

Reports of Scientific Meetings

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First International Symposium on Endocrinology in Anaesthesia and Surgery

The First International Symposium on Endocrinology in Anaesthesia and Surgery was held in Bonn, Germany, September 1 and 2, 1978. The Symposium was divided into three sessions.

In the first session, covering basic problems of endocrinology in anesthesia and surgery, Breuer (Bonn, Germany) reviewed the basic physiologic principles in the regulation of the endocrine system, including the biochemical aspects. This was followed by brief reviews of the pathophysiology of intra- and postoperative stress, by Wesemann (Giessen, Germany), the past medical literature on the effects of anesthesia on the endocrine system, by Oyama (Hirosaki, Japan), the basic principles in the use of radioimmunoassays for hormonal measurements, by Nocke-Finck (Bonn), and the use of isotopic dilution mass-spectrometry method for determination of hormones, by Siekmann (Bonn). This session provided an excellent background and review of the "state of the art" for the participants. It thus served nicely as a foundation for the subsequent diverse, but interrelated, presentations.

The second session was concerned with the effects of anesthesia and operation on the endocrine system. It consisted, for the most part, of a series of presentations by various investigators listing the results of studies they had performed.

Takki and Tammisoto (Helsinki, Finland) reported on the effects of anesthesia and operation on plasma catecholamine levels, which, in their series, showed little response to anesthesia itself, with significant elevations during surgical procedures. Philbin (Boston) reported studies ADH responses to morphine and halothane anesthesia. These showed no significant change in ADH levels with anesthesia alone, but significant elevations following surgical incision. Vetter and Hack (Bonn, Germany) reported that the renin-angiotensin-aldosterone system responded differently according to the anesthetic used. Elevations occurred with neuroleptanalgesia, but not with halothane.

Jenkins (Dallas) presented a protocol for fluid management in the surgical patient to maintain hormonal balance that emphasized the use of isotonic balanced salt solutions starting prior to induction of anesthesia. Kehlet (Copenhagen, Denmark) presented data from a series of patients that demonstrated that epidural neurogenic blockade was very effective in obtunding many of the endocrine responses stimulated by general anesthesia and operation. Halevy (New York) presented evidence that suggested that adequate surgical anesthesia could depress or block any stimulation of thyroid function.

The third session was concerned with the hormonal and anesthetic management of endocrine diseases. Kruck and Stumpe (Bonn) briefly reviewed the hormonal aspects of hypertension and discussed data concerning the use of angiotensin II analogs (saralasin) and converting enzyme inhibitors (viper venom). They found that in high-renin, hypertensive patients, both agents lowered blood pressure, but the enzyme inhibitor was more potent; whereas in low-

renin, hypertensive patients, the inhibitor was without effect and saralasin often actually increased blood pressure. Hengstmann (Bonn) discussed the diagnosis and perioperative management of pheochromocytoma and presented data from a series of successfully managed cases utilizing beta blockers, phentolamine, and enflurane anesthesia. It was pointed out that successful surgical removal did not immediately cure the problem with hypertension because of catechol stores that may be present. Oyama (Hirosaki) presented data collected from a series of patients who had long-term glucocorticoid therapy prior to anesthesia. Hypotension, whenever it occurred during a surgical procedure, was unrelated to plasma cortisol levels. The use of the ACTH test (with an increase in plasma cortisol of less than 5.0 pg/100 ml over control) proved to be very reliable in determining pituitary-adrenocortical insufficiency preoperatively.

Giesecke (Dallas) discussed the anesthetic management of hypophysectomy, emphasizing the preoperative preparation of the patient with cortisol, the close attention to the blood sugar in the diabetic, the use of general anesthesia, and the careful attention to serum electrolytes. The use of the transnasal transsphenoidal approach with an image intensifier and operating microscope is preferred, with a series of 32 cases reported with no mortality. VonLilienfeld-Toal (Bonn) discussed the consequences of parathyroid operations, emphasizing that radioimmunoassays are not very satisfactory for parathyroid hormone because both whole and fragments of the hormone are measured. Gel-filtration chromatography allows for separation and measurement. He also pointed out that there were two forms of parathyroid hormone, the amino-acid terminal, which has half-life of less than 10 minutes and is the active hormone in calcium metabolism, and the carboxyl terminal, which has a half-life of 1-2 hours and is relatively inactive. This may account for the hypocalcemia in patients with reportedly normal hormone levels.

As both participants and observers at this symposium, we found that it served two very useful purposes. First, it allowed individuals from around the world working in one specific area to become acquainted with the wide variety of studies being pursued in the field and, second, it brought together basic scientists and clinicians in an open forum for the free exchange of ideas. The symposium, organized by Drs. Stroeckel (University of Bonn) and Oyama (Hirosaki University), will be published by Springer-Verlag, Berlin. Tentative arrangements have been made for the second symposium to be held in 1981 in Japan.

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