

duties pertaining to an individual section and thereby left him free for administrative duties.

(i) For a time in 1914 we acted with an infantry division and found the organisation equally suitable as when acting with our own formation.

(j) We obtained a supply of acetylene lamps through the agency of the Supply Officer, and used them in the Advance Dressing station and in the Mobile Tent sub-section in the operation and dressing-rooms, and found them infinitely superior to cords, lamp and the lanterns of ordnance equipment.

(k) In conclusion, I should like to emphasise that, by the arrangement of packages as noted herein and in the appended table, we found that when in action we were able to lay our hands on everything pertaining to the treatment of the wounded, without wading through several packages in which the articles were previously packed; we concentrated our resources and reserves and were able to deal most expeditiously in meeting demands.

In the treatment of the sick, we likewise found matters equally simplified. In other words, as I have stated, the ambulance was able to act at the particular moment and carry out the specific duty it was called upon to perform, *i.e.*, treating of the wounded or sick, without prejudice to its efficiency.

SPECIAL KAJAWAH.

(Advance Dressing Station.)

- | | |
|--|----------------------------|
| 1. First Field dressings. | 15. Acetylene lamps—2. |
| 2. Shell dressings. | 16. Carbide in tin. |
| 3. Iodine Capsules. | 17. Towels. |
| 4. Bandages. | 18. Nest of cooking pots. |
| 5. Gauze. | 19. Waterproof sheeting. |
| 6. Wool, absorbent. | 20. Nail brush. |
| 7. Gouches' splinting. | 21. Chloroform. |
| 8. Anti-tetanic serum. | 22. Inhaler. |
| 9. Hypodermic serum syringe. | 23. Tourniquet. |
| 10. Spirit lamp and alu-minium bowl. | 24. Trays, E. I. set one |
| 11. Spirit in tin. | 25. Apparatus, irrigation. |
| 12. Remedies for gas poison. | 26. Tabloids, saline. |
| 13. Remedies for burns by liquid fire. | 27. Hypodermic syringe. |
| 14. Pocket instrument case. | 28. Hypodermic tabloid. |

SPECIAL KAJAWAH.

(Mobile Tent Sub-section.)

- | | |
|------------------------------|--|
| 1. First Field dressings. | 11. Remedies for burns by liquid fire. |
| 2. Shell dressings. | 12. Tabloid, saline. |
| 3. Iodine. | 13. Chloroform. |
| 4. Bandages. | 14. Inhaler. |
| 5. Gauze. | 15. Surgeons' case of instruments. |
| 6. Wool, absorbent. | 16. Primus stove. |
| 7. Gouches' splinting. | 17. Acetylene lamps. |
| 8. Anti-tetanic serum. | 18. Carbide in tins. |
| 9. Serum syringe. | 19. Towels. |
| 10. Remedies for gas poison. | |

SOME FURTHER OBSERVATIONS ON RUPTURE OF THE SPLEEN.

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DURING the five years from 1915 to 1919, 151 cases of rupture of the spleen were officially recorded from the four Federated Malay States—Perak, Selangor, Negri Sembilan and Pahang. It is, moreover, more than likely that these figures understate the actual occurrence of this fatal condition.

The average annual return for these years indicates that 30 cases at least have been in danger of death from this accident. The danger is more than realised when it is remembered that the great majority of cases are only discovered post-mortem.

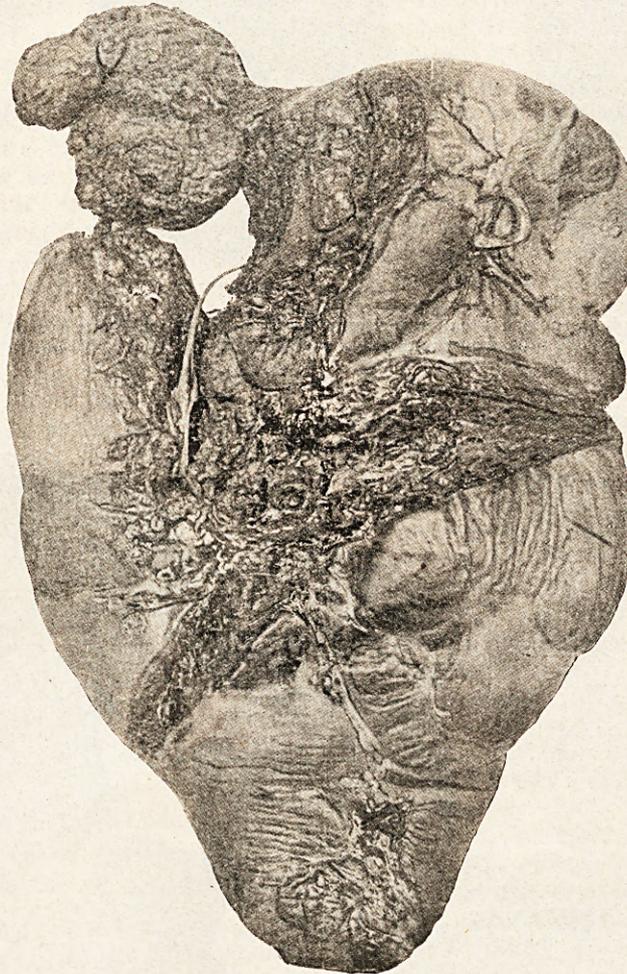
That malarial fever is indirectly responsible for the large number of cases cannot be disputed.

The incidence of malarial fever varies according to seasons, but the incidence of rupture of the spleen does not coincide closely. Unfortunately, the disease is extremely common and most persistent, with the inevitable result that a large number of the population of this country are left with spleens very much larger than normal. The liability to injury of this organ is therefore much increased, and one is inclined to believe that the figures for rupture of the spleen in any one place should vary directly as the prevalence of malarial fever. Some evidence in support of this statement is obtained from the previous records of this State. During the years 1900 to 1909 the number of cases recorded for the State of Selangor was 6 only. From the years 1909 to 1919, owing to a great influx of labour into the country and a great increase in malarial fever, a corresponding increase in the number of cases of rupture of the spleen is recorded, *viz.*, 53 cases. Since the publication of our previous paper on this subject in the *Indian Medical Gazette*, No. 2, February, 1917, a further series of eight cases of rupture of the spleen have come under observation. It is not proposed to place all details of these cases on record, as the history and symptoms are practically the same in each case. The table on the next page with the main points of interest is inserted instead.

The existence of malarial fever as a complication.—In our first series pyrexia was noted in two cases out of nine, in the present series of eight consecutive cases malarial parasites were demonstrated in five. In two of these five they were present before the operation, and in one case undoubtedly contributed to a fatal issue. The sub-tertian variety was seen in two, the benign tertian in two, and a mixed infection of S. T. and B. T. in one. A relapse was noted in case (7) on the 22nd day. The importance of this disease in cases of this nature should, we consider, be always be borne in mind.

TABLE.

No. Sex, Age and Nationality.	Nature of injury.	Duration.	Outer injuries.	Weight of spleen.	Malarial fever.	Result.	REMARKS.
1. Tamil, 25, male ..	A kick ...	12 hours	Nil.	34 oz.	Died	Internal tear.
2. Chinese, 25, male...	A falling tree..	20 hours	Nil.	14 oz.	S. T. big infection.	Died	Internal and external tear.
3. Chinese, 43, male...	Assault with fists.	3 hours	Nil.	13 oz.	B. T. infection	Recovery	Internal tear.
4. Chinese, 30, male...	Assault with fists.	4 hours	Nil.	37 oz.	B. T. infection	Recovery	Accessory spleen internal tear.
5. Chinese, 20, male...	Assault with fists.	8½ hours	Bruises over spleen.	25 oz.	Nil.	Recovery	Accessory spleen internal tear.
6. Tamil, 28, male...	Assault ...	16½ hours	Nil.	16 oz.	S. T. and B. T. on the 18th day.	Recovery	Internal tear.
7. Tamil, 16, male ..	Fall from a tree.	20 hours	Fracture clavicle 6th and 7th ribs left.	12 oz.	Crescents before operation.	Recovery	Internal and external tear.
8. Tamil, 29, male...	Knocked down by motor car.	12 hours	Fracture 9th rib, bruises, face.	5½ oz.	Nil.	Recovery	Internal and external tear.



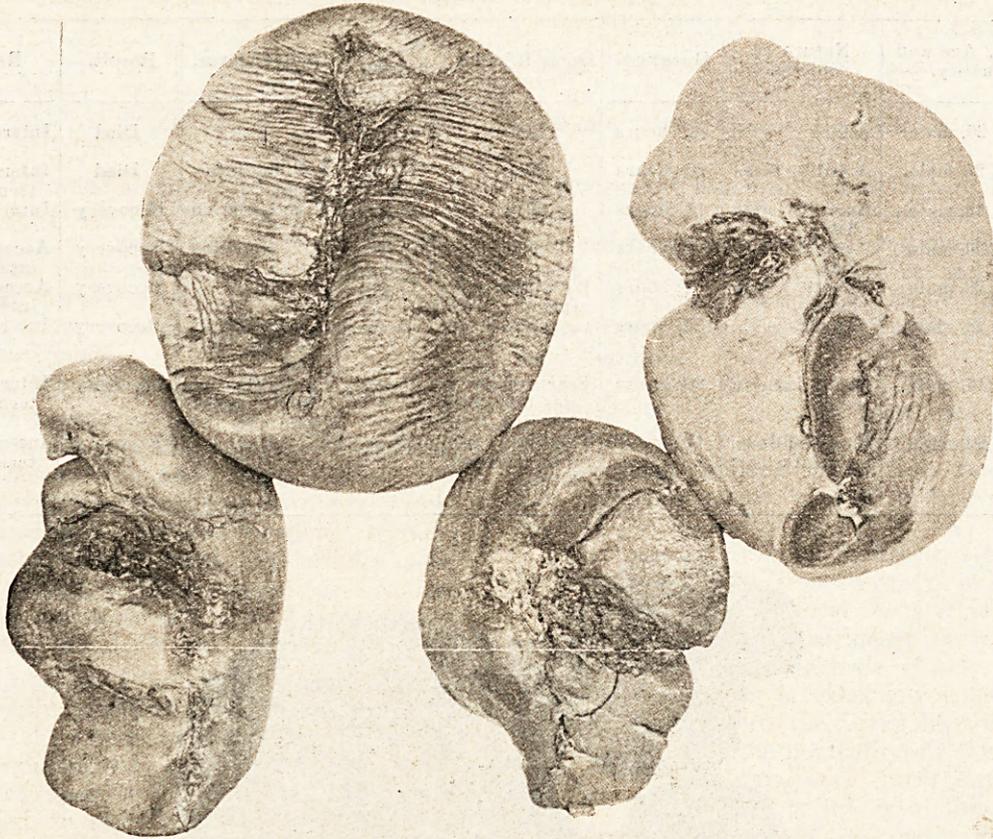
Photograph of a large soft friable spleen weighing 24 oz. The damage on the internal aspect is great and extends to the external surface as well. The patient fell from a height of 8 to 10 feet on to the sharp edge of a flight of steps.

Several of our old cases have been readmitted with the disease.

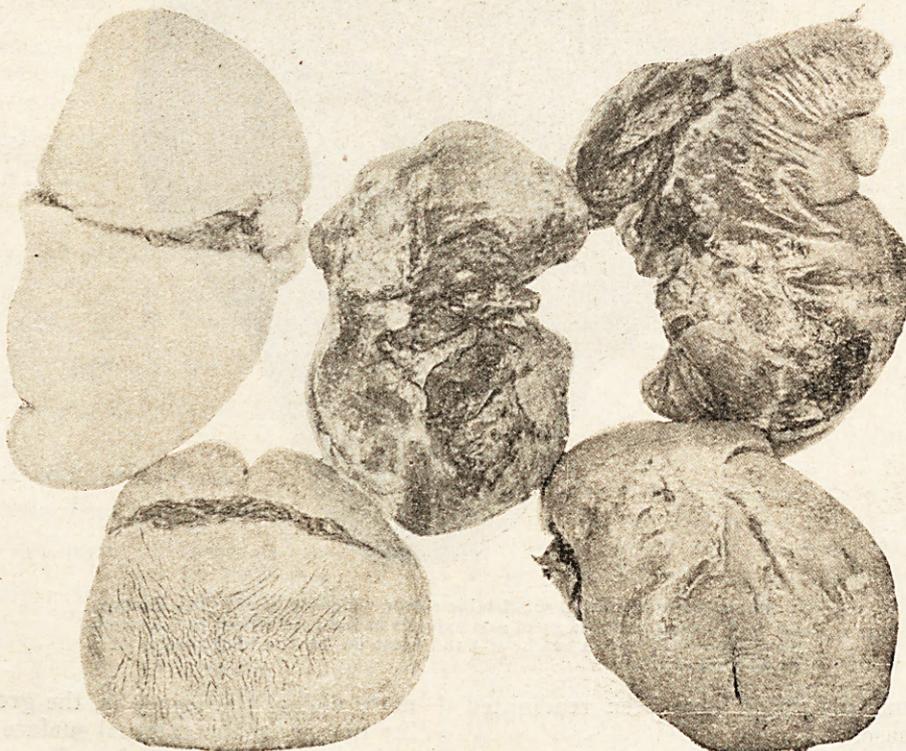
Position of rupture.—As mentioned in our previous paper, the position of the tear depends very closely on the nature of the injury. The

more violent the injury is, the greater the liability to tear on the external surface of the spleen.

A tear on the external surface may exist with an internal tear, but almost always when the injury is the result of great violence. In six



Photograph of the usual tear in the majority of cases, which give a history of assault.
The rent is on the internal surface and involves the hilum.



Photograph of five spleens. All were subject to great violence, the one in the centre was almost divided into two halves. The injury is on the external surface in each case.

out of a combined series of 17 cases, the tear was on the external surface of the spleen or a combination of internal and external tears, associated with fracture of the ribs or injury to other organs. In all six the nature of the injury was due to falling earth, a fall from a high tree, or being run over by a motor car or gharry.

The weight of the spleen.—In only two out of 17 cases was the spleen normal; in 15, this organ weighed from 10 oz. to 37 oz. An accessory spleen about the size of a golf ball was observed in three cases, in which the spleen was much enlarged. Two of these three cases recovered. It would be interesting to know the after-history of these spleens. Others would in all probability develop in the great omentum and spleno-colic ligament.

Symptoms.—Rupture of the bladder may be simulated especially in the later stages, and signs of pain over the hypogastrium with bladder irritation would appear to be due to mechanical pressure from the increasing amount of blood in the pelvis.

Pain in the left shoulder has been described as a symptom of rupture of the spleen. It is a referred pain similar to that noted in the right shoulder in hepatic trouble. Only one case in our series had this symptom.

The most deceptive stage is the quiescent interval after the injury to the onset of restlessness, a rising pulse and abdominal discomfort.

After-history of recoveries.—The difficulty of following up cases in a native population must be appreciated by all of your readers. In a few cases we have been privileged to keep in sight, there have been no ill effects. One continues his active duties as a policeman, one is an overseer and has a large amount of walking to do. A hawker and a shop-keeper continue in their occasionally prosperous undertakings, and two estate coolies help the rubber industry. A peace-loving Buddhist priest, who was assaulted in his own temple by two unruly visitors, is happy and well.

CUTANEOUS MYIASIS IN MAN AND ANIMALS IN INDIA.

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MAJOR, I.M.S.,

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SOME little time back, I issued an appeal to Medical and Veterinary Officers throughout India, Burma and Assam, to send me living and dead maggots from cases of cutaneous myiasis in man and animals, and this appeal was kindly inserted in a recent number of the *Indian Medical Gazette*. I have now received specimens from more than 120 cases of cutaneous myiasis in man and animals, and have been able to breed out hundreds of specimens of the fly whose larvæ cause this

painful, and often dangerous, condition. A paper describing the fly and its early stages, as well as a coloured plate illustrating its life-history, and notes of 40 cases of cutaneous myiasis, will appear in due course in the *Indian Journal of Medical Research*. As some time must elapse before this paper is published, I thought it might interest Medical and Veterinary Officers if I briefly stated the results of this investigation.

On hatching out the first specimens of the fly, I thought it was the common *Chrysomya dux* Esch., but on comparing them more carefully, especially the males, it was at once clear it was not that species. I then came to the conclusion that it was in all probability new to science, but that there should be no doubt on this point I submitted some specimens to my friend Dr. Villeneuve, and in a letter, dated August 2nd, he tells me that it is his *Chrysomyia bezziana*.

Chrysomyia bezziana. Villeneuve has so far only been recorded from the Belgian Congo, the Ivory Coast and French Guinea, where, according to Roubaud, its larvæ cause cutaneous myiasis in the larger animals. As far as I can gather from the available literature on the subject, its larvæ have not been recorded from a case of cutaneous myiasis in man. Now that Indian species proves to be none other than *Chrysomyia bezziana*, the question arises as to whether this fly has been introduced into India from Africa in the body of some animal. Unfortunately, the extent of its distribution in Africa is not known, but it is more than probable that it is widely distributed in that Continent. In India there can be little doubt that it is the chief myiasis-producing Callophirine, and its larvæ are found in man as commonly as in animals. It seems strange that it does not attack man in Africa.

The important points in connection with its life-history are briefly as follows:—The female fly *only* lays its eggs on, or in living tissues being attracted by foul discharges. A mass of eggs of this species was found at the Pasteur Institute on a piece of lint attached to a foul ulcer on the leg of a patient. The larvæ die if placed in the body of a recently dead or a decomposing animal, in which situation those of most Blow Flies flourish. The larvæ burrow into the tissues, causing much destruction, and they are secure from falling out by the many backwardly directed spines on their segments. The mature larvæ crawl out, drop on the ground and pupate in earth. The adult flies have never been seen in nature, as they are not to be found in places where Blow Flies usually collect. Roubaud states that *Chrysomyia bezziana* has never been seen in nature in Africa.

This fly, then, is a serious pest to man and animals in India, and, judging from the number of cases I have had notes of, it is comparable to the well-known "Screw Worm Fly," *Cochliomyia macellaria*, of America. It is, therefore, of the utmost importance that I should have