± 37
propofol	1.4 ± 0.3	1	1.0 ± 0.5	83 ± 26	5.4 ± 3.4	9 ± 5

mean ± SD \* p<0,05 etomidate / propofol



\* p<0.05 etomidate/propofol



\* p<0,02 P/E

REFERENCE: 1. Anesthesiology. (1989), 71, A299.