brief runs of premature ventricular contractions during intubation. These were the only ventricular arrhythmias encountered, and were present only during instrumentation. They disappeared immediately after intubation without treatment. We do not believe that increased ventricular irritability due to pancuronium should be inferred.

The cardiovascular stability and ease of intubation with pancuronium in a dose of 0.1 mg/kg seems to commend its use for intubation and subsequent relaxation using light general anesthesia. The return of all cardiovascular variables back toward pre-pancuronium values within 4 minutes after endotracheal intubation preceded by spray with lidocaine, 4 per cent, speaks for the usefulness of this adjuvant in anesthetic techniques where potent inhalation anesthetics are not being utilized. Since none of our patients was hypertensive by history, nor were they being treated with antihypertensive medications, no generalization of our technique to the general population including hypertensive patients is warranted.

Pancuronium bromide (Pavulon) was provided through the courtesy of Harry Strade, M.D., Organon, Inc., West Orange, New Jersey, 07052. Statistical analyses were performed by the Division of Biostatistics, Washington University School of Medicine, Director: Dr. Reimut Wette.

REFERENCES

A New Transducer and Holder for Recording Thumb Adduction

MARTIN D. SOKOLL, M.D.*

Most clinical studies of the effects of neuromuscular blockers include recordings of thumb adduction to monitor the extent or type of neuromuscular block. To facilitate this measurement, a new transducer holder has been devised. The transducer and load cell are available commercially. The holder is manufactured by a local machine shop.

The components of the transducer and holder are shown in figure 1. The transducer is a Statham† universal transducing cell, model U C 2, with a Statham load cell accessory (UL4–10). The load cell accessory is attached to the transducing cell by threaded fittings which are integral parts of both components. These are mounted in a locally manufactured machined aluminum mounting costing about

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† Both are available from: Statham Laboratories Inc., P.O. Box 1178, Hato Rey, Puerto Rico 00919.
$150 (fig. 2). The exact dimensions of the mounting or the mounting itself, at cost, will be provided by the author upon request. The mounting is machined so that the base of the load cell accessory rests on the mounting. A press fit between the side of the load cell and the holder prevents movement of the transducer assembly within the holder. The hand is taped around the assembly with the thumb resting on a curved plate (fig. 3). Welded to the bottom of the thumbplate is a metal screw which fits a threaded adapter on the top surface of the load cell accessory. The thumbplate is curved up on the lateral edges and down on the edge which fits against the base of the thumb. The mounting frame of the load cell accessory rests on the index finger to prevent slippage. The transducer can be utilized with virtually any kymograph having proper amplification. We have used a Sanborn Twin Viso model 60 recorder.

This arrangement has the principal advantage of having no protruding parts. Additionally, since other load cell accessories
that cover the entire range up to 100 pounds are available, by changing load cell accessories it can be used to study a variety of muscles having different forces of contraction.

We have used this transducer and holder for as long as four hours with no baseline drift. No problem has been encountered using the transducer. Stability of the baseline is good, showing no drift from control to complete paralysis and then recovery (fig. 4). The sensitivity of the recording system for detecting impaired transmission is beyond that which can be noted by watching the hand responses. Even minute amounts of fatigue with tetanic stimulus are evident from examination of a written record.

REFERENCE


Burns of the Skin Caused by a Peripheral-nerve Stimulator

MAURICE LIPPMANN, M.D.,* AND WILLIAM A. FIELDS, D.D.S.†

A review of the anesthesia literature has revealed no report of burns resulting from the use of the Wellcome peripheral nerve stimulator to monitor the effects of neuromuscular blockers. This report documents that surface burns may result from the use of this instrument.

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REPORT OF A CASE

An obese 17-year-old girl was anesthetized with nitrous oxide, meperidine, and d-tubocurarine for an elective cholecystectomy. The patient's prior medical history was unremarkable.

Muscle relaxation for the operative procedure was obtained with d-tubocurarine. The degree of curarization was evaluated by intermittent stimulation of the median nerve with a Wellcome peripheral nerve stimulator, using the spherical-ended probe electrodes. The probes were applied firmly to the skin over the area of the median nerve at the wrist; excessive pressure was avoided. A tetanic stimulus was applied for a period of approximately 5 seconds. The result was a fade of tetanus (Wedensky inhibition). The unit was set to deliver maximum stimulation.