

merular filtration and tubular reabsorption of sodium under these conditions. Maintenance of the latter in the presence of a progressive decrease in arterial pressure must, in some part, be attributed to reduction in renal vascular resistance and preservation of total renal blood flow rates.

The findings of the present study confirm and, in ways previously discussed, augment those of Deutsch and associates,<sup>6</sup> who determined the effects of halothane on renal function in normal man. These investigators were necessarily limited, as were we to some extent, to the use of indirect clearance methods for measurement of renal function, which necessitated the administration of acute and maintaining water loads sufficient to result in a satisfactory urinary output. As they and we found, this is particularly difficult during halothane anesthesia due to an associated antidiuretic response which results in elimination of small volumes of hyperosmolar urine and osmolar clearances that are positive and water clearances that are negative. The basis for the occurrence of this with halothane has not been established but may include, as Deutsch and co-workers<sup>6</sup> infer, the release of antidiuretic hormone.

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### Drugs

**PANCURONIUM** Pancuronium bromide, first synthesized in 1964 by C. L. Hewitt and D. S. Savage, is a bisquaternary amino steroid. Buckett and Bonta, in 1966, demonstrated its neuromuscular blocking properties in animals. In 1967, Baird and Reid, in a pilot study, showed that in man the drug produced a non-depolarizing neuromuscular block with a potency five times that of tubocurarine. The durations of action of the two drugs appeared to be similar. Experience with pancuronium suggests that it is a useful nondepolarizing myoneural blocker with few side-effects. The absence of adverse cardiovascular effects makes the drug particularly valuable for poor-risk patients. Unfortunately, however, this fact has perhaps led some anesthetists into giving larger doses of pancuronium than are necessary. It would seem that the potency of this drug relative to tubocurarine may increase with increasing dosage, and that in the normally accepted dose range, pancuronium is five to six times as potent as tubocurarine. (Baird, W. L. M.: *Clinical Experience with Pancuronium, Proc. Roy. Soc. Med.* 63: 697 (July) 1970.)