THE GLUCOSE TOLERANCE CURVE IN HIDRADENITIS SUPPURATIVA.

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By the term hidradenitis suppurativa we refer to chronic abscess formation usually occurring in the axillae, but occasionally involving other sites, believed to be caused by bacterial infection of the apocrine sweat glands.

Our observations extend over a period of nearly three years, and were it not for the great dearth of clinical material we should certainly not venture to publish this note; but even with the generous co-operation of other dermatologists outside our hospital we have not, in this period, seen as many cases as we would have liked to record.

Our interest was aroused when we noted that the blood sugar curve was surprisingly flat in two women suffering from suppurative hidradenitis. They were under investigation merely because of the chronicity of their lesions, but otherwise appeared to be healthy. We could not recognize any immediate connection between the abnormality of sugar utilization suggested by this curve and the apocrine infection; but this type of flat curve has been noted in the tropics in patients suffering from nutritional deficiencies and certain cutaneous maladies, who improved greatly on an adequate diet, particularly one reinforced by the addition of riboflavine. This vitamin was, therefore, given to our patients, in doses of 3 mg. thrice daily. In six of our small series of seven cases the treatment appeared to be satisfactory, the lesions slowly disappearing whilst the diet was supplemented in this way; the seventh has not been treated with riboflavine. After several months we could usually, but not invariably, stop the riboflavine without relapse of the malady.

All seven patients were women, the youngest was aged 19 and the oldest 52. Fig. 1 shows their response to 50 g. glucose by mouth. It will be seen that five curves are flat, one is the very opposite being of the "lag" or "steeple" curve type and one is diabetic, but none is normal. Although the skin condition responded to riboflavine in the six non-diabetic cases, the type of blood sugar tolerance curve did not alter; but in one instance it seemed that on repeating the test after one and two years, the sugar curve had become slightly less flat. The diabetic case has not been under observation or treatment
for a sufficiently long period for us to make any comment concerning her progress.

One of the six patients consented to enter the hospital for further investigation of the abnormal glucose tolerance. It was possible to show that the flat curve was not due to hyperinsulinism, or to increased sensitivity to insulin; two insulin tolerance tests gave normal results. The absorption defect did not seem to be restricted to glucose, but also applied to the fat-soluble vitamin A. In the vitamin A absorption test, the fasting blood specimen contained 140 International Units (I.U.) per 100 ml. serum. Five hours after oral administration of 350,000 I.U. of vitamin A, the level had only risen to 182 I.U. per 100 ml. serum.

It was remarkable that the two patients who did not have a flat blood sugar tolerance curve showed the very opposite. One had a "lag" curve with a rise from 73 mg. per 100 ml. when fasting, to 188 mg. per 100 ml. within half an hour after administration of 50 g. glucose. The other had a mild diabetic curve with a rise of 91 mg. per cent. within the first half-hour and failure to return to the fasting level (107 mg. per cent.) after two hours; the blood sugar level at the end of these two hours was 140 mg. per cent. If, in the other five women, utilization of glucose by the intestinal mucosa was deficient, perhaps in these the intestinal barrier was overcome, but there was a lessened ability of muscle and liver to utilize the absorbed hexose.

Dr. Brian Russell gave us the opportunity to examine a women who had suffered from hidradenitis suppurativa in the past. The condition had been so severe that plastic surgery had been necessary in the axillae and vulva. When we saw her, she had been well for some two years; her blood sugar tolerance test was normal.
SUMMARY.

In a small series of cases of hidradenitis suppurativa an inability to utilize glucose normally was observed. The majority showed a flat blood sugar curve. Because of this, we decided to try the effect of riboflavine in small doses given orally; clinically the result was satisfactory. In two cases, one showed a lag curve and responded to riboflavine; the other was diabetic and has only recently come under observation.
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