iron and strychnine, it braced up the nervous system, and removed all the symptoms of exhaustion. Would not malaria bring on the same train of symptoms, modified of course in various ways, under various unknown circumstances? Would not quinine then not only cut short the paroxysm but by its continued use remove the cause and effect?

It seems more likely then that quinine in large doses cures intermittent fever by its direct operation on the unknown poison called malaria, or by somehow altering the condition of blood that the poison induces, and not by its direct action on the nervous system, as some suppose. Malaria, fever, and the action of quinine have been freely handled, and various contradictory theories have been set up regarding them. But they are, I fear, often vague opinions, without actual experiment or practical observation. It is only by a careful observation at the bed side and by an intelligent analysis of them that we can expect to arrive at real solutions of those grave questions. Intermittent fever has become so familiar to us, and the treatment is often so simple, that we do not take the trouble to observe or note down the peculiarities of different cases and their behaviour under different plans of treatment.

MILKY JUICE OF *JATROPHA CURCAS* A POWERFUL HÆMOSTATIC.

By Baboo UDHOY CHAND DUTT,

Civil Medical Officer, Noakhally.

THE milky juice of the *Jatropha curcas* (*Bhágbherendá, B.*) is used by the Natives for the purpose of arresting bleeding from wounds. A correspondent of the *Bengali Medical Journal*, some time ago, published a case in which it was said to have checked severe bleeding from a wound immediately on application. I had heard of this use of the plant years ago, but until lately did not test its virtues. Having done so now, it appears to me to be the most powerful hæmostatic that we know of, as will appear from the following cases:—

Tameezudee, aged 40, was admitted into hospital on the 14th July last for a severe contused wound on the head, three inches long, and exposing the bone. Erysipelas of the scalp and head set in, but it was subdued by large doses of liquor ferri perchloridi. A limited abscess, however, formed a little below the wound over the forehead. This was opened on the 22nd July. After the pus was evacuated blood began to well out from the cavity of the abscess in a copious stream. Pressure with wet lint was applied for a considerable time without success. Besides, owing to the great tenderness of the part, pressure caused intolerable pain to the patient. Alum lotion, turpentine, and lastly injection of strong solution of perchloride of iron were successively tried but without any appreciable effect. At this juncture, and while I was thinking of laying open the cavity of the abscess for securing the bleeding vessel, our vaccinator, who had once stopped bleeding from a cut in his own hand by the juice of *Bhágbherendá*, suggested its use. A little of the juice was at once procured from the hospital hedge, and a bit of lint wetted in it introduced into the abscess. The blood seemed to be at once curdled up, and the hæmorrhage stopped immediately. The abscess was shortly after dressed with poultice, and the patient sent to bed. He was discharged cured on the 16th instant.

Moonshee, aged 30, was brought to hospital on the night of the 14th instant, with a broken piece of bougie impacted in his urethra behind the scrotum. He said that he had stoppage of urine from a calculus having entered and blocked up the urethra, and that a village quack, with a view to push the calculus back to the bladder, had introduced an old bougie. It broke in the urethra, and the broken portion was left in it. Repeated attempts were made to press it out, and an incision was also made in the penis for extracting it through the opening, but without success. These manipulations caused the penis to be inflamed and swollen, and the patient was at last brought to hospital suffering from retention of urine for two days, the bougie impacted within the urethra, and the penis inflamed, swollen, and œdematous. A full dose of chloral being given for the night, the patient was operated upon the next morning. An incision was made in the urethra in front of the bougie with the aid of a grooved director introduced through the meatus, and the bougie and calculus extracted through it. Owing to the highly congested state of the parts bleeding from the surface of the wound was very copious. Pressure with wet lint was tried for a time but without success. A bit of lint, moistened with the juice of *Jatropha curcas*, was now applied to the wound, and after this another drop of blood did not trickle from it. I trust that a perusal of the above cases will induce others to test the efficacy of this wonderful hæmostatic, and to bear their testimony to it. The milky juice of the *Jatropha curcas* does not cause pain or act as a caustic. It simply curdles up the blood, and covers the bleeding surface with a tenacious layer. Drury, in his Useful Plants of India, 2nd edition, p. 268, observes "the juice of the plant is of a very tenacious nature, and if blown forms large bubbles, probably owing to the presence of Caoutchouc." He also states that "the milky juice of the plant is said to possess a healing and detergent quality, and to dye linen black." I may add that it has no injurious effect on open wounds, and that after its application they heal as readily as if they were treated with water dressing alone.

A MIRROR OF HOSPITAL PRACTICE.

CASE OF MADURA FOOT.

By Surgeon J. CLEGHORN, M.D., *Joint Civil Surgeon, Allahabad.*

THE following case of madura foot is published in reply to the call made by Dr. Carter in his letter which appeared in the August number of the *Gazette*.

The patient was a Brahmin, aged about 45 years, by occupation a cultivator, born and residing in a village in Gwalior territory, situated about forty miles south of Etawah, the station in which I at the time officiated as Civil Surgeon.

The history of the case was briefly as follows:—A small swelling or "*phora*" appeared on the upper surface of the left foot about three years previous to the date of the patient's visit to the dispensary. There was no history of guinea worm, injury, or apparent exciting cause. The chowkidar of the village, who had lately come from another zillah, had a similar swelling of the foot, but no permanent resident of the village was affected.

The foot presented the following appearance:—The swelling commenced rather abruptly over the first row of tarsal bones, gradually increasing till it assumed an almost globular form over the distal half of the metatarsal bones; it was more rounded and protuberant on the plantar than on the dorsal aspect of the foot; the first two phalanges of the toes were absorbed into the swelling; the whole surface, more particularly the dorsal, was studded with well-defined elevations, oval in shape, varying in size from a split pea to a four anna piece; the skin in the centre of these elevations was thinned, but no breach of surface was detected; pain was not a prominent symptom, the patient simply complaining of a dull heavy feeling in the part. The foot was removed at the ankle joint by Syme's operation, with a successful result.

The following were the appearances observed on dissection:—

The projections on the surface contained dirty purulent matter and numerous roe-like bodies; the soft tissues of the foot on longitudinal section appeared as a dark coloured disorganized mass, containing irregular shaped cavities full of dirty coloured pus and roe-like particles; there was no tunnelling, such as is described in Aitkin's Practice of Medicine; the black matter did not extend posteriorly beyond the first anatomical

row of tarsal bones, and the disease was limited by a well defined margin, which though irregular did not blend within said prolongations into the contiguous healthy tissue. The blackened disorganized tissues adhered firmly to the periosteum, but the bones and cartilages of all the joints appeared to be perfectly healthy.

Numerous microscopical examinations were made of the black matter, the roe-like particles, the purulent fluid, the textures contiguous to the disease, the cartilages and the cancellous texture of the bones, but no fungus elements were found. On boiling portions of the black mass in liq. potassæ, and teasing them with needles, mycelial looking fragments were noticed on two occasions, but these were understood to be due to splitting of the fibrous texture. Large fat cells of uniform size were in great excess and seen everywhere, and in appearance were not unlike the spores freed from their contents, depicted in Aitkin's Practice of Medicine, in the article treating of this affection.

Allahabad, 21*st August* 1874.

HOSPITAL OF 26th MADRAS NATIVE INFANTRY.

CASE OF TRAUMATIC STRICTURE OF URETHRA TREATED BY PERINEAL SECTION.

By Surgeon C. Lloyd, M.D., 26*th Madras Infantry*.

Private R.———, aged 35, 17 years' service, was admitted into hospital on the morning of 17th February 1874, complaining of being unable to pass his urine except by drops, which he states has been the case for ten days previous to his admission. He gave the following particulars regarding his illness:—

History.—When on detachment duty, about two months previous to admission, at Ernacollum, whilst in the act of getting into a boat, he slipped and fell on the edge (or gunwale) hurting his perineum, thereby causing some laceration or rupture of the urethra, evident from the intense pain in the part, which was followed by profuse bleeding from the urethra, but without causing any external wound.

Condition on admission at head-quarters here two months afterwards.—A very slight mark observable on the perineum, but the injured part of urethra could be felt under the finger quite hard and cartilaginous-like, and pressure caused some pain. He had noticed the stream of urine become gradually more narrowed until at length it could only be passed in drops, in which state he was when I saw him. The usual signs of stricture were present, frequency of micturition, &c., and a burning sensation along the urethra and orifice of meatus before and during micturition.

An attempt was made to introduce silver catheters from No. 8 downwards, which failed to pass beyond the seat of stricture; opiate draughts and warm bath were used, and No. 1 silver catheter again tried and proved unsuccessful. The patient after this became feverish, with hot and dry skin, rapid pulse, furred tongue, and constipated bowels. Had salines and antipyretics, and at bed time Dover's powder.

On the abatement of fever catheterism was tried and failed. Pain was then complained of about the seat of the stricture, and to the perineum was applied unguentum belladonnæ.

No. 1 gum elastic catheter was used, but failed to pass the stricture. He always continued to pass his urine in pretty fair quantities but in drops. After this he complained of great tenderness about the junction of the bulbous and membranous part of urethra externally, attended by rigors and a feverish condition of body. Two leeches were applied to the perineum, and antipyretics exhibited.

An attempt was then made to pass an instrument whilst under the influence of chloroform, but failed. The abscess was opened by a free incision in the median raphe anterior to the bulb which gave exit to a quantity of thick pus.

From this time he had no fever, until a week afterwards, when it again attacked him preceded by rigors. Under the usual treatment it soon abated. With this exception the general health of the patient continued good.

In consequence of the failure of all attempts to introduce an instrument into the patient's bladder, having adopted every means, as already noted in the case, *viz.*, rest and constitutional treatment in addition to the most careful and repeated manipulations under chloroform, and deeming the stricture completely impermeable to an instrument, I resolved to perform perineal section.

March 27th.—Having previously had an enema adminstered to clear the rectum, at 2 P.M. the patient was placed on the operating table, and put under the influence of chloroform. No. 8 silver catheter was introduced into his urethra and passed as far down as the obstruction permitted. He was then secured in the lithotomy position, and the instrument entrusted to an assistant, who at the same time drew the scrotum forward, keeping the point of the catheter well against the obstruction. An incision was then made through the skin and cellular tissue in the middle line of the perineum along the raphe from over the point of the catheter to within some little distance from the anterior margin of the anus; a few deeper incisions exposed the point of the catheter. A loop of stout ligature thread was then passed through each margin of the incision embracing the mucous membrane of the urethra close to the stricture, so as to open out the passage, thus dispensing with hooks or fingers which might intercept the view. A very fine grooved director was tried to be introduced through the contracted portion of the urethra, but proved unsuccessful. I however succeeded in introducing the point for two or three lines, when having made a careful incision so far I was again enabled to follow the track of the contracted canal for a short distance, until, owing to the increasing hardness of the tissues, and complete obliteration of the passage, there was no alternative left but literally to dissect through the structures in the median line endeavoring to follow the urethral canal as closely as possible. At length having restored the continuity of the passage No. 6 catheter was introduced into the bladder, giving exit to a quantity of urine. The instrument was then tied in by tapes, and the wound in the perineum stitched; scarcely any hæmorrhage took place. An opium suppository was introduced into the rectum, and carbolized oiled lint dressings applied to the perineum.

Chloral draught at bed time. The following morning strong reaction had set in with a quick bounding pulse (125), hot skin, &c. Some urine was drawn off. In the evening the pulse became quieter, he complained of scalding along the urethra, and was doing as well as could be expected. The silver catheter, having been more than 48 hours in, was withdrawn, and No. 8 introduced without much difficulty. The wound discharges healthy pus, and is gradually closing.

The next day (April 1st) No. 10 gum elastic catheter was introduced, No. 8 having been withdrawn. Shortly afterwards he became feverish, the right testicle became enlarged and very painful; this was treated by hot fomentations and scarification, with repeated small doses of tartar emetic, the affected gland being well supported on pillows; afterwards by strapping.

April 9th.—No. 9 silver instrument was easily passed, and retained for about half an hour. Patient was able to pass a tolerably thick stream after this, but a small quantity escaped through the incision in the perineum if a catheter was not continually passed when required.

Patient was doing very well after this, had good nourishing diet and tonic medicines, until again the testicle commenced to swell and grow painful from the irritation of the instruments.

Under treatment, however, it soon became normal in size and less sensitive, and Nos. 9 and 10 were passed with little difficulty.

After this patient continued to do very well, and the size of the catheters passed was gradually increased; all this time the wound in perineo was healthily granulating, discharging a little pus, still allowing the escape of a small quantity of urine. He then learnt to pass his own instrument (No. 10 gum elastic catheter) both for micturition and before defecation, so as to prevent any urine escaping through the wound whilst straining, and by strictly keeping up to this the wound gradually closed. Before he was discharged from hospital, which he left on June 17th, No. 12 silver catheter easily entered the bladder, the perineal wound had completely healed, he had discontinued the use of the gum elastic catheter, and was able to pass his urine in a natural thick stream.

On several occasions since his return to duty I have had him up to hospital, and passed No. 12 silver instrument with the greatest ease, thus proving the continued patency of his urethra.

Remarks.—This case is an example of a dense cartilaginous stricture of traumatic origin, involving nearly three-quarters of an inch of the membranous part of the urethra, and subsequently becoming complicated with abscess and fistula in perineo, in