return of all symptoms and signs it is usually only temporary and lasts 48 to 96 hours, followed by a complete or partial remission. In some patients with psoriasis or rheumatoid arthritis the disease becomes much worse after stopping treatment. There is no way, as yet, of predicting in which patients the disease will do this. By withdrawing ACTH and cortisone therapy slowly many of these exacerbations can be prevented.

CONTRAINDICATIONS

Hypertension.—Because of the salt and water retention which accompany ACTH and cortisone administration they should be used cautiously in the presence of severe hypertension. There is also experimental evidence that the adrenal steroids, particularly desoxycorticosterone-like steroids, act directly on blood vessels, thereby aggravating hypertension. The restriction of sodium intake will tend to minimize elevation of blood pressure, and the judicious use of diuretics often aids in reducing accentuation of preexisting hypertension.

Congestive Heart Failure.—In general, ACTH or cortisone should never be used in the presence of congestive heart failure. The only exceptions are those in which the modification of the disease includes improvement in cardiac function or reduces the load placed on the heart. As an example, an occasional patient with acute rheumatic fever and congestive heart failure will improve so dramatically during treatment that the hormone treatment may be safely given without compromising the cardiac status. This has also been observed in instances of heart disease secondary to chronic pulmonary disease in which the improvement in the latter has been so marked that concomitantly cardiac symptoms appeared to be reduced.

Renal Insufficiency.—In a previous publication it was shown that most renal diseases, with the exception of the nephrotic syndrome, do not respond therapeutically to ACTH and cortisone treatment.[1c] Indeed, certain manifestations of renal insufficiency are actually made worse. The blood nonprotein nitrogen tends to rise; albuminuria increases. Unless there are good indications for ACTH and cortisone therapy, these hormones should not be used in the presence of kidney impairment.

Peptic Ulcer.—There are instances of active bleeding from peptic ulcers following administration of ACTH and cortisone. This has occurred in patients whose ulcers had previously been pronounced healed or inactive. Reports of perforation of a peptic ulcer following ACTH treatment and activation of quiescent ulcers are available.[9] In the case of the activation of a quiescent ulcer this therapy may prove disastrous inasmuch as some of the signs and symptoms which normally accompany perforation of a viscus may be masked by the hormone effects. That intestinal ulceration is not made worse by ACTH or cortisone in all instances is clearly shown in the response which certain patients with ulcerative colitis [1c] obtain with ACTH or cortisone treatment.

Tuberculosis and Syphilis.—In both man and animals there is evidence indicating that tuberculosis may be aggravated during treatment with ACTH or cortisone. Therefore, they should be used with great caution in patients who might have active

9. Habif, D.; Hare, C. C., and Glaser, G. H.: Perforated Duodenal Ulcer Associated with Pituitary Adrenocorticotropic (ACTH) Therapy, J. A. M. A. **144**:996 (Nov. 11) 1950. Smyth, G. A.: Activation of Peptic Ulcer During Pituitary Adrenocorticotropic Hormone Therapy, ibid. **145**:474-477 (Feb. 17) 1951.