

14th.—Patient very irritable. Spots fewer, but larger and more raised. Temperature 102.4° . Diarrhoea still continues. 15th.—Temperature at 9 A.M. 101° . Patient more comfortable. Bowels open six times.

With the exception of a slight rise on the 8th, the temperature remained about one degree below normal in the morning, and one degree above in the evening until the 18th, when a relapse took place.

14th.—Took bread-and-butter; on the 15th still two or three spots on abdomen and chest, complains of deafness, bowels open once, motion thick.

18th.—Temperature at 9.30 A.M. 97° ; 9.35 P.M., 103.4° ; pulse weak and rapid, great pain in lumbar region. An enema was given at 10 P.M., consisting of castor oil and soap and water. Twenty drops of sedative solution of opium were given by mouth. Pains relieved at 11 P.M.; temperature 101.2° .

19th.—Pulse somewhat stronger, still rapid; bowels open twice, motion dark and watery. Temperature at 9 A.M. 101° ; 2.30 P.M., 104.2° ; 7.30 P.M., 101° .

20th.—Patient much better, but had rise of temperature in the evening.

24th.—Temperature still high, spots all disappeared, bowels opened twice; no pain in abdomen. Patient began to mend rapidly, though the temperature did not reach normal till July 7th. She was discharged July 22nd, fairly strong, temperature normal.

Remarks.—In this case the patient experienced great relief from each ice packing, and each time it was performed expressed great comfort both during and after the application. It seems to be much more efficacious than sponging or the wet packing; it is quicker than the former, and less troublesome to both nurse and patient than the latter. In this instance a waterproof was passed next to the bed with a blanket between it and the patient. A large quantity of ice was then packed next to the skin along the trunk only, and the mackintosh and blanket folded over. The patient experienced no shock from the ice, but seemed to like the contact. At the end of the packing, the ice being removed, the blanket was drawn over the body, the moisture absorbed and the mackintosh and blanket both withdrawn. The relapse in the case is difficult to account for, but the fact that the temperature came down at once after the use of an enema might lead one to suspect that it might be caused by the retention of effete matter in the bowel.

LEITH HOSPITAL.

CASE OF RHEUMATIC FEVER WITH HYPERPYREXIA (109.2° F.) FOLLOWING ACUTE TONSILLITIS; ICE PACK; TEMPORARY RELIEF; DEATH; NECROPSY; REMARKS.

(Under the care of Dr. GARLAND.)

FOR the following notes we are indebted to Mr. Herbert C. Male, M.B., house-surgeon.

Margaret R—, a servant girl, aged twenty-four, was admitted about midday on May 25th, suffering from pain in the joints and pyrexia. She had been previously under treatment for acute tonsillitis, which had developed on May 13th, and for which quinine in three-grain doses had been prescribed. She had always been a healthy girl, but was of a nervous, excitable temperament, and had recently joined the Salvation Army. She recovered from the tonsillitis, but complained of pain in all her joints on the evening of May 24th, and was sent to the hospital on the following morning.

On admission she was flushed and feverish, complained of headache, pain in the knees, ankles, and hands, the ankles being considerably swollen; copious perspiration. Temperature 100.8° . She was placed between blankets, ordered a milk diet, and to be given fifteen grains of salicylate of soda with two grains of carbonate of ammonia in camphor-water every four hours. The affected joints were wrapped in cotton-wool. The evening temperature was 103° . She passed a very restless night, did not sleep at all, and complained much of thirst.

May 26th.—The pain in the joints much relieved. Temperature (8 A.M.) 102° . The patient was seen about noon by Dr. Garland and by Dr. Struthers, who had previously attended her. She was cheerful, but appeared to be very nervous. Respiration was noticed to be rather rapid, and she complained of some shortness of breath and of a sensa-

tion of "ringing in the ears." There was a faint systolic murmur in the mitral area. No evidence of pericarditis, and the pulmonary sounds were healthy. About 2 P.M. she complained of severe headache, but fell asleep shortly after, and slept till between 3 and 4 P.M., when she woke up suddenly in a great fright and said she had had a dreadful dream. She talked in a strange, excited manner, and attempted several times to leave her bed. About 5 P.M. the nurse thought the girl was "going off her head." She was restless and excited; answered questions correctly, but had a delusion she was going home. The pulse was rapid and the breathing accelerated. Temperature in axilla 106.2° ; perspiring freely. She was given ten grains of quinine, and cold cloths were applied to the head, after which she was quiet and rested. At 6.45 P.M. she started up, talking in a loud, excited manner, imagining she saw things on the wall, and was with difficulty persuaded to lay down in the bed. Temperature 106.4° . Her head was ordered to be shaved, and her body sponged all over with cold water. About half an hour later she became wildly delirious, could not be reasoned with, and was so violent that she had to be strapped in bed. The thermometer rose to 106.6° in the axilla, but could not be properly retained, owing to her struggles. The clothes were now removed from the bed, and she was wrapped in sheets wrung out of iced water. She became much quieter, and soon lapsed into a semi-comatose condition. The sheets were changed frequently. At 8.15 P.M. the temperature had risen to 109° in the axilla. She was lying on her back with her mouth open, quite unconscious. Pulse rapid and feeble, respiration stertorous, pupils much contracted and insensible. One drachm of sulphuric ether was given hypodermically. 8.30 P.M.: Temperature in rectum 109.2° ; pulse 140, barely perceptible; respiration irregular and gasping; death seemed imminent. Ice was packed over and round the body, in the axilla and hands, and half a drachm of ether injected. 9 P.M.: Temperature in rectum 106.6° ; breathing freer. Still unconscious and insensible to stimuli. 9.15 P.M.: Temperature in rectum 103.6° ; pulse 140, fuller; decided improvement in condition; pupils dilating and slightly sensible; feeble attempts to cough and occasional twitchings of hands. Half a drachm of ether injected. 9.30 P.M.: Temperature in rectum 100.6° ; pulse 132; breathing much freer. Pinching the skin caused her to move slightly. She rolled her head from side to side, and tried to open her eyes. The cold pack was now removed. She was wiped dry, and placed on another bed between blankets. 10 P.M.: Temperature in rectum 98.4° ; pulse 120, of fair volume; surface of body very cold. Hot bottles applied to sides and feet. Swallowed a little brandy-and-water with difficulty. 10.30 P.M.: Temperature in rectum 98° ; pulse 112; respiration slower and less embarrassed. More sensible to external impressions. Pupils acting freely. No return of consciousness. Half-drachm of ether injected. 11.15 P.M.: Condition much the same. Twitching of muscles of mouth and attempts to expectorate. Moving about more in bed. 11.45 P.M.: She started as if suddenly awakened, uttering unearthly screams, expression indicating extreme terror. The slightest touch or approach of light produced general convulsive tremors and appeared to excite the greatest alarm. Temperature in rectum 101° ; pulse could not be counted owing to spasms of hands when touched. Breathing laboured, long inspirations with peculiar hiccoughy catch at full inspiration. Saliva collected in mouth and spasmodic attempts of expulsion. Pupils dilated. Ice-bag applied to head, but had to be discontinued as it produced spasms. Ward was darkened, after which she was quieter.

27th.—12.15 A.M.: Temperature 102.4° ; respiration 40. Lay quietly in bed, if left alone, with wild vacant stare, but screamed and shrank from anyone who approached or touched her. 1 A.M.: Temperature 104.8° ; respiration 44, more laboured. A lighted candle produced violent convulsions and caused great agitation. Spasmodic contractions of muscles of mouth, with rolling of eyes and blinking; mouth firmly shut and attempts to spit saliva out of closed lips. Pupils widely dilated. The patient died somewhat suddenly at 1.20 A.M. with frothing at the mouth and symptoms of asphyxia. Temperature immediately after death 105.4° , and fifteen minutes after death 104.2° .

Necropsy, eighteen hours after death.—Post-mortem lividity very slight; rigor mortis present only in lower extremities. Dura mater congested and about two ounces of blood-stained serum escaped on its incision. Brain substance firm, vessels on surface distended; on section white matter presented a mottled injected appearance, the puncta

vasculosa being more numerous than usual; the brain appeared otherwise normal. Heart soft and flabby; right auricle and pulmonary artery contained firm decolourised clots; valves healthy. Lungs congested. Spleen enlarged, very soft and friable, and tore on removal. Liver much enlarged, adherent to diaphragm; surface rough and some thickening of capsule in parts; section very soft and fatty. Kidneys much congested, otherwise normal. The bladder was empty.

Remarks by Mr. MALE.—This case is interesting in illustrating the relationship between tonsillitis and acute rheumatism, to which Dr. St. Clair Thomson recently drew attention in THE LANCET, May 24th, and in showing once more the efficiency of the cold pack treatment in reducing temperature. Like many of the cases published, the hyperpyrexia was preceded by an alleviation of the joint symptoms and by insomnia. The occurrence of hyperpyrexia within forty-eight hours of the commencement of the rheumatic fever is unusual, and the extreme reflex excitability, at the last approaching almost a hydrophobic condition, I have not found mentioned in other cases. Death apparently did not result from exhaustion, but from spasm of the muscles of respiration. Some observers have noticed an increase in the amount of urine passed previous to the rise of temperature. In this case no urine was passed for ten hours previous to death, and at the post-mortem examination the bladder was found empty. The question arises, Was the suppression of urine caused by the elevation of temperature, or was it a factor in its production? The fact that there was no return of consciousness after the reduction of the temperature, and the subsidence of other grave symptoms, show the necessity of having early recourse to the wet packing, and not waiting till such alterations have taken place in the brain from the excessive tissue change, as must so seriously interfere with its functions and materially lessen the patient's chances of recovery.

SOOREE CHARITABLE DISPENSERY.

A CASE OF CATHETER FEVER; DEATH.

(Under the care of Dr. G. C. ROY, Civil Surgeon.)

JOOGUL, aged about thirty-two, Hindoo, came to the dispensary on May 19th, with the following history of his case:—Eight years ago he had gonorrhœa, and he had passed water in small streams for the last five or six years. Until about a month ago he could urinate only in drops, and with great difficulty and straining. Micturition was frequent, some fifteen or sixteen times in twenty-four hours, and each act used to take him half an hour, and made his life miserable. His urine was said to be clear. In other respects he was healthy looking. Catheterism was attempted. There was a tight stricture in front of the membranous portion of the urethra, which barely permitted a No. 3 catheter (English) to pass. As there was some bleeding in the manipulation, no further attempt was made on that day, but the patient was dismissed with a dose of quinine and tincture of opium.

On the following day he attended the dispensary with fever, which had come on some time during the night. A saline diuretic mixture and tincture of Indian hemp gave relief, and the patient soon felt as well as ever. He could pass water in better streams, and he asked permission to go home and present himself after a few days. He remained well for two days, when he had a relapse of fever, but not without shivering. The fever was of a remittent type; but the patient being away from any medical advice, nothing was done for three days. On the fourth day he returned for treatment. His temperature was then about 103° in the morning; pulse 120; great thirst, burning of the body, and restlessness, and complete anorexia. The bowels were costive. There was no pain over the bladder or perineum, or any tenderness on rectal examination or thickening. In fact, very careful examination was made to detect any formation of pus. He complained of pain over the region of the right kidney, which was full and tender, without any distinct sense of fluctuation. His urine was turbid and milky, as if mixed with pus, and contained bits of soft tissues. A poultice was applied over the right loins, and a mixture of Indian hemp was given. This was changed afterwards to quinine, tincture of perchloride of iron, and tincture of henbane; brandy was also given. On the 1st of June the temperature became subnormal. The body was bedewed with cold clammy

sweat. Costiveness gave place to diarrhœa. Thoracic râls indicated œdema of the lungs, and he sank on June 2nd, retaining consciousness to the last.

Reviews and Notices of Books.

The non-Bacillar Nature of Abrus Poison. By C. J. H. WARDEN and L. A. WADDELL. Calcutta. 1884.

THIS little volume embodies the results of an inquiry into the existence of the so-called "bacillus of jequirity seeds, with observations on the nature of abrus poison, its chemical properties and physiological action. The practical application of the knowledge thus far acquired to the treatment of cases of abrus poisoning is also indicated. The opportunity of Dr. Koch and the German Cholera Commissioner at the Medical College Hospital, Calcutta, enabled the authors to conduct the bacterial part of the research with a thoroughness which they could not otherwise have hoped to attain. It is a little unfortunate for the authors that the main principle for which they contend has been anticipated in England by two other independent workers—namely, Klein and Benson.

In the first chapter the question of the presence in the seeds of jequirity of specific bacteria or their spores is discussed. The intensity of the abrus ophthalmia is said to depend on the strength of the infusion and the frequency of its application, and this fact is held to be inconsistent with bacterial infusion, and to be an argument in favour of a chemical action. The mere presence of bacteria at the site of inflammation is not regarded as remarkable, for the infusion used by Sattler was unsterilised, and the albuminous constitution of the infusion was specially favourable for the growth of micro-organisms. In the third chapter the essential lesions of abrus poisoning are contrasted with the alleged bacterial lesions described by M. Cornil. The sixth chapter deals with and disproves the alleged immunity against further attack which attends the injection of a single small dose.

The second part of the work is chiefly concerned with the chemical nature of abrus poison, the activity of which is held to depend on a substance of proteid characters, which is named abrin. The physico-chemical properties and composition of this active principle, its place amongst the proteids, and its relations with vegetable albumen are likewise treated of. It has also been found that the albumen of the roots and stems of abrus precatorius is poisonous. This discovery is of very great practical importance, and should serve to banish from the Indian Pharmacopœia the roots of this plant, which are recommended as a substitute for those of glycyrrhiza glabra as a demulcent. The poison is, however, only active when directly introduced into the circulation. Abrin is said to bear in many respects a strong analogy to snake poison. Like it, it may be taken by the mouth with impunity. Heat lessens the activity of both poisons, but affects abrin much more powerfully. The toxic symptoms of these two poisons also exhibit a certain degree of similarity—general depression, drowsiness, fall of temperature and hæmorrhagic lesions. The marked differences, especially the convulsive phenomena, are considered to be accounted for by the more complex constitution of snake virus. A chapter is devoted to an account of the physiological effects of abrin on the blood, circulatory system, body temperature, nervous and other systems.

The last part of the text has to do with the management of cases of abrus poisoning. It appeared from experiments on chickens that dialysed iron given hypodermically at the seat of the abrus injection prolonged life.

We have recorded a sufficient outline of this excellent work to point out its careful and painstaking nature. The alliances of abrin with venom globulin might tempt to a hasty generalisation.