Recovery Interest Group

To the Editor—In Britain, day case surgery and endoscopy are increasing. In contrast to inpatients, Day Hospital cases can be impaired less by the therapeutic process than by the rate of recovery from the drugs, the anaesthetics, analgesics, or sedatives used to facilitate the procedure.

There is no simple testing scheme which can be routinely used to determine the existence of residual impairment. At a national workshop held in Cardiff last summer, it was agreed that the accurate measurement of post-drug impairment is a problem in both clinical practice and research. It was felt that the opportunity to discuss experiences and problems in this field was informative and that there is a need for better communication between those involved in the assessment of functional impairment. We have, therefore, established a Recovery Interest Group, with three aims.

1. To establish and circulate a register of members’ research, an annually updated list giving details of tests used, currently and in the past, as well as drugs investigated.
2. To produce an annual newsletter.
3. To promote regular workshops to discuss developments and to foster communication.

Further details of the group can be obtained by writing to: Dr. Lalage Sanders, Recovery Interest Group, Department of Anaesthetics, University of Wales College of Medicine, Heath Park, Cardiff CF4 4XW, UK.

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Thermographic Evidence for Demarcation of the Sympatholytic Effect following Intravenous Regional Guanethidine Block (IVRGE)

To the Editor—Intravenous regional sympathetic blockade with guanethidine (IVRGE) is increasingly employed in the therapy of sympathetic reflex dystrophy.1-3 Compared to local anesthetic blocks of the sympathetic chain, IVRGE offers several advantages, including a longer lasting sympatholytic effect and a less invasive technique.4,5

In contrast to epidural anesthesia and blocks of the sympathetic ganglia, intravenous regional guanethidine, as first described by Hannington-Kiff,6 acts by a postganglionic blockade of sympathetic neurons. Drug fixation at the basis for a "pharmacologic target block" probably is due to the selective uptake of guanethidine in adrenergic neurons by competitive transport via the amine pump mechanism.

The regional action of IVRGE in limbs has been demonstrated by plethysmographic measurement of forearm blood flow7,8 and measurement of skin temperature9,10 when compared to that of the contralateral limb. However, little is known about the redistribution of the unspecifically absorbed drug amounts and the demarcation of the sympatholytic effect.

With institutional approval and informed consent, a volunteer without disturbances of the sympathetic nervous system underwent an intravenous regional guanethidine block of the left upper limb with 15 mg guanethidine in 30 ml of prilocaine 0.5%. Twenty-four hours after IVRGE, thermographs were performed after 120 s of ice water immersion of both arms. Figure 1 shows a marked hyperperfusion of the left distal limb compared with that of the contralateral arm. In the proximal region, two clear-cut lines of skin temperature changes are obvious: the upper one (*) shows the extent of ice water exposure, the lower one (**) corresponds exactly to the distal part of the tourniquet which was used for arterial occlusion during IVRGE. The region which was covered by the tourniquet shows an ice water response with marked vasoconstriction indicating an unaltered sympathetic innervation; when compared thermographically with the contralateral unblocked limb, no differences of skin perfusion could be distinguished in this area.

Our thermographic observations show a very clear-cut demarcation of sympathetic block after IVRGE with 15 mg guanethidine which we believe to indicate a functionally minor or nonexistent redistribution effect and to support results concerning the selective uptake of guanethidine after regional iv application. Higher doses during IVRGE may result in unspecific drug absorption, a less localized sympatholytic effect, and a higher incidence of systemic side effects. However, to our knowledge, studies on systemic plasma guanethidine concentrations after IVRGE depending on drug dosage, tourniquet time, and block intervals are still missing.

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REFERENCES


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Intravenous Nitroglycerin for Uterine Relaxation in the Postpartum Patient with Retained Placenta

To the Editor—The anesthetic management of the postpartum patient with retained placenta should provide cervical competence and analgesia while minimizing the risks to the patient.

Smooth muscle is present in the cervix, uterus, and vagina. Nitroglycerin (NTG) has been shown to be a powerful relaxant of rat uterus myometrium strips in vitro. If the cervix and uterus can be relaxed in the patient with retained placenta, manual exploration of the uterus can be performed without the risk of general anesthesia. We conducted a trial of NTG for the manual extraction of retained placenta.

Institutional Review Board approval for this study was obtained. Fifteen postpartum patients (ages 29 ± 10 SD, parity 1.4 ± 0.7 SD) needing manual removal of retained placenta were entered in this study and informed consent was obtained. Patients were entered into the study if their cervix was closed, they had not completely expelled their placenta after 30 min, and the neonatal age was at least 32 weeks. Patients with blood loss greater than 25% total blood volume or with cardiac disease (e.g., aortic stenosis) were not included in this study. At least 500 ml of crystalloid was infused prior to NTG administration. Vital signs were monitored by an automated blood pressure device and an electrocardiogram. Bicamura® 50 ml po was administered preoperatively. Blood loss was estimated by the obstetrician. Prior to NTG administration, the patient was determined to be normotensive by two systolic blood pressure measurements greater than 110, 3 min apart, and that infused crystalloid was appropriate for the estimated blood loss. A bolus of NTG 500 micrograms was administered intravenously. After NTG administration, the blood pressure was determined each minute. The obstetrician determined the time to adequate cervical uterine relaxation by vaginal palpation. Supplemental analgesia during manual extraction of the uterus was obtained with 50–100 micrograms of intravenous fentanyl and/or 40% nitrous oxide via mask. A t test for paired samples was performed to determine the statistical significance of the blood pressure changes.

Successful extraction of the placenta was achieved in all cases. Tracheal intubation was not required with any of the patients. All patients

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