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BALANIC HYPOSPADIAS COMPLICATED WITH SIMULTANEOUS INTRAURETHRAL CHANCRE AND GONORRHŒA, AND IDIOPATHIC LOW SPECIFIC GRAVITY OF THE URINE.

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BALANIC HYPOSPADIAS COMPLICATED WITH SIMULTANEOUS INTRAURETHRAL CHANCRE AND GONORRHŒA, AND IDIOPATHIC LOW SPECIFIC GRAVITY OF THE URINE.*

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A well educated bachelor, thirty-seven years of age, who first came under observation in June, 1908, had complained as long as he could remember of a smarting sensation near the end of the penis on urination. There had also been slightly painful ejaculation at intercourse. The patient was a moderate alcoholist and had had two attacks of gonorrhœa, the last one six years previously. Otherwise he had always been in good health, though he was of a nervous temperament. Repeated physical examination showed nothing abnormal except tongue tie and balanic hypospadias; the tongue was not sufficiently bridled to interfere with any of its functions, and the abnormal situation of the meatus urinarius at the base of the glans penis did not prevent the proper performance of urinary and sexual functions. At this time a 28 F. sound was readily passed.

Repeated examination of the urine showed a strikingly low specific gravity, which was always under 1.010, often 1.001 or 1.002. For example, on July 3, 1908, uranalysis showed the quantity to be forty-eight ounces; the urine was pale, clear, faintly acid; no albumin; no sugar; urea, five grains to the ounce; the specific gravity of this twenty four hours' specimen, measured with a delicate urinometer at the chemicophysiological laboratory of Mount Sinai Hospital, was reported by Dr. Samuel Bookman as 1.0004.

It is true that the patient was of a nervous disposition, and he partook freely of water. Yet the quantity of urine passed in twenty-four hours was always less than 50

*Case reported at the Section in Genitourinary Surgery, New York Academy of Medicine, October 20, 1909.

ounces; there was no polyuria or polydipsia. There were no evidences of contracted kidney or arteriosclerosis; the systolic blood pressure was always less than 130.

Under treatment, which was largely psychic and expectant, though astringent applications were made to the urethra, the patient's nervousness diminished, and the symptoms referable to the urethral malformation were alleviated.

Thirteen months later when the patient was seen again he stated that during the interim he had been practically free from symptoms till three or four week previous to August 24, 1909. Although he was unable to remember the exact time of onset, during these weeks there had been difficulty in starting urination, increased pain referred to the anterior urethra during the act, and spattering of the urine, —these symptoms having gradually increased in severity. The frequency of urination was not increased and there was no urethral discharge. Local examination showed a cylindrical shaped infiltration about the urethra just posterior to the meatus. Except for the low specific gravity (1.002), uranalysis was negative. The assumption was that there existed a fibrous stricture of the anterior urethra.

Two weeks later the patient returned, complaining of great aggravation of the symptoms: There was greater difficulty in starting the stream, the pain on urination was very severe, and the spattering extreme. In addition urethral discharge had been present for some days and there had been chordee at night. Palpation of the under surface of the penis revealed a sensitive circumscribed induration of the urethra, situated immediately posterior to the meatus, spindlelike in form, its longitudinal axis about one inch in length coinciding with that of the urethra. From the bright red meatus issued purulent discharge, a spread of which showed numerous intracelluar and extracellular Gram negative diplococci. The urine in the first glass was very cloudy, that in the succeeding ones clear. On physical examination no eruption was seen on the skin, but there was moderate enlargement of the inguinal lymph nodes.

Four days later, when Dr. Victor C. Pedersen saw the patient in consultation, the local condition was unchanged. After hearing the history and inspecting and palpating the penis, Dr. Pedersen stated that the beefy appearance of the meatus and the parchment feel of the urethral canal were typical of urethral chancre. Further examination of the patient now revealed a typically syphilitic macular roseola and well marked adenopathy. According to the history the

time between the beginning of the urethral symptoms and the appearance of the rash was about five weeks. Therefore it is fair to assume that the primary lesion had been present in the urethra a week or more before causing any disturbance of micturition.

It is needless to say that with the diagnosis established, response to the proper therapeutic procedures was prompt and gratifying. Perhaps the notes which follow, extracted from my records of the case, will suffice to elucidate the future course and treatment.

"September 14th: Rose colored erythematous eruption on the chest, back, abdomen, arms, and thighs. Has had chilliness and pains in back during past two days. No sore throat. Induration about urethra diminishing. Spreads of discharge examined by E. P. Bernstein were reported on as follows. 1. Spread stained by Gram's method showed very numerous intracellular and extracellular gonococci. 2. Spread stained by Giemsa's method failed to show spirochætæ after a two hours' search. Treatment: Deep injection, one grain of mercury salicylate, into left buttock. Immersion of penis in hot water. Irrigation of urethra with protargol solution, two per cent. Calomel ointment, thirty per cent., applied to chancre with ointment applicating sound. Urotropin internally.

September 18th: Eruption fading. Small white patch in throat. Thickening of urethra diminishing. Discharge still contains numerous gonococci. First urine cloudy. General condition excellent. Mercury appears to be well tolerated. Third injection, one grain of mercury salicylate into right buttock.

September 26th: Rash has entirely disappeared. Patch in throat smaller. Much less induration behind meatus. Slight mucoid discharge in morning only; spread shows a few extracellular gonococci. Fifth injection, one grain, left buttock.

October 2nd: Throat negative. No signs of syphilis remain except glandular enlargement. Patient free from symptoms except for some smarting during urination. Discharge gone. Urine clear except for a few threads in first glass. Specific gravity, 1.001. Does not believe he has had syphilis, but promises to submit to systematic treatment for three years. Injection No. 6, one grain. left buttock."

The patient is now apparently perfectly well except for mild symptoms referable to the urethral malformation. Having never been convinced that he had contracted syphilis, serological tests were undertaken with the hope of furnish-

ing to him additional proof of the existence of the disease. Though unfortunately the blood was not examined till three injections of one grain each of the mercury salicylate had been given, D. J. Kaliski's report on the Noguchi reaction was as follows: "The blood of your case, 'X,' shows the presence of specific antibodies. Although present, the reaction is a weak one." After six injections had been given an opportunity was afforded of having Dr. Noguchi personally perform the test; his report was negative. Apparently either the further treatment had caused the disappearance of the reaction or the findings of Noguchi and his pupil showed a discrepancy..

After this report was submitted for publication the injections were continued at weekly intervals until twelve had been given. With the intention of allowing six weeks to elapse before starting a new mercurial course, potassium iodide was administered. But in two weeks the patient returned to exhibit as a late secondary manifestation copper colored macules averaging about one centimetre in diameter, symmetrically distributed over the trunk and extremities. Before resuming mercurial treatment, blood was obtained for another serum test. At the kind request of Dr. Martin Cohen, Dr. Noguchi again personally performed the test. The reaction was *negative!* This result suggests a word of caution not to attach undue significance to the serum reaction, which is frequently a valuable presumptive aid, but as yet offers too many permutative possibilities of error to be absolutely dependable. In this instance there was ample bacteriological and clinical evidence to establish beyond doubt the diagnosis of coexistent gonorrhœa and syphilis.

An interesting pathological question is whether two distinct infections took place within a short time of each other or whether the urethritis was of the nature of a mixed infection; lurking behind in the urethral mucous membrane after apparent cure of the previous gonorrhœa may have been some long

lived gonococci which possibly aided the chancre to incite a seemingly new urethritis.

From theoretical and anatomical considerations it may be assumed that in this patient there was especial vulnerability to urethral attack because of the situation of the meatus on the under surface of the penis. The case has been reported not only because of the rarity of coincidental syphilitic and gonorrhœal infection in the urethra, but because of the independent disclosure of another unusual condition —a constant low specific gravity of the urine without ascertainable cause.

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