

Management of Adrenocortical Insufficiency During Surgery

JAMES A. NICHOLAS, M.D.
CHARLES L. BURSTEIN, M.D.
CHARLES J. UMBERGER, Ph.D.
and
PHILIP D. WILSON, M.D., New York

Adrenocortical insufficiency, known to be present in patients with Addison's disease and in patients who have had bilateral adrenalectomy, may also be induced in patients who have been receiving therapy with cortisone or other corticosteroids. The possibility of death following surgical intervention in such persons has been pointed out.* This is particularly apt to occur in cases where emergencies require surgery to be performed without benefit of prior work-up and preparation.

We wish to describe our experiences in the management of three patients with adrenocortical insufficiency, each with a different problem, who required surgical intervention. We have had six patients with hypoadrenalism at the Hospital for Special Surgery in the past two years who required surgery; hence, it is by no means a rare problem. Five of the six patients had cortisone-induced cases of hypoadrenalism. All were prepared for surgery but one, and in only one who required emergency surgery did death occur.

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From the Laboratory of Surgical Research and Anesthesiology, the Hospital for Special Surgery, Cornell University Medical College.

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* References 1, 2, 3, and 4.

The data on three of these patients are being presented in this paper to illustrate the methods whereby we managed the problems.

One patient had been receiving intensive hydrocortisone therapy for rheumatoid arthritis when he developed acute appendicitis. A second patient had suppressed adrenocortical function produced by cortisone therapy for pemphigus, and he required an elective femoral replacement arthroplasty of the hip. A third patient had known Addison's disease and needed spinal and sacroiliac fusions. Each of these patients presented different problems in the management of their adrenocortical deficiency. The successful results obtained in all but one case were due mainly to the extended metabolic work-up prior to, during, and after surgery. The scale of trauma in the surgery of these cases is very intense.

REPORT OF CASES

CASE 1.—*Example of Hydrocortisone-Induced Adrenocortical Insufficiency Requiring Emergency Surgery*

A man 47 years of age entered the clinic for rheumatic diseases of the Hospital for Special Surgery in 1940 because of rheumatoid arthritis involving the neck, shoulders, wrists, and knees. Gold therapy was started but was discontinued because it produced severe dermatitis. On Aug. 14, 1949, he was given 25 mg. of corticotropin (ACTH) by intramuscular injection, which resulted in good relief of his pains with diminution of his stiffness. Therefore, he was started on corticotropin therapy of 50 mg. twice a day. In January, 1950, his treatment was changed to desoxycorticosterone acetate (DCA) in 5 mg. doses on alternate days, combined with ascorbic acid. In November, 1951, his treatment was changed to hydrocortisone with phenylbutazone. This was maintained thereafter on low dosage. Despite this, he gained weight and developed some facial edema at times.

On Nov. 7, 1954, the patient was brought to the hospital in acute distress due to appendicitis. Ap-