

# : : ABSTRACTS : :

## HORMONAL FACTORS IN HEART DISEASE

### Their Role in Myocardial Hypertrophy, Hypoxia and Electrolyte Imbalance

By W. RABB

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Three cardinal features of cardiac pathology, myocardial hypertrophy, structural degeneration and functional weakness have been attributed to mechanical factors primarily. That this oversimplification is inadequate is shown by the growing comprehension of myocardial metabolic anomalies especially those induced by the action of hormones.

1. The phenomenon of cardiac hypertrophy depends to much lesser extent on the mechanical burden than is believed, for example, idiopathic cardiac hypertrophy with normal blood pressure. Thyroid hormone and adrenal mineralo-corticoids seem to sensitize heart muscle to the hypertrophying effect of growth hormone by their action on cell oxidations and electrolyte balance. Cardiac hypertrophy is thus seen to be a complex metabolic process under the influence of the growth hormone chiefly.

2. Hypoxic degeneration and necrosis is frequently found in areas whose cardiac vessels are anatomically intact. Disregarding the unproven theory of coronary spasms, this can be explained by the presence of the powerful oxygen wasting and hypoxia producing cardiac hormones which cause intensified oxygen consumption by the heart muscle far in excess of simultaneous work requirements.

The author believes that angina pectoris can be explained by an acute discharge of these hormones coinciding with inadequate coronary dilatibility or inadequate cholinergic counter regulation. Treatment on a long range basis would therefore consist

of inhibition of sympathetic neuro-secretions, such as sympathectomy, x-radiation of the adrenal glands, or of desensitizing the heart muscle to hypoxiating action (thyroidectomy, thiourea, radioiodine).

3. Myocardial functional weakness of the type leading to congestive heart failure is caused largely by an inefficient oxygen economy. This is due to exaggerated hormonal action in conjunction with a distorted myocardial electrolyte equilibrium (increased sodium and decreased potassium) due to the adrenal mineralo-corticoids. This is substantiated by the fact that surgical measures yields dramatic results in otherwise intractable cases of congestive heart failure.

Thus it seems that some of the most widely accepted teachings of cardiology must be, in the light of these facts, accepted with some reservation.

B. Z. AYLWARD, '57.

## AN EVALUATION OF HYDROCORTISONE ACETATE IN VARIOUS SKIN DISORDERS

F. KOLZ et al., C.M.A.J., Vol. 72; 7, 1955

Topically applied Hydrocortisone Acetate proved most effective in the treatment of a number of dermatological disorders, including atopic dermatitis, infantile eczema, seborrheic dermatitis, contact dermatitis and a number of other disorders. The authors' impressions are based on the observations of a series of 581 patients. The difficulties in the application of controlled methods of study in clinical dermatology are recognized.

The ointment used contained hydrocortisone acetate in preparations varying from 1 to 2½ per cent in water, in an oil emulsion. Lesions on the eyelids, and on thin skinned areas of the body responded more readily than those areas located on the palms and other areas with a thick

epidermis, The course of self-limited diseases, as contact dermatitis, were considerably shortened. The authors believe that hydrocortisone acetate is the most effective single agent in controlling the symptoms of atopic and seborrheic dermatitis and infantile excema.

No evidence of systemic side effects was seen. Twelve instances of irritation and exacerbation of the skin condition treated were noted, and the ointment base rather than the hormone was found to be responsible. The authors believe that long term observations will bear out their initial good results.

W. ALAN JANES, '57.

### METHIONINE FOR WARTS

T. P. MERKLEN

LaPresse Medicale, January 2, 1954, 62, 8

While stating that he does not understand the rationale, the author reports three cases in which the administration of methionine, 1 to 2 grams daily, was followed by the complete disappearance of multiple warts within a space of about a week. This effect was stumbled upon when, while treating a man, aged 30, for a liver disturbance with methionine as part of the treatment, the patient noted after four days that the many warts on his hands, which had previously resisted all forms of treatment were becoming smaller; in eight days they disappeared. Similar results were obtained with the next two cases.

D. T. J.

### SUPPOSITORIES AND MIGRAINE

G. A. PETERS

Proc. Staff Meetings of the Mayo Clinic

Dec. 2, 1953, 28, 673

Through a review of the relevant literature and his own experience, the writer concludes that "ergot-caffeine suppositories are of definite help in acute attacks of migraine and related headaches". The suppository he uses contains 2 milligrams of ergotamine tartrate and 100 milligrams of caffeine ('cafegot'). Out of 45 patients treated, 30 obtained relief and any side relations were of such mild consequence that they did not prevent relief of the

symptoms. The use of the suppository provides a more prolonged effect than the same combination given orally. They have two cited advantages: "they can be used by the patient early in the attack" and "they can be used even when nausea and vomiting prevent oral administration of the drugs".

D. T. J.

### PROBLEMS OF PEPTIC ULCER

SARA M. JORDON, M.D.

Journal of Gastroenterology, Vol. 27, 6, 54

The etiology of peptic ulcer has been a controversial subject in the past. The protagonists of acid, spasm and local circulatory disturbances have finally agreed that all these factors play a role and that there is as yet an unknown factor behind them termed the neurogenic or constitutional factor.

Recent work suggests a correlation of chronic stress and the adaptation syndrome to peptic ulcer and so brings the pituitary-adrenal-gastric axis into the etiological picture.

The problem of diagnosis rests on a comprehensive and detailed history, X-ray examination of the upper gastro-intestinal tract, the presence of hyperchlorhydria, esophagoscopy, gastroscopy, cytological studies and stool examinations for occult blood. The history and X-ray examination are still the bulwark of diagnostic strength.

The problem of potential malignancy is still controversial. One opinion is that vigilant conservatism is sane policy.

Medical therapy based on the principles of rest and neutralization or adsorption of acid has been improved by non-absorbable agents such as aluminum hydroxide. Motility and acid secretion have been attacked by blocking nerve impulses in the autonomic nervous system.

The complications of ulcer require both medical and surgical treatment. Acute perforation is still most safely treated by surgery. Hemorrhage is the most distressing complication.

There is relative tranquillity in the medical versus surgery battle for treatment. Both sides have learned by their respective failures, the lesson of humility and value of collaboration. It is generally accepted that peptic ulcer is a medical problem until proven surgical. The problem of gastroenterologists is to continue their goals of (1) early and accurate detection, (2) the intensive treatment and if possible the complete healing of ulcer at any stage, and (3) the protection of ulcer victims against recurrence.

C. F. BRENNAN, '55.

**THE USE OF TESTOSTERONE IN  
PREVENTING POST-OPERATIVE  
LIVER DYSFUNCTION IN THE POOR  
RISK SURGICAL PATIENT**

M. A. Hayes, P. E. Hodgson, F. A. Collier  
Annals of Surgery, October, 1952

This is a review of eight cases of esophagogastric neoplasm in patients between the ages of 69 and 78 years. Three were treated with 50 mg. testosterone pro-

pionate I.M. daily for seven days prior to operation. The other five received no hormonal therapy.

The liver function studies included (a) fractionated serum bilirubin, (b) 24 hour excretion of urine urobilinogen, and (c) 45 minutes bromsulfalein retention. Other methods for evaluating the patients were used such as the epinephrine tolerance test and blood volume studies. All these studies were done before and after operation

This study showed that the use of the steroid resulted in a net gain in protein for the body. All of the experimental cases were within normal limits in the post-operative total bilirubin test while four cases of the control group exceeded the normal limit and the other case reached the upper limit. There were no abnormal results in the experimental cases for the bromsulfalein test but all of the control cases showed a marked degree of impaired liver function of a cellular type produced by anesthetic and operative trauma.

HENRY J. PRESUTTI, B.Sc., '56.

