BRIEF COMMUNICATION

INSULIN IN THE TREATMENT OF NON-DIABETIC BED SORES

INSULIN is a proven remedy in indolent ulcers. Decubitus is, for the most part, not only indolent but progressive. Due to the invasion of secondary infection, it is sometimes the direct cause of death in a lingering or exhausting disease. Since the introduction of insulin, occasion has arisen to use it by the reporter in five cases of decubitus in non-diabetic patients. The results were uniformly satisfactory.

CASE I.—Female, aged sixty-four, Para VI, has had cardiac trouble for over twenty years. There is a history of several decompensations and several nervous, bordering on mental, breakdowns. Albumin and casts were repeatedly found in the urine but never glucose. Wassermann negative. Eight weeks ago patient suffered from cardiac decompensation and mental breakdown. In addition there were cramps in the legs and intense pains in the course of the sacral and crural nerves. Hæmorrhoids which were always a complicative factor became more bothersome, and urinary and fecal incontinence became frequent of occurrence. A bed sore in the coccygeal region which developed about four weeks previously kept spreading and added greatly to the complexity of the situation. Scrupulous cleanliness and various ointments seemed to make no difference in the progress of the ulceration which by then occupied an irregular area of about three and one-half by two and one-half inches, was sloughy and deep. Through the courtesy of Dr. L. Spiegel, insulin injections were now instituted, fifteen units before dinner. Improvement began almost immediately and at the tenth injection the bed sore had diminished to about one-fifth its former size and had become quite superficial in depth. There was a marked improvement in the mental symptoms and the incontinence disappeared almost entirely. The tenth injection was followed by insulin shock, but was controlled by the administration of orange juice and sugar water. She received no further insulin for five days, but the decubitus kept progressively healing, when it was again instituted on alternate days. At the time of the fourteenth injection a pin-head opening was all that remained of the original sore.

CASE II.—Male, aged sixty-eight, suffering chiefly from cardiovascular disturbances. Wassermann negative. Blood sugar content on three different examinations averaged 160, and urine, over a period of one year, showed a trace of sugar (calculated as one-tenth of 1 per cent.). During an attack of apparent grippe the patient was put to bed. Sacral decubitus developed about two weeks later and one on the left heel about a week after that. Surgical cleanliness and ointments were of no avail. Patient was started on five units of insulin two times a day. A change for the better was noticeable on the third day, and on the eighth day, after the initial injection, the sacral sore was about half its original size; the heel sore remained stationary. Ten units (making a total of fifteen units a day) were then administered before the evening meal and the improvement became more noticeable still. The sore in the heel seemed to make even better progress than that in the sacrum. The general physical condition showed marked improvement, but inasmuch as other stimulating therapy was administered, the action of the insulin was duly discounted. The patient died of pulmonary œdema three months later, after being out of bed for more than a month prior to his death. The sacral bed sore was completely healed and only a very superficial and very small granulating surface remained under the left heel. The insulin treatment was

reduced to five units once a day for six weeks, and discontinued entirely four weeks prior to death.

CASE III.—Female, aged fifty-eight, with a blood-pressure of 240/120 to 180/90, was diagnosed as luetic with apparent early paresis. Wassermann negative. Spinal puncture was not permitted. One of the pupils was immobile to light and the other reacted faintly. Knee-jerks could not be obtained (patient was then in bed). Urine always negative to sugar. A sacral bed sore developed rapidly after about ten days in bed in spite of excellent physical care. The mental symptoms, chiefly noisily irrational, increased in severity. Insulin injections, ten units once a day, were instituted, at which time the sore was about four inches in diameter, necrotic almost down to the bone. In less than two weeks the ulcer had decreased about one-half and healthy granulating tissue was everywhere present. There was a definite improvement in the mental status. In five weeks' time there remained but a small superficial ulcer. The mental condition was much improved. It is but fair to add that mixed treatment and mercurial inunctions were used at the same time. About one year later this patient died of a cerebral embolus.

CASE IV.—Female, aged thirty-nine, with a pulmonary abscess following pneumonia. She was ambulatory for several months after a successful partial thoradectomy. Due to a fresh infection she was compelled to go to bed. Temperature ranged from 101° to 103.5°. Emaciation was rather rapid and a sacral decubitus developed in about three weeks' time. Spleen was enlarged. Diagnosis, proven by X-ray, was further pulmonary involvement in region of the first lesion. No sugar was found in repeated examinations of the urine. Bence-Jones' reaction positive. The decubitus at the time the insulin treatment was instituted was sloughy and about two inches in diametre. Dosage ten units once a day. In ten days' time it had all but disappeared. The general condition was distinctly improved (for about three days the temperature was normal, and appetite, which was very poor from the start, became normal). A new infection apparently again made its appearance and the patient died of exhaustion and in coma fourteen weeks after she went to bed. The decubitus never recurred, although its original site became bluish-black twenty-four hours before demise. There had been no insulin treatments for over six weeks before death.

CASE V.—Probably the most rapid results were obtained in a female, aged sixty-two, suffering from a severe non-malignant cystitis. When for better control she was ordered to bed, she developed a small sacral and a larger left sacro-iliac sore. Insulin injections of fifteen units (divided in five and ten), daily, cured both in ten days' time. The sacro-iliac sore was one and one-half inches in its greatest width when the insulin treatment was begun. The cystitis immediately improved. There was partial incontinence before the patient went to bed, but due to the physical care it apparently did not enter as a factor in the development of the decubitus. The patient has remained well a year and a half after the last insulin treatment.

In all the above, other remedies had been used in addition to the insulin, but were for the most part discontinued as soon as the insulin was begun. With the exception of the patient with the pulmonary abscess, the others suffered clinically, at least, from degenerative vascular disease—the so-called arteriosclerosis. Experience with the treatment of decubitus in the presence of vascular degenerative disease is unpleasant at its best. An agent which modifies their course more favorably than any other treatment is apparently to be found in insulin.

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