



Sketch Map of Gold Coast Colony, showing the Route of the Boundary Commission on the Western Frontier, and also the Distribution of Filariasis.

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## NATIVE METHODS OF TREATMENT IN WEST AFRICA

WITH NOTES ON  
THE TROPICAL DISEASES MOST PREVALENT AMONG  
THE INHABITANTS OF THE GOLD COAST COLONY

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DURING the visit of the Anglo-French Boundary Commission to the Gold and Ivory Coast Colonies in 1902 and the first half of 1903, as medical officer to the Commission, I had ample opportunity for investigating the interesting subject of medicine and surgery as known to the West African native.

My information was chiefly obtained from Kwauvi, a native of Popo, a coast village near Kwita, on the extreme east of the Gold Coast Colony.

This man knew nothing of European treatment, but had studied native methods for many years under his father. He had a wide reputation and an extensive practice among the natives at Kwita.

His fees varied, according to the severity of the case, from 2s. to £1, payable in money or in kind.

I was also provided with information by Kwaku Mensa, a native of Agunah, a bush village near Accra, who had lived and practised in the town of Sampa, British Jaman, for five years. He derived his knowledge, which was handed down from generation to generation, from his mother, a fetish priestess, known as *Akonfu*.

Native surgery among Gold Coast natives is in as primitive a state as among most African tribes. Efforts at cleanliness

are seldom attempted, and, from the nature of the applications and their preparation, quite impossible. Why tetanus is not more common is a marvel.

Their methods, as far as cleanliness, or the want of it, is concerned, are indeed but little better than those in vogue among the tribes of the Hinterland who commonly apply dung and earth to their wounds.

I. Fractures are as a rule left untreated; in the case of a fractured phalanx, the finger may be amputated. One native whom I saw in the forest suffered from an ununited fracture of the right humerus, the result of a blow from a falling branch fifteen years before. The only treatment he received from a native "doctor" was the application of pieces of wood to the arm for three days, smeared with some herb preparation, after which nothing further was done.

The flail-like limb could only be raised to the level of the shoulder, and apparently a false joint had formed between the ununited ends of the bone.

The case of a boy whom I saw in a northern village was, fortunately for him, treated differently.

Two months previously he had sustained a fracture of the right femur. When I saw him, he was lying on the ground of the hut with the right leg partially embedded in a trough dug in the earth, and fixed in position with pegs driven in on each side. Firm union had resulted without shortening of the limb, and soon after he was at work again in the fields.

II. Dislocations.—No attempt is made at reduction. In shoulder dislocations a pad is placed in the axilla, and the forearm is bandaged across the chest to the opposite shoulder.

III. Wounds are never sewn up.

Hæmorrhage is stopped by plugging the wound with a mixture of the powdered roots of the *Fefi*,<sup>1</sup> *Danwe*<sup>2</sup> and *Sru* trees.<sup>3</sup>

Hæmorrhage from a wound is also treated by applying the black juice obtained from the crushed leaves of the *Funtum* or

<sup>1</sup> *Fefi*.—A common tree in the Gold Coast Colony growing to about 10 feet in height. Seed about 1½ inches long.

<sup>2</sup> *Danwe*.—A common shrub about 2 feet in height.

<sup>3</sup> *Sru*.—A shrub of about 6 feet in height.

rubber tree. After this application the wound is dressed with the leaves of the *Satadua* shrub, native pepper grains, and palm oil in the form of a paste. If a wound becomes inflamed, a paste obtained by crushing up the fresh leaves of *Sru* is applied to the affected part.

IV. Inflammatory swellings are treated, at Kwita, by the application of a cold paste of *Sru* leaves; at Accra, by applying a paste of the leaves of the *Kakapimpi* tree and pepper grains; both are intended to assist in the termination of the inflammation in abscess, or *Fumo* in Kwita language.

When the presence of pus is recognised a small incision is made with a knife, and the pus is allowed to drain away; the wound is afterwards merely bathed with hot water.

If in the course of severe cellulitis the fever becomes high and attended with rigors, the affected part is dressed with a powerful paste obtained by crushing the root of the *Nyati* tree with palm wine. In addition a purgative is given composed of crushed *Nyanyara* leaves mixed with clay and about 6 oz. of palm wine. This mixture is heated by dropping in a red-hot stone, and taken while still warm.

Kwauvi attached great importance to this remedy, and regarded it as infallible, however serious the state of his patient.

V. Ulcers=*Fla*, are washed with a lotion formed of a decoction of the seeds of *Sru*, *Danwe*, and *Mameyati*, and dusted with the ash of the seeds or young flowers of these plants.

Another method in use is to crush up the fibre of the leaf of the pineapple, and mix it with verdigris obtained from the native brass pots containing rancid shea-butter. The mixture is spread over the surface of the ulcer and covered with a leaf.

YAWS=*Agitoch* (Kwita), *Dobé* (Fanti), *Gigelli* (Mende Sierra-Leone), is an exceedingly common skin disease in all parts of the Gold and Ivory Coast Colonies. It occurs at all ages, but is most prevalent in childhood between the ages of one and five. It is certainly contagious, spreading from one child to another, and occasionally from child to parent.

A pre-eruptive stage is described by natives as occurring

among adults. The patient is said to suffer from malaise, and the joints, especially the elbows and knees, become swollen and painful. Fever is not marked. No headache, vomiting or diarrhoea occur.

The eruption appears as a soft warty granuloma covered with a purulent vesicle, which ruptures, leaving large dried scabs overlying the granuloma.

The whole body may be scattered with these granulomata, which, when covered with the dry scabs, have quite a limpet-like appearance. Many attain the size of a florin.

Infantile and adult yaws are regarded by the natives as the same disease, and no age limit is recognised.

That the disease is contagious is well known, and no effort is made to isolate infected children. In fact, the parents in many places encourage rather than otherwise the spread of infection, under the impression that a child, who has properly recovered from the disease, afterwards enjoys better health than if he had never had it.

In some places the parents go so far as to inoculate their children with the disease.

As to its origin, native opinion differs. Kwauvi, the Kwita "medicine man," was convinced that syphilis had nothing to do with either adult or infantile yaws.

Kwaku Mensa, the Accra native, however, thought that syphilis was the cause in both children and adults, and that unless the disease was treated at the time of the eruption it was followed after some years by ulcerations of the nose and palate. He knew of no cases of primary syphilitic sore preceding yaws. I could obtain no history of syphilis from those adults whom I saw suffering from the eruption, nor from those who had had it, though some stated that the yaws followed sexual contact two to three weeks previously.

In the course of the general eruption granulomata frequently appear on the penis and scrotum.

Granulomata on the soles of the feet are very common; they occur probably as the result of chronic irritation of dirt in fissures of the sole, and are not accompanied by any general eruption on the body.

Yaws occurring in the first six months of life is regarded as

having been contracted from the parents. Should the eruption occur in the first four weeks it not uncommonly proves fatal, and the mother is supposed to have had the disease internally.

Cases in newborn and still-born infants are known to occur and are supposed to result from parents who at the time were not suffering from yaws, but were nevertheless syphilitic. So important a point, however, requires careful proof.

The syphilitic origin attributed to yaws by leading authorities on tropical medicine is, from what I have seen, exceedingly difficult to prove. One is not justified in stating more positively than that in a certain number of adult cases the infection is possibly conveyed by sexual intercourse, when one or the other is suffering from or has recently had the disease.

Yaws is so very much more prevalent among children than adults that were it due to congenital syphilis one would expect to find other signs of hereditary taint. But with one possible exception which I mention below among the sequelæ of yaws, I was unable to find any evidence to support the theory of syphilitic origin.

Another opinion held by natives is that yaws is contracted through lying on a certain kind of dried grass.

*Treatment of Yaws:* 1. At Kwita.—A preparation is used composed of iron chips and refuse from a blacksmith's anvil which have been well mixed in a copper bowl with the juice of four or five limes and heated to boiling. When cool the resulting paste is applied to the affected areas of skin.

In addition, the whole body is daily rubbed with a paste composed of ashes from the fire, and the pounded leaves of the *Basisa* shrub.

Cure is guaranteed in two weeks.

2. At Accra.—The leaves of the white koko yam are ground up with ironstone dust, and a little lime juice is added. The mixture is heated to boiling in the hollow of a native hoe, and when cool applied to each of the granulomata.

3. In Sefwi, a forest district close to the western frontier of the Gold Coast Colony, the leaves of a ground plant named *Tinta* (Sefwi), or *Toto-toto* (Fanti), are pounded up with the

juice of limes and heated. Then the paste is applied to the affected skin after cleansing the part with water.

I have seen a case thus treated cured in a very short time.

*European methods of treatment.*—Internally, mercury, iodide, and arsenic I found do no good at all.

Externally, dusting with boric acid, applying boric acid ointment, or touching each granuloma with silver nitrate, copper sulphate, or a strong solution of potassium permanganate are occasionally of value.

*Sequelæ.*—Untreated yaws, particularly if the massage of the limbs and body is neglected, is said to be followed in the course of one or two months by serious bony deformities and contractures.

1. The osseous deformities consist most commonly in antero-posterior enlargement and forward curvature of the bones of the shank. I have seen two such cases in adults which were attributed to untreated yaws in childhood. The resemblance of the changes in the tibiæ to those occurring in osteitis deformans, and occasionally as the result of hereditary syphilis,<sup>1</sup> is worth noting (*vide* illustration).

Knock-knee may result, and also enlargements of the epiphysial ends of the phalanges and of the arm bones. Enlargements of other bones, such as the inferior maxilla, femur, clavicle, and ribs, are not known. In two other cases I saw bony deformities attributed to untreated yaws which closely resembled rickets. One was a boy, æt. circ. 5, in whom the rickety changes were well marked.

The head was large with marked bossing of the frontal and parietal bones. There was slight curvature of the left radius and ulna, and marked anterior curvature with elongation and enlargement of both tibiæ.

The second case was a woman, æt. circ. 20, a dwarf who owing to her deformity had never walked. The head was large but not bossed; there was marked curvature of both humeri and of the bones of both forearms, and well-pronounced anterior curvature of both femora and tibiæ. The chest and spine appeared naturally formed.

<sup>1</sup> Fournier. Syph. Hered. Tardive, p. 263.

In the four cases quoted no signs of congenital syphilis could be found in the teeth, eyes, or face.

2. Contractures of the arm and hand, and occasionally of the legs, are also said to occur.

Attempts are made to straighten the flexed limb by massage with a paste made from the leaves of the *Basisa* shrub.

3. Mutton fat as a lubricant to the skin, after an attack of yaws, is said to produce loss of pigmentation and patches of leucoderma.

GUINEA-WORM (*Filaria medinensis*), *Nja* (Fanti), *Dippa* (Kwita), *Kbulé* (Mendi), is excessively common throughout West Africa. During sixteen months spent in the Ivory and Gold Coast Colonies, I treated 156 cases. The mode of entrance of the parasite into the body has been shown to be through drinking water containing the minute water-insect, *cyclops quadricornis*, which acts as an intermediary host in carrying the Guinea-worm embryos.

The embryo, on reaching the subcutaneous tissues through the circulation, develops until it reaches maturity.

The fully-developed worm varies considerably in length, but as a rule measures between 2 and 3 feet. Its diameter is about  $\frac{1}{8}$ th of an inch. The head is rounded off, and the tail abruptly bent into a fine hook, by which the worm retains its hold.

Only the female worm is ever found in the body, and her whole length is occupied by an enormous uterus which is crowded with actively motile embryos. It is supposed that impregnation of the female occurs while in the immature stage before entering the human body, and that the male dies after his function has been performed. The adult worm works her way to all parts of the surface of the body, but appears far more commonly in the legs and feet. Of the cases which came under my notice, 77 per cent. occurred in the legs, of which 23 per cent. were in the feet, 9 per cent. in the arm, 4.5 per cent. in the abdomen, 4 per cent. in the scrotum, 3 per cent. in the back and buttocks, 1 per cent. in the face, and 1 per cent. in the penis.

Before the head makes its way through the epidermis, the



worm is often distinctly visible as a slender twisted cord under the skin.

Even previous to its appearance under the skin, the worm makes itself felt by tickling and dragging sensations in the affected part. The head, on reaching the surface, causes the epidermis to be raised up in the form of a vesicle, the size of a shilling piece, containing sero-purulent fluid.

If the loosened epidermis be removed a thick slough is often found covering a circular ulcer, in the centre of which appears the head of the worm.

Two methods of treatment to the exposed worm may then be applied.

1. The native method of douching with water, which is slow, but on the whole reliable.

The contact of the cold water causes the worm to protrude the uterus from the oral aperture in the form of a thin membranous bag containing a slightly opalescent fluid swarming with minute embryos. The protruded bag then ruptures and sets free a multitude of actively motile embryos. In fact, a stage in the natural method of propagation is thus artificially produced.

By continued douching an inch or more of the worm itself is expelled; this portion is carefully attached to a small splinter of wood, round which the worm is wound.

A few turns are taken each day, until by degrees, in a favourable case, the whole worm is removed. Owing to the hold by means of the tail, great care is required to avoid breaking the worm, an accident which may be followed by serious results; for the motile embryos, set free into the tissues, cause intense inflammation, and usually suppuration. Cellulitis and abscess may also be produced by the death of the worm under the skin, or by retraction after the worm has once appeared.

2. A second method has in recent years been introduced by Emily, a French naval surgeon. When applied with every antiseptic precaution, and in hospital, it has met with remarkable success.

By means of a hypodermic syringe, a few minims of a

1 in 1000 solution of perchloride of mercury are injected into the protruding worm. This causes death of the parasite, and after twenty-four hours the dead worm can be extracted. If the worm is not exposed, but is visible immediately under the skin, a few minims may be injected along its course. The worm is thus killed, and is supposed to become converted aseptically into a fibrous cord without cellulitis.

My experience of injection into the neighbourhood of the worm has been different. Although every precaution was taken, intense swelling of the part resulted, and eventually an abscess formed. This, I think, is to be accounted for by the solution of perchloride causing necrosis of parts only of the worm; in the intervening portions the still active embryos are set free into the tissues, and cellulitis and suppuration ensue.

3. In cases of great swelling and cellulitis, attended with much pain, great relief follows the application of belladonna ointment. The inflammation subsides, and the worm may give no further trouble for a considerable time. But until the whole worm has been extracted, the tail, owing to its hook, being the most difficult part to dislodge, the patient may become crippled at any time by the inflammatory swelling, which develops with extraordinary rapidity. Early incision and drainage are necessary, as soon as pus has formed.

If the worm appears in the immediate neighbourhood of a joint, synovitis almost invariably follows.

Of all tropical complaints among natives, Guinea-worm is one of the most discouraging to treat, and the most painful to suffer from.

No sooner has one worm been got rid of than another makes its appearance.

Many of the natives who came to me for treatment had five to ten Guinea-worms each, several had ten to twenty, and one as many as twenty-five at one time.

*Native Ideas and Treatment of Guinea-worm.*—It is thought that the worm in the undeveloped state gains entrance to the body either through drinking well-water, or locally through a wound in the foot when wading.

Considering the motility of the embryos, local infection is by no means improbable.

*Treatment.*—Whether there is attendant inflammation or not, the treatment of the exposed worm is the same.

The leaves of a plant belonging to the *Euphorbiaceæ* called *Addi* in the Kwita language, are pounded up with the juice of limes and applied as a paste to the exposed worm, and lightly round the ulcer.

This application is followed in three days by the death of the worm, which can then be extracted *in toto*, without inflammation or abscess.

Cold douching is also in vogue to tempt the worm to emerge. If an abscess forms, it is lanced and douched with hot water. A Mahomedan remedy consists in the application of a paste obtained by crushing rock salt with the brown seeds of a common shrub, and mixing well with oil.

The extracted worm is washed with hot water, and the application put on with a leaf every morning.

In three days the worm is killed and can be extracted.

VENEREAL DISEASE at Kwita is known generically by the name of *Appa*.

1. *Syphilis* is simply regarded as a local disease, attacking the genital organs, and is known as *Babadso* (Kwita), or *Babasu* (Fanti).

Secondary and tertiary syphilis are common enough, but are not recognised, and if the later manifestations occur they are not attributed to syphilis.

Syphilitic destruction of the nose and palate is simply known as *Och-hong*, owing to the nasal tone of the voice, and is not regarded as the result of *Babadso*.

Inherited syphilis is unknown to the natives.

*Treatment of the Venereal Sore:* 1. Kwita method.—Local. The leaves of *Danwe*, *Sru*, *Abundwa* (lime tree), *Kadoki*, and *Amadyeh*, and of two other trees are ground into a powder and applied daily to the sore.

General.—The roots of these seven trees are pounded up together with the eggs of "seven white ants" into a paste, some water is added, and the mixture is drunk every morning and evening for a week; by this time the patient is considered cured.

2. Ashanti method. The legs and tail of a chameleon are

roasted to a cinder. The ash is then mixed with gunpowder, and drunk with water every day for one week.

3. Fanti method. Leaves and roots of the rope tree are burnt with Guinea grains, and ground to a powder which is applied to the sore, and also drunk mixed with gin. Cure is guaranteed in one week.

Another remedy used is an infusion of the bark and roots of *Archi* and *Ofimba* with gin and water.

By Fantis, or coast men, yaws is considered to be the cause of what in all probability are tertiary syphilitic ulcerations. To these ulcers is applied the name *kokuram*; literally translated, "isolated," because the affected person is sent into the "bush" for treatment to avoid spreading infection. *Babas*, the Fanti term given to ulceration of the glans, is not regarded as the cause either of yaws or of tertiary ulcerations. The ulcer is said to appear on the day after contact, and, unless treated, causes death.

*Gonorrhœa*.—*Asafu* or *Afu* (Kwita), *Sépu* (Fanti), is known to differ from *Babadzo*, or venereal sore.

Suppurating bubo and orchitis are recognised as complications, and rheumatism is said to be known as a sequela.

*Treatment*.—*Kwadi* root is chopped up with the fruit of the black papaw, mixed with mashed corn and water. This mixture is allowed to stand, and a glassful is taken three times a day. Free diuresis is produced, and cure is guaranteed in one to two weeks. Paraphimosis is treated by administering a drink of corn wine and native soap (*Adjani*). This causes diuresis, and the paraphimosis is then said to be easily reducible.

Corn wine is made by boiling maize with water and allowing it to stand in the sun.

*Adjani* is prepared by drying the skins of plantains and roasting them in the fire. The ashes are then mixed with the fresh bark of the silk cotton tree (*Bombax sylvestris*), and again roasted.

The mixture of the two ashes is boiled in a pot with water and well stirred the whole time.

On cooling, the thick paste which results is taken out and

moulded into black soap balls. These when dry are ready for use. Palm oil is often added to improve the quality.

*Circumcision* is universally practised on the coast. It is customary for a boy to be circumcised before he reaches the age of ten, but the operation may be performed at any age from one month to ten years.

At the ceremony a feast is given to the friends while the operation is carried out privately by a native doctor with a sharp knife.

The prepuce is buried and the bleeding wound exposed to the smoke of burning wood; then palm-nut oil is applied.

The boy is considered a coward if he resists or cries out.

After the operation a feast is held and presents are given to the friends. The circumcised then has his head shaved, and visits his friends with his person covered with a fan-shaped mat.

**SNAKE BITES AND THEIR TREATMENT.**—My information was obtained from a Sierra Leone Mendi carrier named "Blackman Trouble," who had a great reputation among his "brothers" for his skill in handling poisonous snakes and in treating their bites.

The *Black Cobra*, the *Horned Cerastes*, and the *Puff Adder* are the most venomous reptiles in West Africa. Their bites quickly prove fatal unless immediately treated.

The method of cure adopted by "Blackman Trouble" was a strange and complicated one.

His first step was to rub a few grains of gunpowder mixed with saliva into the punctured wound. He then chewed the leaves of a small ground plant known as *Jani*, and with the leaves still in his mouth sucked the wound.

After the wound had been thus "cleansed," he rubbed the chewed stalk of the *Tofā* leaf into the part.

A strip of young palm leaf about half an inch in width, or failing it, the bark of a twig of the *Foso tree*, is knotted in two places for a woman and in three places for a man, and then tied tightly round the limb above the wound.

A powder composed of a mixture of the ash of the *Jani*, *Tofa*, Palm, *Somba*, *Foso*, and *Fōfoi* leaves, and a few grains of gunpowder is finally well rubbed into the poisoned part.

In addition to undergoing this external treatment the victim has to drink an infusion of *Jani* and *Somba* mixed with gunpowder.

If vomiting follows, and, as might be expected, it usually does, the prognosis is favourable.

Protection from the effects of a poisonous bite is obtained by swallowing a few grains of the powder mixture, and by rubbing it into the hands, between the toes, and on each side of the heel.

"Blackman Trouble" also claimed the power of rendering a poisonous snake harmless. Before attempting to catch the snake he swallowed some of his powder, rubbed it into his hands, and placing some in his open palm blew it in the direction of the reptile.

Then with a lightning movement he suddenly seized the snake by the neck from behind, and forcing the jaws apart, spat chewed *Jani* leaves into the open mouth.

With his free hand he then squeezed the chewed and moistened stalk of the *Tofa* leaf into the gaping jaws.

The snake, on one occasion a *Horned Cerastes* which had been caught, was apparently stupefied. How long the effect lasted is uncertain, probably a repetition of the dose was necessary after a short time had elapsed. While acting as a carrier, this Mendi was at one time entrusted with a money-box, and, in addition to his load, carried a fine specimen of a Black Cobra which he had rendered harmless, at any rate to himself. Needless to say, his load was never molested.

Another remedy was described to me by Kwaku Mensa, a native medicine-man from Accra, whom I have already mentioned. His method was to scrape the wound with the point of a knife, and then to rub into the raw surface an extract of the leaves of the rope tree (*Isa*), obtained by crushing the leaves with water. Internally he gave a mixture of the powdered roots of the *Junjuna* shrub and *Isa*, together with Guinea grains (the seeds of *Isa*), diluted with water. The compound paste he afterwards applied to the wound. By means of this remedy Kwaku asserted that he had recently cured a boy who had been bitten by a poisonous snake.

## GENERAL MEDICAL TREATMENT.

1. Constipation.—*Nyanyara* leaves are pounded up with clay and mixed with 6 ounces of palm wine. The mixture is heated by dropping in a red-hot stone, and then swallowed while still hot.

2. Headache=*utripau*.—Native medicine is quite unable to explain the origin of headache, and constipation even is not regarded as a cause.

Kwauvi knew of no fatal case of headache. His remedies were only applied locally to the seat of pain.

- (1) Guinea grains ground into a paste.
- (2) Pepper and sand.
- (3) Ginger paste.

One or more of these are rubbed into the forehead, and then smeared, for the sake of appearance, in lines or curves over the painful part.

If the headache still persists and becomes very severe, small superficial incisions are made with a sharp knife between the eyebrows. This method of treatment is adopted for the relief of pain in any part of the body.

3. Disorders of the Eye.—“Sickness of the eye” is the generic name for all eye troubles, which are treated alike.

- (1) An infusion of leaves of the *Akrikon* tree is made with salt and water, and dropped into the eye.
- (2) The sap from twigs of the *Kwadi* tree may also be used to drop into the eye.
- (3) Ginger may be smeared over the eyelids.

4. Epistaxis and Nasal Catarrh.—Guinea grains (the seed of the rope tree) are pounded up with water and the liquid extract dropped into the nostrils.

5. Earache and Otorrhœa.—The leaf of the *Sabwe* tree is ground up with water and the extract dropped into the ear.

6. Caries of the Teeth is not uncommon. Extraction with the fingers only is performed when a tooth is loose.

Toothache is treated by rubbing Guinea grain paste into the cheek; if due to a decayed and hollow tooth, the tooth is plugged with a pounded mixture of the root of the lime tree and Guinea grains. Dental abscess is lanced.

7. Stomatitis and Glossitis occur in children, and are treated with a mouth wash made from the leaves of a grass plant—*Lagbanigbe*—which grows near the seashore.

8. Tonsillitis.—A severe inflammation of the throat is known, characterised by great pain, inability to swallow, to speak, or open the mouth. There is a foul discharge from the nose and mouth. The neck becomes much swollen, and the patient may die of suffocation after a week's illness.

*Treatment*.—A mixture of the powdered roots of *Kadoki*, *Abundwa* (lime tree), and black and red *Amaje* are applied to the throat externally. An infusion of their leaves is mixed with gin and given by mouth.

*Diseases of the Chest*.—Auscultation and percussion are, needless to say, quite unpractised as methods of diagnosis. Inspection is very little used except to define the position of the heart's apex beat, and to ascertain that both sides move equally. Displacement of the apex beat is recognised as a sign of disease of the heart only. Palpation is only used to localise pain. Cough, pain, rapid action of the heart are the recognised symptoms of diseases of the chest.

1. Cough = *Walomong*.

Two different kinds are known.

1. Curable, which may include bronchitis and pneumonia.

(a) Bronchitis. The treatment is the same whether the cough is dry, or accompanied by expectoration of mucus or blood.

(b) Pneumonia (?) = *Gbakeng-hela* or Children's Sickness, is recognised by straining cough, very severe pain in the chest, short breath, expectoration of tenacious sputa, red or yellow in colour, also by fever and hot, dry skin.

The fever is said to last one day, and the cough two weeks.

As the native name implies, pneumonia is common among children; it is known to be followed by empyema, which usually ends fatally.

A serious pleural effusion is quite unknown.

2. Incurable cough.

Phthisis is probably known under the onomatopœic *Bong-hē-ong*, characterised by chronic cough and loss of flesh.

No attention is paid to the sputa. Hæmoptysis may occur



in the course of a cough and prove fatal, but is not recognised as a feature of *Bõng-hě-õng*. Kwauvi was very positive on this point.

Treatment of all forms of cough : —

1. Internal. The roots of *Danwe*, *Sru*, and *Abundwa* are ground to a powder, and made into a drink with lime water and the boiled extract of their leaves. This is given three times a day.

2. External. The oil of shea butter is rubbed on to the chest.

II. Pain in the chest.

Whatever the cause of pain the treatment is the same. Powdered Guinea grains are rubbed into the seat of pain, and applied as a paste in decorative lines.

III. Palpitation and shortness of breath.

Recognised causes.

1. Disorder of the heart.

2. Over-exposure to the sun.

The native medicine-man diagnoses disease of the heart by palpitation and shortness of breath, and by the character of the pulse at the wrist, such as a too rapid or feeble pulse.

Treatment of heart disease.

1. *Kola* nut (a well-known cardiac stimulant), clay, and the leaf of *Gbô*, a small shrub, are mixed together and taken with gin and water.

2. *Danwe*, *Sru*, and *Abundwa* (lime tree) roots are given if there is much cough.

*Abdominal disorders*.—1. Vomiting.

*Treatment*.—The leaves of the lime tree or the juice of the fruit and the leaves of *Hesri* are heated in a pot with water, and a hot stone is dropped into the mixture.

Three half-pint doses of the warm infusion per diem are said to be sufficient to check the vomiting.

2. Dyspepsia.—*Mosũm kong*, literally “gripping pain in the belly,” is considered to be due to one of two causes.

(1) Most commonly constipation, cured by a purgative.

(2) Disordered stomach characterised by pain after food.

*Treatment*.—The roots of *Sru* and *Abundwa* and Guinea

grains are ground up with a small quantity of gin, and taken undiluted three times a day before meals.

3. Gastric ulcer, to judge from the history of hæmatemesis and dyspepsia, probably occurs, but, it is needless to say, unrecognised.

Hæmatemesis is said to be equally common among both sexes.

*Treatment.*—A piece of *Ilo* (chalk), the size of a pea, is powdered and mixed with lime juice. Cold water is added, and the preparation is then ready for use.

The remedy is said to be very efficacious, and Kwauvi had never seen a fatal case.

4. Diarrhoea and Colic = *Dô* ("sick belly").

*Treatment.*—A small shrub, called *Attākū*, growing to the height of 4 or 5 feet, on the coast and in the forest, is used.

The stem and branches are cut into small pieces, and ground together with the root of *Sru*. A small quantity of water is added, and the mixture is heated on the fire. When hot, a small amount of gin is added, and the drink taken while still warm. Three or four doses suffice to cure.

5. Dysentery = *Eh-hūng*.

*Treatment.*—*Ahāmé*, a small, spreading ground shrub, growing to a height of 2 feet, both on the coast and in the interior, is used.

The small sprigs bearing leaves are stewed in a pot with water and boiled for two hours. The concentrated infusion is taken warm, three times a day, in small doses, for ten days.

By this time the patient is guaranteed cured. Kwauvi was very positive as to the infallibility of the remedy.

*Complication.*—Three or four days after the onset of the dysentery, the patient is said to be invariably seized with a severe, sudden pain, vaguely referred to the hyphondrium; it lasts for three days, and disappears under the influence of *Ahāmé*. Unless *Ahāmé* is administered the case will end fatally.

6. Blackwater Fever, or Hæmoglobinuric Fever = *Idovévé* (Kwita), *Kākā* (Fanti), is certainly known to the natives as a sickness characterised by the passage of very dark or blood-stained urine. The drug employed by them in the treatment

is one which has been strongly advocated by the French colonial surgeon, Dr. Paul Gouzien, at the Thirteenth International Congress of Medicine, in 1900.

An infusion of the leaves of *Cassia occidentalis*<sup>1</sup> is found to prove very efficacious in rapidly increasing the flow of urine, and in ridding it of hæmoglobin and cell débris, and also in causing diaphoresis and evacuation of the bowels. The infusion is prepared by heating 15 grammes (3.75 drachms) of the recently dried leaves with 750 grammes (32 ounces) of water. The infusion is boiled for five minutes, and then filtered. The juice of a lime is added, and the drink sweetened according to taste.

Two to three pints of the infusion may be taken during the course of the day.

Besides its efficacy in cases of bilious, intermittent, and hæmoglobinuric fever, mentioned by Dr. Gouzien, it is certainly a valuable addition to quinine in the treatment of malarial fevers.

#### NATIVE MIDWIFERY AND GYNÆCOLOGY.

I could get no information from Kwauvi as to his knowledge of amenorrhœa or menstrual disorders. He knew that the menses occur every moon, and last three or four days, and that the period of gestation is ten "moon," or 280 days. He could tell me nothing of miscarriages, and did not recognise the premonitory pains of labour earlier than the day of confinement.

Abdominal palpation, before labour begins, is practised to ascertain the position of the head, and vaginal examination is very occasionally performed by the native midwife.

The woman continues her ordinary work until the pains become strong, when she lies down on her back bearing down with the pains.

1. Treatment of the first stage of labour.—As soon as the pains become strong, infusion of *Ahâmé* is given in small amounts every half-hour up to six doses. About one hour

<sup>1</sup> Well known in the Gold Coast Hinterland, where the shrub is very common, as *Akendi-Akuba*, and at Kwita as *Torro-Torro*. [Allied to *Cassia bearsana* of E. Africa.—ED.]

after the administration of the first dose the membranes rupture.

2. The second stage usually lasts two hours before the birth of the child. *Ahāmé* is given as before every half-hour, and once also after delivery.

With the commencement of the second stage the woman assumes the genupectoral position; one of her friends stands behind to embrace and exert pressure on the abdomen with her hands, while another stands in front to take the child, and to prevent its being sat upon by the mother.

The placenta (*amenon*) is expressed immediately after the birth of the child; the cord is tied and cut, and the after-birth buried.

After delivery a cloth is tied tightly round the mother's abdomen; the woman washes herself, takes food and gin, and is ready to return to work.

The child is washed, and then put to the breast. For ten days after delivery, the mother is dosed with gin three times daily, and so long as hæmorrhage continues!

Complications.—Kwauvi could tell me nothing of cases of obstructed labour, in which the obstruction was due to deformities in the mother or foetus. Uterine inertia is treated by doses of *Ahāmé* which is said to be infallible.

The second stage is never known to be prolonged beyond six hours.

Of antepartum hæmorrhage, malpresentations of the arm, breech, or umbilical cord, I could obtain no information.

Of foot presentations, Kwauvi had seen many cases; delivery followed as easily as with head presentations.

No attempt is made either to return the foot, or for any reason to introduce the fingers into the vagina.

Turning by abdominal palpation and moulding is practised when the child lies "across the belly" to make the head or foot come first, either of which means of delivery are considered equally good.

The results of untreated uterine inertia were thus aptly described by Kwauvi in his "pidgin" English. "When the pickin sit down for belly and no go come out, the mammy go die!" To avoid this, one "big" woman holds the

mother in front, and another grasps her round the waist while in the genupectoral position.

A mixture of *Ahāmé*, *Sru*, and *Abundwa* is given six times in the day, after which the child is always born safely; but unless *Ahāmé* is administered the mother will die. In the event of the death of the mother before delivery, the abdomen is opened with the object of getting out the child, not to save its life, but to save the house from ruin. For the superstition prevails that unless the child is extracted, whether dead or alive, immediately after the mother's death, the Fetish Spirit, *Abosam*, will destroy the house and all its future occupants.

Fatal cases of post-partum hæmorrhage are known.

*Treatment*.—An infusion of the leaves of *Kādoking* is drunk three times daily; after one week the hæmorrhage ceases.

Beyond this there is no remedy for serious hæmorrhage.

Retention of the placenta is treated by giving the infusion of *Ahāmé*, *Sru*, and *Abundwa*, and after the delivery of the placenta retained blood clot is removed by drinking repeated doses of gin!

