kidsneys. In fact, after the patient has been tided over the stage of collapse, the case resolves itself practically into one of acute nephritis, and should be treated accordingly. The blood should be examined daily, and if malarial parasites are found quinine in moderate doses should be given; the occurrence of parasites in the circulation should be looked upon as a complication of the disease, and the temptation to treat the case with large doses of quinine should be withstood. Up to the present ten cases of blackwater fever have come under my direct care or observation, and of these cases only one has resulted fatally, none of them having been treated with large doses of quinine. In my opinion blackwater fever occurring in a young subject with healthy organs should not be looked upon as a very deadly disease, and a good prognosis can be usually given as regards the probability of complete recovery.

KALA-AZAR, AND ITS INTERMEDIATE HOST. A SUGGESTION.

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In the search for the intermediate host of the Leishman bodies, one peculiarity, distinguishing them from blood-parasites transmitted by suctorial insects, deserves close attention. These bodies are practically never found in the peripheral circulation.

Bearing this fact in mind, it seems reasonable to ask by what means a parasite, confined to the portal area, may be transmitted from man to man. As the peripheral circulation is liable to be tapped by suctorial insects, so is the portal area at the disposal of intestinal parasites. The suggestion which I venture to put forward is that, in one of these, the carrier and intermediate host of the Leishman bodies may be found.

To such a suggestion, a necessary corollary is that the "bodies," when taken into the intestinal canal of the worm, gain the ova, leave the body in the embryos, and are thus in a position to regain the human host with the infected worm. There is nothing impossible in this. The researches of Dutton and Todd, recently confirmed by Koch (see article in the British Medical Journal, March 24th, 1906), show that the spirochetae of African relapsing fever, on being sucked into the intestine of a tick, reaches the ovaries, exists in the eggs, and finally appears in the young ticks hatched from them.

That parasites of this nature can pass a stage in worms is supported by a sentence which I quote from Lieutenant-Colonel Birt's interesting article "The Leishman Body, the Gregarine Stage of a Herpetomonas," in the Royal Army Medical Corps Journal for June, 1906. "Butschli discovered a monodine much like the above (Burnett's Herpetomonas) in the intestine of a free Nematode, Trilobus gracilis."

In searching amongst the Vermes for possible hosts, many can be at
once excluded. The Cestodes may be eliminated as having no alimentary canal, or only an incomplete one. The Trematodes are unlikely to furnish the looked-for intermediate host, as they seem to be little known in man, with the exception of the Bilharzia hematobium, whose life history is not yet completely worked out, and the worm-stage of which is not passed in the intestine. It is amongst such of the Nematodes as inhabit the digestive tube that we are likely to find the culprit, and to my mind, the evidence goes far to incriminate the Ankylostomum duodenale. It has been, I believe, asserted that this parasite does not suck blood, but browses on the duodenal epithelium. This may or may not be the case, but does not put the hypothesis out of court, as the kala-azar bodies have been found on the surfaces of intestinal ulcers, and are known to exist in large numbers in endothelial cells. The evidence which seems to inculcate the Ankylostomum may be summarised as follows: (1) The similar geographical distribution of ankylostomiasis and kala-azar; (2) the large number of kala-azar patients who simultaneously harbour ankylostomes; (3) the fact that Giles and others, for some time, believed the diseases to be identical.

Against this view, however, I quote a letter from Lieutenant-Colonel Leishman, to whom I am indebted for his opinion on the subject. "It is by no means impossible that some intestinal parasite might prove to be the long-sought for host of the kala-azar bodies. At the same time I think the bulk of the evidence is against the Ankylostomum being such a host, for, although the geographical distribution is much the same, it is abundantly proved that cases of kala-azar occur in places where there is no ankylostomiasis, and further, many cases have been watched both during life and after death with completely negative results as regards Ankylostomum duodenale. Still, this does not necessarily mean that, in the early days of the disease, such an infection may not have occurred and not have been recognised."

In conclusion, I wish to state that my suggestion is put forward, with all diffidence, as a suggestion merely, and in the hope that it may be put to the test by someone who has cases at his disposal.

The disease is of such importance, and its mode of transmission so obscure, that I make no apology for calling attention to a possible line of investigation.

**STERILITY OF MERCURIAL CREAM.**

The treatment of syphilis by the intramuscular injection of mercurial cream is now being so extensively carried out that any information as to the sterility of the present cream, as well as any particulars as to how far the cream will allow pathogenic germs to live or multiply within it, must be of considerable general interest.