connected with the state of allergy, but what we may describe as the normal eczematous reactions are essentially related to physical conditions in the external environment. These cases—and they make up the vast majority of eczematous patients—are sensitized to friction owing to a defect in the physical conditions of the rete and cuticle with inherited or acquired increased permeability of the capillary walls. Such cases can be cured by simply raising the pressure of the rete and cuticle over the capillaries.

Exact knowledge is needed, and when this comes we shall be better placed for classifying the protein sensitization diseases. I am not yet prepared to say what value is to be attached to local signs of cell irritability provoked by the intra-epidermic applications of various proteins. There are many conditions which affect cell irritability besides protein sensitization, and for myself I prefer to wait for further evidence.

BILE SALT AS A VEHICLE FOR A PEDICULICIDE.

BY

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For several years we have been experimenting with various substances for the destruction of head lice, but nothing was found which prevented the hatching out of the nits. It was considered that as bile salts are stated to assist the passage of emulsions of fats through the mucous membranes by their property of reducing surface tension, they might have the same effect in assisting oily emulsions to penetrate the shell of the louse's egg. Experiments were made with various strengths of sodium taurocholate in watery solution with eucalyptus and sassafras oils. The best compound was found to be

Sodium taurocholate	...	...	10 grams.
Ol. eucalypti	...	...	50 c.cm.
Water	...	...	to 1,000 c.cm.

Dissolve the bile salt completely in water, add the eucalyptus oil, and shake well.

A higher concentration of bile salt rendered the hair very sticky, whilst a lower did not form so good an emulsion. More than 5 per cent. eucalyptus rapidly separated out. The formula yields an emulsion like milk in appearance, and but little of the oil separates out after several days.

Most lice, if immersed in the liquid, cease movements in a few seconds, but a few individuals did not die for three minutes. In no case did any of those tested recover when dried on blotting paper and incubated. Larger insects, such as wasps, house-flies, and fleas, when dropped in the emulsion became wetted all over immediately, and died in less than a minute.

During the past eighteen months the emulsion has been tried on over 500 patients on whose heads living lice were seen. It is well rubbed into the head until all the hair is wetted. The head is then wrapped in a bathing cap or towel and the application left on all night. The head is washed with soap and water next morning, and a fine-toothed comb used daily for a fortnight, notes being kept of any lice found. In 23 per cent. of the cases no lice were found after one application. In the remainder a few recently hatched very small forms were discovered, in no case before four days after the first application, in most cases not until after a week, and in a few not until the tenth day. A second application on this reappearance sterilized 63 per cent., while 14 per cent. required a third application.

It appeared that the embryos on the point of emergence were killed, whilst the most recently deposited eggs were more resistant.

Some of the worst infested heads, in which the towel swathing the head was nearly black with dead lice on the morning after the first application, were sterilized with one application, while some of the lightly infected required three applications, so that it would seem that there must be different powers of resistance in certain strains of lice.

This preparation is not toxic, is not irritating to the skin, is not inflammable, and is elegant to use as it is easily washed out of the hair. The cost of the ingredients works out at 6½d. a pint.

Possibly the property of bile salt solutions to wet the lice and their eggs can be combined with some substance more poisonous than eucalyptus oil to the louse's egg, so that one application would always be sufficient.

The Hettzsonian Lectures

ON

AMOEBIIC LIVER ABSCESS.*

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON

BY

SIR LEONARD ROGERS, C.I.E., M.D., F.R.S.

[Abstract.]

LECTURE II.—VARIETIES AND TREATMENT.

THE lecturer continued his remarks on pathology by referring to suppurative cholangitis, a rare disease in which he had been greatly interested ever since he met with three cases at St. Mary's Hospital in his third year studentship. Fourteen years later he recorded a case which he had diagnosed and operated on at Calcutta European General Hospital, in which a mass of gall stones was removed from the hepatic ducts. Unfortunately, this case was taken in hand too late, and the suppuration tracked out and opened into a bronchus, with a fatal result. The rarity of this complication in India was explained by the fact that, although gall stones were nearly as common in India as in Europe, in the eastern country most of them were of the soft pigmented variety, and the hard, disease-producing cholesterol form was comparatively infrequent, at least in Calcutta. Suppurative cholangitis would, therefore, seldom give rise to difficulties in differentiation from liver abscess in the tropics. He also spoke of diffuse suppurative hepatitis produced by *B. coli communis*. He had seen this condition in a Calcutta hospital, the patient having leucocytosis with over 90 per cent. of polynuclear leucocytes. He showed a colour drawing to illustrate the condition found *post mortem*, indicating a large diffuse suppuration throughout that half of the liver which was supplied by the right branch of the portal vein, in which an extensive clotting was present, while the remaining half of the organ was healthy.

Frequency of Large Single Abscess.

In his previous lecture he had shown that multiple small amoebic abscesses were nearly always overshadowed by the acute sloughing dysentery to which they were secondary, so that they could not easily be recognized during life, still less easily treated surgically. This variety might therefore be put on one side, and they could turn with more hopefulness to the comparatively chronic, large, fibrous-walled form, and see what lessons the *post-mortem* room and the laboratory could teach them in dealing with this formerly very common and very fatal tropical liver disease.

He gave some statistics which appeared to indicate—it was not a matter for precision—that in about 70 per cent. of cases of large liver abscess the abscess was single. Among 38 cases in which there was found to be more than one abscess there were two abscesses in 44.7 per cent., three in 26.3 per cent., four in 18.4 per cent., and over four in 10.6 per cent. In this connexion he drew attention to the practical importance of the fibrous limiting wall in large amoebic abscess which he had described on the previous occasion. In friendly discussions with surgical colleagues he had often been told that the high mortality of the open operation was due to the amount of destruction of the liver tissue. This he was convinced was not the case. He showed a coloured drawing of a liver with three medium-sized amoebic abscesses side by side, with only about one-third of an inch separating one from another, and said that it might be a matter for wonder that in such a delicate organ as the liver they did not coalesce into one; but on cutting sections it was found that each abscess was limited by a dense fibrous wall, and that the liver tissue in between was perfectly healthy. Once the fibrous wall was formed there was no further destruction of liver tissue, at least as long as the cavity remained free from bacterial infection. He had twice seen six pints of pus aspirated from the liver at a single drainage, and yet a complete recovery took place. If such amounts of pus did not destroy enough liver tissue to cause death he would like to know what basis the surgeons had for attributing the mortality in open operation to destruction of tissue.

Secondary Bacterial Infection after Open Operation.

The lecturer went on to speak of the importance of secondary bacterial infection after open operation on large

* An abstract of the first lecture appeared in the BRITISH MEDICAL JOURNAL of February 11th, 1922, at p. 224.