

Patient in fair general health, thoracic and abdominal viscera normal. The urine is normal.

Has suffered from gastric distress for a year. Several months ago was treated in the hospital by lavage, alkalies, etc., and partly relieved. His trouble has lately greatly increased in severity, and he returns seeking admission to the hospital and requests relief by operation.

The pain is of a burning drawing character and is general over the epigastrium and radiates through the both shoulders. The pain is greatly intensified by eating, and is severest several hours after meals. He sleeps but little on account of the distress after his evening meal. The pain is partly relieved by vomiting and to some extent by the expulsion of gas. Flatulence is marked and the lower border of the stomach reaches midway between the umbilicus and pubes. There is no history of syphilis or of hæmatemesis. The pain developed gradually and without known cause. The patient was purged freely and prepared for operation in the usual way, by lavage of the stomach, wet dressings, etc.

*Operation, July 5th.*—Chloroform narcosis. Time, 50 minutes. Posterior gastro-enterotomy. The stomach was found greatly dilated, the pylorus region thickened, and its lumen greatly reduced in size. The colon was small and shrunken. The abdominal wound closed in tiers.

The subsequent feeding was the same as case V. Convalescence was smooth, the abdominal wound healing per primam, except at the site of a small stitch abscess. No medicines were given. The patient sat up on the ninth day following the operation, and was discharged on the 16th day, enjoying his food and expressing himself as greatly pleased with the relief afforded.

### SOME REMARKS ON MALARIA PROPHYLAXIS.

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HAVING read several articles on Malaria Prophylaxis, and especially those of the Royal Society Reports to the Malaria Committee, I have been struck by the absolute absence of mention of "wind" as a very serious factor to contend with.

Observations have been made on the flight of the mosquito and the utmost distance allowed is half mile. As several observers agree to this distance according to the observations they have made, the conclusion to be drawn is that the observations were carried out in a comparatively undisturbed atmosphere.

Now in a great many cantonments where malaria is prevalent, there is generally a breeze of greater or less strength most evenings with the result that mosquitoes must be able to travel a distance far greater than half mile.

This point, I was able to satisfy myself on, in the Malakand. In the Fort there, during the malaria season in the Swat Valley, I have been able to catch anopheles in very fair numbers. Having examined the ground thoroughly on all sides, there was every reason to suppose that breeding did not take place in the near vicinity. The only conclusion to come to was, that they had come up from the rice-fields and

swamps in the Swat Valley, a distance of about three miles as the crow flies. Mosquitoes breeding in abundance I have found in multitudinous spots in this valley. It is the rarest thing for the breeze to fail at nights, and the direction is always from the valley to the Malakand.

Taking this point into consideration, how futile it seems to try and destroy larvæ with kerosene oil in a district where cultivation spreads for some distance on the windward side of the place that requires protection. The utmost that can be expected from such operations is a slight reduction in the quantities of mosquitoes, but is a reduction, only, sufficient?

Certainly not, judging by the slight reduction in the malaria incidence that took place after the operations in Mian Mir.

However, even though a slight reduction does take place, I would not have the war against larvæ to cease but continued actively in the cold weather and at such times when irrigation is not extensive.

Canal cuts, on the windward side of a cantonment up to two miles, or further if a strong night wind prevails, should have their sides, at the water's-edge only, so constructed that it would be possible to have the sides thoroughly cleansed periodically. Bridges over canals instead of jutting out into the stream abruptly ought to be built so that an arc of a large circle projects, consequently making it impossible for leaves to collect.

In the vicinity of barracks small cuts are made to carry away waste water from stand-pipes or their equivalents. Sometimes these cuts are made of brick-work, and are most unsatisfactory. Spirogyra, &c., grow very rapidly on the rough edges and excellent harbours for larvæ are formed. Such a cut polluted with washings from a latrine I constantly examined during one malaria season at Chakdara. Even though it was swept down everyday, yet at any time I could collect adult larvæ. Cement work is better, but only for a time, and as constructed in this country cracks appear rapidly and profusely, and the cut is then little better than if made of brick-work. Then as a rule these cuts lead to nowhere, and a swamp soon accumulates and forms an excellent breeding-ground. If this "nowhere" were so arranged that the waste water were led on to one plot of ground one day, and another the next, and so on, the defect would be remedied and a good breeding place destroyed. Instead of having one large cut, as is the rule, and which is very difficult to clean, it would be better to have two or three channels side by side having a depth of, at most, four inches and breadth of four so that when they were brushed out a thorough cleansing would take place.

Fire-buckets according to order have to be emptied and refilled once a week. Not only should they be refilled, but they should be scrubbed out as well. Vegetable growths on the bucket sides are rapid, and mere emptying will

not destroy all larvæ; many must be and are retained in the growth entanglement.

As larval destruction does not give the results that are desired, other methods have to be resorted to. I would advocate, firstly, that all barracks should have their doors, windows, and ventilators covered with fine wire-gauze. Desirable doors and windows to be so constructed that they could be opened at will. Undoubtedly, such a covering will keep a certain amount of breeze out, but I venture to think that with the lessened irritation from mosquitoes a better night's rest would be obtained.

In barracks, for British troops, where electric fans could be fitted, this mode of protection could be most easily fixed. The fans would not be interfered with, and adequate ventilation could be provided for, by means of suction and force fans. Over the force fans tatties could be arranged, thus ensuring a continuous stream of cool air being poured into the barrack.

Not only will mosquitoes be kept out but also flies, which is a very important factor in the prophylaxis of enteric. Unless the meshes of the gauze be very fine sand-flies will gain entry, but in less numbers. Can it be possible that sand-flies are a factor to contend with in malaria propagation?

If such a work be carried out by a contractor, very careful supervision will be necessary, or the gauze will be cut too small with the result that the edges will burst out and a seeming protection will be worse than a snare.

Although adequate protection can be procured during the sleeping hours, yet after nightfall, individuals can be bitten by mosquitoes when outside the protected barrack, but on the whole this is probably a minor point.

To obviate this, in barracks that are to be built in the future, let very careful attention be paid to the choosing of the sites.

If it is impossible to choose a site where no cultivation takes place for some miles to the windward side, let a site be so chosen that there are no inhabitants in the wind-swept area or if there are, have them moved to one side, and especially so in close proximity to the barracks. Then behind the barracks or the leeward side, have the quarters for followers and their children built so that if they do infect mosquitoes; these latter can be swept away by the wind and out of harm's way.

No doubt the gauze method of protecting buildings would cost a large initial outlay, yet with the results obtained in Italy and elsewhere, it certainly seems worthy of a trial, especially so when the saving in the cost of quinine is taken into consideration.

A time when many people are infected is probably during the time when dining in the open air is prevalent. Bites around the ankle are frequent, but only a little care is necessary in the way of Wellington boots or putties.

My experiences of quinine prophylaxis (liquid method) point out that the results are not as good as they ought to be. The reasons I believe, are that firstly a very inadequate dose is given, and in many cases immediate vomiting is induced. Even though this form of prophylaxis does good in that should a man have an attack of fever, he will in the majority of cases remain in hospital but three days. Thus with the liquid method of quinine prophylaxis good is undoubtedly done, and good to such an extent that it is worth continuing in a military outpost where it is necessary to keep the fighting men up to strength as much as possible. In a cantonment where the fullest possible strength is not so necessary, such a method is waste of money.

With the tabloid form of administration far better results ought to be obtained.\* The correct dose will be given and vomiting but very rarely produced. I was able to satisfy myself that tabloids are far superior and probably adequate from the experience I had with a wing of a regiment marching up to Tibet through the Teesta Valley last June. All men got through without an attack of malaria, and I could not trace any case afterwards that was malaria due to infection in the Teesta Valley.

Mosquito curtains as such and in the shape of gauze doors and windows seem to be the prophylaxis which will give us the best results in the near future.

#### CATARACT COUCHING.

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COUCHING of the cataractous lens is probably as immemorial in the East as is the inoculation of the small-pox virus, possibly much more so, and I presume that it was introduced into Europe from the East as was the inoculation of the small-pox virus. In India at the present time there exists the caste of lens couchers—*ravals*—who travel over the country couching cataractous lenses, and I know one of them who comes to southern Europe every summer at the present time to perform this operation, and from all appearance he must be doing well from a money point of view.

We may look on couching the cataractous lens as a very retrograde proceeding, but when we find it seriously brought before the British Medical Association Meeting of 1901 by Mr. Henry Power, and an article published on it in the *Ophthalmic Review*, April, 1903, by Major Maynard, Indian Medical Service, who gives no very decided opinion as to its merits when compared with extraction, yet who leaves it to be inferred that he is on the whole an advocate

\* Tablets should be available when a new and well organised Medical Store Depot and Factory is started under Government in India.—ED., *I. M. G.*