

Fresh abscesses subsequently appeared; and she was never able to leave her bed nor to straighten her knee. When admitted, her knee was bent nearly at a right angle; the tibia and fibula were displaced backwards; there were several openings along the line of the tibia from knee to ankle, dead bone being seen at one place for an inch, and here a small artery could be seen pulsating. There was no movement in the knee, and the ankle was not of much use. There was a good deal of pain in the leg, and considerable discharge. On Nov. 7th the patient was placed under chloroform, the leg was bandaged with an elastic bandage from the foot upwards, and Esmarch's india-rubber band tied above the knee. Amputation was then performed at the knee-joint. Partial ankylosis had occurred. The extremity of the internal condyle of the femur was removed, the other parts being healthy. The popliteal artery was ligatured, and torsion applied to others. The stump was fixed upon a splint, and the wound dressed with dry lint, covered with cotton wool. Pulse 112, small and feeble; temperature 99.2°. She had a quiet night and slept well, but felt sick; she, however, was able to take milk, wine, and beef-tea without vomiting. She had a little headache on the 9th, which continued.—28th: She had progressed without interruption, excepting the nausea after eating and occasional pains in her leg, principally in the night. The flaps had now nearly united, there being some slight discharge coming from the natural opening left in the anterior flap.—Dec. 13th: She had suffered a great deal of pain in the stump, especially at night. Had felt very sick, and vomited on the 9th. She was able to sleep but very little, and had slight diarrhoea. Poulitices had been applied to the stump, which relieved the pain; but the nausea still remained, as did also the diarrhoea.—22nd: The leg was improving, only a slight discharge appearing; the diarrhoea had ceased, but returned again, and continued up to the date of her discharge from the hospital. She had also suffered a good deal from pain in the abdomen and shooting pain in the stump, which disturbed her rest. She was, however, able to get up on the 2nd of January, 1874, looking much better, and left the hospital on the 3rd. One month later she was well and about.

CASE 43. *Chronic osteo-arthritis of knee-joint; amputation at the joint; recovery with an excellent stump.* (Reported by Mr. Bottamy.)—Thomas S—, aged forty-eight, a porter, was admitted into Guy's Hospital, under the care of Mr. Bryant, with extensive disease of the right knee-joint. He had been a healthy man till ten years ago, when he had scarlet fever, and after that he had been subject to rheumatism. Two or three years ago he first noticed some swelling in his right knee, and this had gradually increased. For some months he had been unable to walk or work. On admission the right knee was much swollen; it measured in circumference 21½ in., the left measuring only 14½ in. The condyles of the femur were immensely enlarged, and crests of new bone surrounded the condyles. The inner condyle was much longer than the outer. The head of the tibia was expanded and altered in shape. The leg was like a flail; it could be moved and bent in any direction; all its ligaments were gone. Amputation was suggested and consent obtained, it being clear that nothing less was of use; and with such a limb, however artificially supported, the man could not work. It was consequently performed by Mr. Bryant on January 11th, 1870, the leg being taken off at the knee-joint, with a long anterior and a shorter posterior flap, the arteries being twisted. The operation was followed by little or no constitutional disturbance, and convalescence went on steadily and well. It was retarded a little by the exfoliation of a small shell of bone from the edge of the internal condyle of the femur, but nothing more, and the formation of one or two abscesses; but he left the hospital on March 25th with a strong stump that could bear any reasonable amount of pressure, and could support his body. As an example of amputation at the knee-joint it was very good; but, considering the condyles of the femur were expanded and thickened from rheumatic disease, the result was most satisfactory. The head of the tibia after the amputation was seen on its inner half to have been ground down for more than one inch by the inner condyle of the femur. All the articular cartilages were gone.

Remarks.—These eight cases are, I think, enough to prove the proposition I have advanced. In Case 36—one of disease of the knee secondary to disease of the tibia, that occurred in 1863—I wrongly amputated above the knee, and

as a consequence had a secondary osteitis and necrosis to contend with. Had I at that time my present knowledge, I should have taken the leg off at the knee-joint, when no such complication as I have recorded would probably have taken place. In Cases 37 and 38, both of disease of the knee, the flaps were brawny, and yet a rapid repair followed; the division of tissues infiltrated with inflammatory products having no injurious influence. In Case 39—one of disease of the knee-joint—albuminuria complicated the treatment, and yet no bad result followed an amputation at the knee-joint. In the other cases, four in all, amputation at the knee-joint was performed through the diseased tissues, with a good result. In all the cases the diseased parts were alone removed; no healthy tissues were sacrificed for the sake of the operation; and in all good results ensued.

(To be concluded.)

ON THE PRESENCE OF A FILARIA IN "CRAW-CRAW."

By SURGEON JOHN O'NEILL, M.D., R.N.,

H.M.S. "DECOY," CAPE COAST CASTLE.

(Communicated by the DIRECTOR-GENERAL OF THE MEDICAL DEPARTMENT OF THE NAVY.)

AMONG the natives of the West Coast of Africa there is of frequent occurrence a peculiar skin disease called the *craw-craw*. Its intractability, contagiousness, and irritating nature so aroused my attention that I was induced to bestow much time on its microscopic examination, and succeeded at length in discovering a filaria which I believe to be the immediate cause of the complaint. I shall make some remarks on the nature, appearance, &c., of the *craw-craw*, and then proceed to the mode of procuring, and the description of, the filaria.

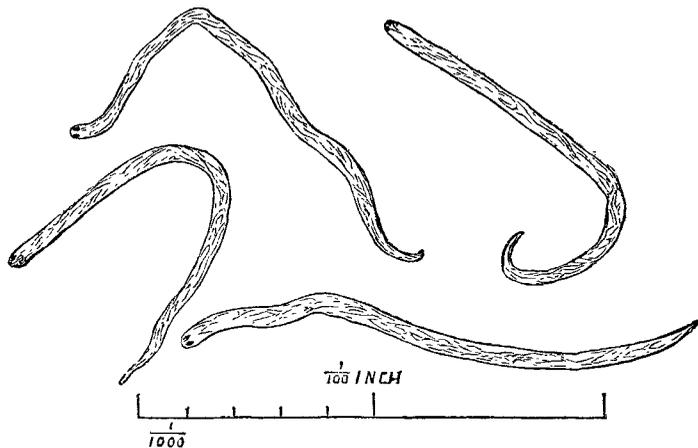
At first sight a well-marked case suggests the presence of extensive scabies in all its stages of development—the papule, the vesicle, and the pustule; showing itself first in the clefts of the fingers, front of the wrists, and back of the elbows, seldom being found on the face, and always accompanied with intense itching. It should be stated that all the cases examined, about six in number, were in the persons of negroes, where the native hue of their complexion obscures the blush which, in the case of a "white man," would surround every eruption accompanied with irritation. The papules arise singly and at irregular intervals, increase to the size of a pin's head, feel firm to the touch, and, on account of the reason above stated, appear of the same colour as the surrounding integument. In some cases the papules arrange themselves in a crescentic form, like ringworm; still it appears this is accidental, and that the separate and scattered distribution is the more common. In about two days' time the papule becomes converted into the vesicle, with very little increase in size, and in the course of a couple of days the pustule is developed, rapidly enlarging, and uniting with those in its immediate neighbourhood. In the height of his suffering the patient tears the pustules, and their liberated and desiccated contents produce large and unsightly crusts. Night or day produces little alteration in the amount of itching, the cool of night tending, if anything, to lessen the irritation. The contagiousness of this disease is so well known that those affected are most studiously avoided. Three days' time is said to be the period at which the complaint shows itself after productive contact, and it is popularly believed that, though a person affected should, in search of its riddance, proceed to the Cape of Good Hope, or some other cool latitude, the disease, which thus merely becomes latent, will burst out with all its former vigour when the unfortunate patient returns to the warmth of the tropics. Sulphur, so beneficial in scabies, is here of doubtful efficacy, and the nostrums of the native "medical man" have frequently failed in bringing relief after six months' application.

Having placed the contents of a pustule beneath the microscope, nothing could be seen except pure pus-corpuscles; the vesicle gave no further information, and it was the papule which was at length successfully examined.

After many trials I find the readiest way to procure the filaria is to take between the finger and thumb a fold of the skin, so that the papule will be the highest point, then with a very sharp scalpel slice off the epidermis, which may be discarded; now take another slice, which will remove the base of the papule and the cutis vera. This film, moistened with a drop of water, and magnified about 100 diameters, will very likely contain at least one filaria, easily detected in the field by its violent contortions. Thread-like in form, at one time undulating, and now twisted as if into an inexplicable knot, then, having rapidly untwined itself, it curls and coils into many loops. After some minutes beneath the microscope the motions of the little worm become less energetic, and it spends the last moments of its existence in gradually extending itself to near its full length. Measuring it now we find its length about $\frac{1}{100}$ inch, and its breadth about $\frac{1}{2000}$ inch, and with the exception of the abruptly pointed tail the filaria is of nearly equal breadth throughout its entire length. At the head, or blunted extremity, two small dots are noticed, but their nature could not be determined.

If the scalpel used be not sufficiently sharp to completely remove the slice to be examined, it should be detached by means of scissors, and not with forceps; and if the section be taken at a sufficient depth, five or six filariæ may be seen in the field together, though the pain thus caused the negro has prevented me from obtaining many such specimens.

The accompanying drawing is taken by means of the camera lucida.



Filariæ in "Craw-craw" ($\times 200$ diameters).

I have to return my best thanks to Dr. Thomson, Glover Expedition, Addah Fort Hospital, for having placed at my disposal those cases of crawl-crawl which were under his care.

HISTORY OF A CASE OF PYÆMIA IN PRIVATE PRACTICE,

IN WHICH RECOVERY TOOK PLACE AFTER EIGHTEEN ABSCESSSES HAD OCCURRED.

BY FREDERICK H. DALY, M.D.

THERE are many points of interest in the following history of a case of pyæmia occurring in private practice—indeed, some features of the case are almost, if not quite, unique. I may just draw attention to a few.

1. The origin of the pyæmia was a small carbuncle at the back of the neck. There was no possibility of contagion in the case, and the hygienic surroundings of the patient before the attack were everything that could be desired.

2. The almost complete symmetry of the abscesses, occurring, as will appear, in nearly the exact same position upon both sides.

3. The fact that although several of the abscesses were in the immediate vicinity of joints, there was no abscess in the cavity of a joint during the whole progress of the case, neither was there any internal abscess.

4. The cessation of discharge from the existing open abscesses when a new one formed elsewhere, as if the formation of a new abscess starved the old ones.

5. The enormous quantities of stimulants taken by the patient, and the very large doses of steel and quinine given, without any very apparent good or bad results. Half an ounce of tincture of steel and twenty grains of quinine were taken *each day* for months.

6. The administration of mercury in an asthenic disease like pyæmia.

7. The presence of albumen in the urine for one day only.

8. The fact that there was no rigor or sweating preceding the formation of any of the large earlier abscesses.

9. The register of temperature twice daily for such a lengthened period in a case of pyæmia.

To the above interesting points in the case Mr. Jonathan Hutchinson, who saw the patient frequently with me in consultation, and who kindly read over my notes, has added the following remarks:—

(a) In connexion with the absence of rigors in association with the abscesses, it is worth noting that when, late in the case, erysipelas attacked the skin a rigor of considerable severity denoted its onset.

(b) Although there was never any suppuration in any joint, yet several of the joints were at different times very painful, and in the knees it was certain that there was for a time considerable effusion.

(c) Through the greater part of the case the patient was of an earthy pallor, almost cadaverous.

(d) The excessive sensibility of his lower extremities, especially of his feet, was very marked. This hyperæsthesia led him to dread the slightest touch or movement. For months he lay with his legs absolutely still, so far as voluntary movements were concerned. Probably the state of fixation, from inability on the part of the muscles to relax, which existed during the early part of his convalescence was due to this long-continued period of extreme rest. He kept them perfectly straight, and would not endure the least suggestion of movement of any joint.

(e) In the earlier part of the case, most of the abscesses, which when opened contained unmixed pus, began, after a day or two, to drain away a thin blood-stained fluid. This occurrence, which was repeatedly noticed, suggested that there was a tendency to the migration of red corpuscles as well as of the white ones.

On March 10th, 1873, I was consulted by a Swiss gentleman about a small carbuncle on the back of the neck. It was not larger than a shilling, and had already broken. I ordered a linseed poultice and cerate of resin. He looked a little out of health, but not particularly so. He had, some years back, resided in India for five years, and suffered from dysentery there. Since then he has been very subject to boils. Has never had syphilis, and always been most abstemious. I recommended him to remain away from business for a few days, which he did, and to live generously, also prescribing citrate of iron and quinine. I saw him on the 11th, 12th, and 14th, when the little carbuncle had healed, and he expressed himself as feeling much better and ready for business.

On the 18th of March I was again sent for to see him, and he informed me that "he was suffering from rheumatism"—that "his back and some of his joints were painful." He certainly had intense pain in his back, and there were pains flying about the limbs and joints. He was sweating a very little; the urine was loaded with lithates and very acid; temperature 102.8° ; *had no rigor*; pulse 110; tongue coated with creamy fur. Ordered milk diet, and an alkaline mixture and ten grains of Dover's powder at bedtime.

19th.—No better. The pain in the limbs and joints is not complained of, but the back pain he describes as most acute and almost unbearable. He had no sleep, and his temperature at noon was 103° ; pulse, tongue, and urine the same as yesterday; bowels confined. The pain in the back is so great that he dare not move. Carefully examined the back, but could find no better explanation of the pain than rheumatism, and the general symptoms seemed to point the same way—such as the temperature, tongue, skin, and urine. To continue the same treatment, and take fifteen grains of Dover's powder at bedtime. I also got him a bed-chair with arms, in which he was able to sit and sleep in comparative ease.

20th.—No change; pulse and temperature the same, the