countries. However irksome and unpleasant, such examinations are absolutely necessary for the diagnosis and treatment of tropical diseases.

A helminthologist should be part of the establishment of every hospital in the tropics, and he should be there to assist the doctors to carry out their own examinations. Few doctors know enough about the examination of faeces by microscope to make their knowledge of any practical value; how can they, since they never practise it? I would go so far as to say that a doctor who cannot himself intelligently examine faeces and translate into practical values what he sees should not be doing medical work in the tropics. A whole volume of medicine remains unknown to him. He is groping in the dark.

A NOTE ON THE VARIETY AND LATENCY OF ORGANISMS ON MISSILES IN THE TISSUES.

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It is well known that organisms may remain in certain cavities and tissues of the body. Perhaps the best recognized examples of this persistence are the presence of the enteric bacillus in the gall bladder and the staphylococcus in the bones, months or years after the initial infection has died down. A similar condition has frequently been noted in war wounds, both of the bones and soft tissues; after varying periods of quiescence a "flare up" occurs and acute symptoms again supervene. This recrudescence of activity has also been noted to occur with foreign bodies lying apparently quiescent in the tissues.

It seemed that useful information on this subject might be gained by systematic examination of missiles removed from the tissues. To achieve this, missiles apparently sterile, or at least giving no clinical indication of infection, were sent for bacteriological examination. The missiles were removed with the usual surgical precautions and were dropped into a sterile tube. In some cases they were shelled out of the fibrous tissue capsule in which they lodged, in others the foreign body was removed in the capsule, which was removed before culture. The missiles were extracted for varying reasons, either because they were subject to pressure or caused pressure on nerves, or interfered with movement. Forty-four specimens were sent for examination; nearly 50 per cent. were sterile.

Varieties of Organisms Present.

Number of examinations ...	44
Number sterile ...	21=50%
Number giving cultures ...	23=50%
Varieties of organisms:	
Staphylococcus ...	10%
Streptococcus (never in pure culture) ...	2%
Bacillus perfringens ...	1%
Tetanus bacilli ...	2%
Putrefactive bacilli ...	6%
Leptothrix ...	1%
Number of bullets (sterile) ...	4
" (with organisms) ...	11
Shell fragments (sterile) ...	16
" (with organisms) ...	11

Time of Latency.

Staphylococcus ...	3-4.5 months
Staphylococcus and putrefactive bacillus ...	7 "
Leptothrix ...	1 month
Gram-positive bacilli ...	3-15 months
Bacillus perfringens ...	7 "
Staphylococcus and diphtheroid bacillus ...	30 "
Streptococcus pyogenes and tetanus bacillus ...	6 "

Of twenty-three missiles from which cultures were obtained, the staphylococcus was present in ten cases. Putrefactive bacilli, in six cases, were next in the order of frequency. In two cases the tetanus bacillus or organisms of that type were found. The analysis shows that shell fragments, contrary to what might be expected, are more often sterile than bullets. The length of time the missile remained in the tissues varied from one to thirty months. This examination has shown that the *Bacillus perfringens* may survive a period of seven months. In

this case the bullet was removed from the tibia, where it was lying without causing any apparent lesion in the surrounding cancellous tissue, as visible from an x-ray plate. After removal no ill effects followed, and the wound healed by first intention. In a second case a fragment of shell was removed from the forearm; streptococci and the tetanus bacillus were found. The wound suppurated, and immediately on receipt of the bacteriological findings antitetanic serum was administered; no symptoms presented themselves.

From a surgical point of view the following conclusions may be drawn:

1. That most pyogenic organisms can persist in the tissues for periods up to at least thirty months.
2. That they may at any time give rise to inflammation, and that this is possible in at least 50 per cent. of cases.
3. That prophylactic measures before removal might be useful.
4. That if possible the missile be removed complete in its fibrous tissue capsule.
5. That if such be impossible, careful disinfection of the cavity be carried out.

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INUNCTION OF CREOSOTE IN PNEUMONIA AND INFLUENZA.

BY
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I WAS led to try the axillary inunction of creosote in pneumonia and in influenza and some allied conditions by several circumstances. My father, the late J. R. Wells, F.R.C.S., used creosote in his prescription for coughs and colds with success. Sir Leonard Rogers, in 1895, described in the BRITISH MEDICAL JOURNAL the use of an axillary inunction of creosote in cases of malarial pyrexia. On referring to a standard textbook of physiology I found it stated that the inunction of creosote produced sweating and lowered the temperature, but was not used for that purpose. In 1898 I used the axillary inunction of creosote in a severe case of pneumonia. Within half an hour the patient sweated, and the temperature fell from 104° to below 100°; uninterrupted recovery followed. Since then I have made frequent use of this method with almost unvarying success; the results have been too constant to admit of the change in the patient's condition being merely a coincidence with the crisis occurring at the time of the administration of the treatment.

The method of administration is simple. For adults, 10 minims of pure creosote are gently rubbed into the right axilla with the finger. If necessary, which is very rarely the case, a second dose may be given, this time in the left axilla for fear of blistering. The patient must be dressed in woollen or flannel and placed between blankets so as to avoid a chill after the sweating. Only slight discomfort attends the treatment; a slight burning of the skin, which passes off in a day or two without vesication, is the only disagreeable effect. For children I have diluted the creosote with soap liniment, reducing the proportion of creosote according to the age of the patients. For infants, in place of the axillary inunction, I have at times substituted rubbing the back and front of the chest with a liniment containing creosote.

Practically all cases of influenza under my care have been treated by rest in bed (most of them a soldier's bed—that is, on the ground), plenty of fresh air, and the administration of creosote by the mouth. Half a minim of creosote shaken up with half an ounce of water is the simple mixture—the addition of half a minim of oil of peppermint makes it more palatable, but it is not very unpalatable without it. Very few cases treated in this way develop pneumonia. When signs of pneumonia developed the axillary inunction of creosote was nearly always followed by its abortion, or it was so modified that the patient recovered. When the pyrexia of influenza has gone, quinine or strychnine or both may be necessary.

Several cases of meningitis due to infection by *Micrococcus catarrhalis*, and one by meningococcus, recovered