CASE OF ACUTE TRAUMATIC TETANUS.

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LUTCHMOO, aged 30 years, a married Hindoo woman, was admitted to the Hospital for Women and Children, Madras, on the 10th of May, 1879, with the following history.

History.—Two days before admission, that being the third and last day of a menstrual period, she took a cold bath. Next day symptoms of lock-jaw appeared, and the day after she sought admission to hospital.

May 10th. State on Admission.—The patient is a strong, well-developed woman. The muscles of her neck and abdomen are hard and contracted. Trismus is established, the mouth cannot be opened more than half an inch. She has occasional slight spasms of opisthotonos. She can swallow without much difficulty. The left ankle is disfigured with deep syphilitic ulcers, some with sinuses and tense cicatricial bands. Pulse 136. Temperature $102^{\circ}2$ F. Respiration 30.

Treatment.—The cicatrices and sinuses were slit up to relieve tension, and a poultice smeared with belladonna ungt. was applied over the ankle. Calomel grs. v. and pulv. jalapæ grs. 30 at once. Chloral hydrate 3ss in syrup every two hours.

May 11th.—Patient's bowels have been moved, and she has taken 300 grs. of chloral. Trismus is further developed, and there is great difficulty in swallowing. The spasms of opisthotonos are decided, and occur about every hour. Patient is well under the influence of chloral, but not completely so. Evening temperature 103° F. Pulse 140. Respiration 32.

Treatment.—Continue chloral 3ss every two hours by the mouth as long as a patient can swallow, afterwards by the rectum. Strong beef-tea every three hours, by mouth or rectum.

May 12th.—Decidedly worse. Although completely under the influence of chloral, the tetanic spasms are excited by the least noise or motion. The body is arched forwards, the head

thrown back; every muscle of the trunk and extremities is firmly set; the teeth are clenched, and the patient remains thus, breathless, as if cast in iron, for sixty seconds or so. There is no mistaking the acute nature of the case. Evening temperature $102^{\circ}8$ F. Pulse 136. Respiration 32. Nutrient and chloral enemata had been required for the past eighteen hours. Three hundred grains of chloral used.

Seeing that the patient was worse even with the very free exhibition of chloral adopted, I decided to give nerve-stretching a trial. The operation was performed at once.

Operation.—Under chloroform, and with the carbolic spray, an oblique incision was made in the left ham downwards, from the lower border of the gluteus maximus. There was some difficulty in finding the sciatic nerve, which was covered by $2\frac{1}{2}$ inches of fat, and overlapped by muscle. When found it was drawn out of the wound and stretched with a force of about 30 lbs.¹ for the space of two minutes, and afterwards jerked once or twice with about double that force before being replaced. Silk sutures and boracic dressing.

After the Operation.—Not a single spasm occurred during the rest of this day for fourteen hours after the operation.

May 13th.—Patient well under the influence of chloral, but very restless, tossing from side to side. Slight spasms of opisthotonos appear to occur at intervals. Has had 300 grs. of chloral by the rectum since the operation. Temperature $102^{\circ}5$ F. Pulse 144. Respiration 32.

May 14th.—The spasms have ceased altogether. Patient is quite under the influence of chloral, but can be roused to take nourishment, which she begins to swallow. Has taken 270 grs. chloral diet at this time. Beef-tea, 4 pts. (concentrated); milk, 4 pts.; eggs, 4; anack, 6 ounces, by mouth and rectum.

Treatment.—Cont. chloral 3ss every three hours. Evening temperature $102^{\circ}5$ F. Pulse 130. Respiration 36.

May 15th.—No spasms; under the influence of chloral yet. Very restless. Has taken 180 grs. chloral by the mouth. Sciatic wound begins to suppurate. Temperature, evening, $102^{\circ}2$. Pulse 136. Respiration 34.

May 17th.—Still chloralised. Not so restless. Muscular tension continues, but no spasms. Reduced chloral to 3ss every fourth hour. Temperature 102° F. Pulse 120. Respiration 30.

May 19th.—Improving. Trismus diminishing. Takes 120 grs. chloral daily. Not so restless. Temperature fell to normal this day, and continued so for the rest of the case. Pulse 120.

¹ The force required to lift a 9 lb. weight.

May 22nd.—Doing well. Passed a round worm by the mouth. Ordered santonine grs. v, followed by a purge. Bowels opened three times; no worms. Ordered chloral 3ss three times a day.

May 29th.—Can open her mouth about halfway. Can speak distinctly. Begins to masticate, and is ordered full diet at her own request. Neck and abdominal muscles still tense. Continue chloral 3ss twice daily. Sciatic wound healthy suppurating and dressed from the bottom.

June 1st.—Still improving. Chloral 3ss at bed time.

June 23rd.—Patient is able to sit up. Tetanus quite gone. Sciatic wound healing. Tried her again with santonine, but found no worms. Sensation, nutrition, and power equal in both limbs.

Remarks.—Notwithstanding the fact that a chill after bathing at the end of a menstrual period was the exciting cause of the attack, I think all will agree that the above case was one of traumatic tetanus. To those who would call it puerperal, I may suggest that traumatism is concerned in the origin of puerperal tetanus. This woman had never borne children. She was strong, stout, and in the prime of life. Although well saturated with chloral, the symptoms rapidly developed into an explosion of acute tetanic violence, which would surely have carried the patient off but for the nerve-stretching. At the same time, nerve-stretching would not have saved the patient but for the chloral. Eighteen hours after the operation slight spasms reappeared, and if at this time chloral had not been pressed, I fear the spasms would have gathered strength. The day after the operation I left instructions at the hospital to send for me if clearly marked spasms of opisthotonos returned, as I intended to have opened the wound and stretched the nerve again. This is the fifth time that I have stretched the sciatic for traumatic tetanus, and each time the separation has suppressed spasm for many hours. If during these valuable hours of rest chloral is properly plied, the chances are that spasm will not return. I have been obliged to give chloral very freely, and to maintain narcotism for about ten days. During the three critical days, on and after the operation day, the patient had 300 grs. chloral daily. The absolute fatality of acute tetanus justifies the exhibition of the drug in what appears to be a reckless fashion. There is besides an astonishing toleration of chloral. The sciatic wound suppurated freely, but there was no pain complained of in the limb, and there was no contraction of it. In this case I purposely refrained from operating until the symptoms were alarming, for I wished to test the value of nerve-stretching in

acute cases only. Sub-acute cases get well of themselves. Really acute cases, I believe, never get well of themselves. It would be well whilst this treatment is on its trial to wait for an outburst of acute symptoms before operating. We shall then sooner know the value of the remedy than if it is used indiscriminately, or before it is quite certain that the case is going to be acute. I doubt if any treatment will avail to cure acute tetanus, unless age and stamina are with the physician. I mean by age, about thirty years, the prime of life. In this case the duration of the disease was twenty-three days. It is seldom less in acute cases. Only the strong can hope to battle through the exhausting efforts of clonic and tonic tetanic spasms prolonged for days, generally with insufficient nourishment, often, for days at a time, with rectal alimentation only. Yet, considering the well-merited reputation of tetanus as a fatal disease, it seems to me a solid gain that even a few cases may in certain circumstances be saved by modern medicine.