

Correspondence

Malignant Heating Pad

To the Editor:—Malignant hyperthermia is a dread but rare complication of anesthesia for which anesthetists must be prepared with treatment plans. Anesthetists must recognize malignant hyperthermia early by routinely monitoring patients' temperatures.

Three recent "false alarms" point to a more common cause of hyperthermia: malignant heating pad. The three patients were infants lying on heating pads covered by several sheets. Rectal or tympanic probes monitored temperature. The heating pad controls were presumably set correctly at the start of anesthesia, but were left near the foot of the operating table. Thirty minutes to 2 hours after the start of anesthesia, each patient's temperature rose rapidly. A 17-kg girl's tympanic temperature rose from 36.1 to 38.1 C within 15 minutes. Malignant hyperthermia was suggested and, in two cases, the surgeons were alerted and commotion created. The problem was overheating. The controls to

one heating pad had been turned to 115 F. Temperatures of all three patients fell when warming was discontinued.

I see two lessons in these experiences. First, because man has an irresistible urge to twist, fiddle, bump and spin dials, knobs and levers, heating pad controls must be positioned next to the anesthetist (except when a flammable anesthetic is used). A very small turn raises the blanket temperature from normal to dangerous on some controls. Such overheating may cause serious burns, in addition to false alarms. Second, when on the great American plains you hear hoofbeats, it's less likely to be zebras than horses.

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(Accepted for publication March 29, 1974.)

Epidural Blood Patch for Post-lumbar-puncture Headache

To the Editor:—Post-lumbar-puncture headache (PLPH) has been a recurring problem since the inception of spinal anesthesia. August Bier, the father of spinal anesthesia, had the first reported PLPH in 1898. In 1960, Gormley reported that the epidural injection of 2–3 ml of autologous blood at the site of the dural puncture relieved PLPH by forming a gelatinous tamponade which sealed the dural opening.¹ DiGiovanni confirmed this effect and offered an anatomic and physiologic explanation for its success.^{2,3}

The Society for Obstetric Anesthesia and Perinatology undertook a prospective study of the effectiveness and safety of epidural blood patch (EBP) for the treatment of PLPH. Reports on 185 patients have been received. Eighty-two were described on formal data sheets, while 103 were reported informally by personal narratives.

The patients were 26.7 ± 0.9 (mean \pm SE) years old. The needle size used in the dural puncture was reported in 84 cases: 16-, 17-, or 18-gauge—34 patients; 22-gauge—31 patients; 25- or 26-gauge—19 patients.

Headache was first noticed 25.7 ± 2.0 hours following dural puncture. EBP was performed 4.1 ± 0.5 days after the onset of PLPH and reflected the failure of conservative therapy such as bed rest, increased hydration, analgesics, abdominal binders, and caudal or epidural injection of saline solution. All patients had headache immediately prior to treatment.

RESULTS

PLPH was completely and permanently relieved in 182 of the 185 patients (98.4 per cent) within 24 hours of EBP. An average of 9.7 ± 0.4 ml of autologous blood was in-

jected. The three failures may have resulted from an inadequate volume (6 ml) of blood used for the patch (one patient), failure to place the autologous blood in the epidural space (one patient), or wrong diagnosis (one patient).

Four patients had backache or "stiff back" for 24-30 hours after the EBP. Transient side-effects which disappeared within minutes of the EBP were noticed by 15 patients and included: backache or "stiff back," five patients; neckache or "stiff neck," four patients; paresthesias in the legs or toes, five patients; crampy sensation or "fullness in the lower abdomen," one patient. A subcutaneous hematoma at the site of injection occurred in one patient.

No severe or permanent complication (sepsis, epidural abscess, epidural hematoma, neurologic deficit, or muscle weakness) was reported at the time of EBP or at one-year follow-up. To date, one transient neurologic complication has been attributed to EBP. The symptoms appeared to have been related to nerve-root irritation or pressure, and resolved completely within ten days.⁴

The consensus of the case reporters was that an epidural blood patch is an effective, safe treatment for refractory post-lumbar-puncture headache.

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(Accepted for publication March 29, 1974.)

Obstetric Anesthesia Organizations in the United States

To the Editor:—Awareness of the special problems associated with obstetric anesthesia led Sappenfield, in 1958, during his tenure as President of the American Society of Anesthesiologists (ASA), to establish a "Committee on Maternal Welfare." Chaired jointly by Bonica and Hingson in 1958, by W. A. Cull in 1959, and by O. C. Phillips from 1960 on, the committee directed its major efforts toward achieving closer cooperation and better communication between the ASA and the American College of Obstetricians and Gynecologists (ACOG). Phillips met with the ACOG Committee of Obstetric Anesthesia in 1960, and liaison between the two committees was established in 1963. In the same year, a manuscript on "Pain Relief in Labor and Childbirth" was prepared by the ASA Committee as a guide for a brochure for expectant mothers which was published and distributed by ACOG. Standards for obstetric

analgesia-anesthesia and infant resuscitation were formulated in 1964 and included in the ACOG Manual of Standards. An obstetric anesthesia record was also devised and accepted by ACOG. At the request of both ASA and ACOG, recommendations regarding obstetric anesthesia training for anesthesiology residents as well as for obstetrics residents were outlined.

In 1966, Bonica, then President of ASA, appropriately changed the committee's name to "Committee on Obstetrical Anesthesia," as it had become evident that the anesthesiologist was concerned with fetal-neonatal welfare as much as with the well-being of the mother. Phillips remained chairman of the renamed committee through 1968, B. E. Smith took over from 1969 through 1972, and G. F. Marx from 1972 through 1974. Further accomplishments of the ASA Committee on Obstetrical Anes-