INDUCED LEUCOCYTOSIS IN THE TREATMENT OF INFECTIONS.

BY

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SOME twelve months ago Dr. Burr Ferguson of the United States Public Health Service, Southampton, spoke to me of the results he had obtained by injections of mercury salicylate in the treatment of infective conditions, and I decided to try it in some suitable cases. The method consists in the intramuscular injection of a mixture of mercury salicylate in liquid paraffin (1 grain per cubic centimetre), 1 c.cm. being injected at intervals of one week up to four or six doses, or less if the desired result is obtained earlier. This is the usual method, of course, in treating syphilis. Some of the cases which I tried were as follows:

CASE I.

A man, aged 46, with a condition of chronic infection of the lungs following pneumonia bronchiectasis, had attacks of pyrexia and chest pains whenever he had a chill; they confined him to bed and made him very ill for a time. There were physical signs of chronic pleurisy. He had been immersed in the sea for many hours after a torpedo attack on his ship during the war, and his chest trouble began subsequent to this. During one bad attack I waited until the more acute symptoms had subsided, and then gave him two injections of mercury salicylate, at an interval of five days. The result was a complete recovery, with abatement of all chest pains, and free and easy breathing. The patient was enthusiastic about the treatment. Previous to the injections he stated that he had a chronic depression of spirits, with a feeling as though there was a load on his chest and weights on his legs. After the injections he was buoyant again, and walked more lightly and with the elasticity which he used to have before his attack of pneumonia. The good results obtained have so far persisted.

CASE II.

A man, aged 51, suffering from a fairly large carbuncle on the back of the neck, was confined to bed and suffered from much pain. The carbuncle was being treated with boric fomentations and was steadily enlarging and forming a central crater containing a large mass of hard dead epithelial debris. I gave an intramuscular injection of 1 c.cm. of mercury salicylate, and on the following morning there was a most perceptible softening of the mass. It continued daily to get rapidly better; the slough was cast off and an uneventful recovery ensued.

CASE III.

A woman, aged between 50 and 60, was suffering from chronic dermatitis of the whole body, with bleb formation and much irritation. I treated this with calamine lotion, and in several weeks there was a marked improvement over the whole body, but new formations of blebs continued to appear. I therefore gave two injections of mercury salicylate at an interval of five days, and complete recovery ensued, no further outbreak of blebs occurring. The condition had been troubling her for many months.

For local infections of the skin I have long had a strong faith in calamine lotion, which seems to have a peculiar, or what is usually termed a "specific," effect in healing skin infection. Ferguson has investigated the results on the blood of the injection of mercury salicylate, with the assistance of Dr. Simson, who was tuberculosis officer at Southampton at the time. His results revealed an immediate general leucocytosis in the blood within twenty-four hours of the injection. He has found that certain salts of arsenic produce a similar effect, and that in malaria quinine produces a similar leucocytosis, though not so pronounced. The conclusions drawn are that the "specific" action of mercury, arsenic, and quinine in certain diseases is all due to a general leucocytosis produced in the blood.

In my opinion the local use of calamine lotion produces a local area of leucocytosis which causes its "specific" action in skin infections, and the same effect is produced by unguentum hydrargyri ammoniati. In these cases the salts of the heavy metals zinc and mercury produce the result locally. I have repeatedly noticed a bluish coloration of the skin around the areas treated with calamine lotion, suggesting a blood change at that area. This leucocytosis of the blood is considered by Dr. Ferguson to be the reason for the happy results of intramuscular injections of mercury salicylate in infective conditions, the increased number of leucocytes killing the infective agents.

OPHTHALMOLOGY IN EGYPT.*

BY

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THE problem of subtropical ophthalmology, with which I have become familiar in Egypt, may be considered under two heads—first, as affecting the European population, and second, as affecting the native Egyptian population.

EUROPEAN POPULATION.

1. *Effect of Sun, Dust, and Wind.*—The healthy emmetropic eye becomes painfully affected by the sun's glare in the summer when motoring or riding along dusty roads or over the desert. The heat rays from the red end of the spectrum which cause this may be prevented by wearing protective goggles of Crookes B or B2 material; but if discomfort is complained of the refraction of the patient should be verified under a cycloplegic. There are other varieties of protective glasses, which theoretically are more absorbent of the heat rays than Crookes glasses, as shown by Sir Arnold Lawson at the Ophthalmological Section recently, such as peacock-blue, flouzal, and amber. I have found in a large number of instances that ordinary glass, in which is included if necessary a very small ametropic correction, is all that is required. The effect of sun, dust, and wind in causing pinguecula and pterygium must be remembered.

2. *Effect of Fatigue, Ill Health, and Worry.*—Fatigue, ill health, and worry bring out latent defects in the eyes in any country. A hot climate causes greater fatigue than a temperate, and this may lead to fatigue indigestion, with resulting physical depression. Worry, whether official or private, similarly may cause ill health. Under these conditions trifling errors of refraction, if present, or slight degrees of heterophoria exert effects quite out of proportion to their actual severity. It is therefore of the greatest importance that correction of these errors should be made as carefully as possible, generally under a cycloplegic such as homatropin, and that the correcting spectacles should be adjusted accurately by the optician. In a highly sensitive patient, whose nerves are constantly being jarred by physical or mental discomforts, the correction of a very small degree of astigmatism may make all the difference between happiness and misery. The symptoms which patients with an uncorrected error of refraction complain of are headache, neuralgia, frequent frowning with consequent fatigue of the subcutaneous muscles of the forehead, indigestion, inflammation of the edges of the lids, with perhaps suppurative of the glands of the lid margins, and so on.

3. *Effect of Acute Conjunctivitis.*—The same organisms cause this among the Europeans as among the Egyptians, and will be considered when speaking of the latter. I have seen acute gonococcal conjunctivitis in English children of 2 or 3 years of age, which had no doubt been contracted from the chronic gonococcal conjunctivitis of servants, without any suspicion of venereal taint.

4. *Effect of Chronic Conjunctivitis.*—The chronic conjunctivitis most prevalent in Egypt is trachoma. It occasionally attacks English children who have been taken care of by Egyptian or Nubian servants.

5. *Treatment.*—I have mentioned the importance of the accurate correction of ametropia; the glasses should always be worn in the sun and dust at any rate. This, with a good sun-hat, is all that is required in most cases, but tinted glasses may be ordered if they give relief to the patient. In dusty seasons it is most advisable to wash from the eyelids the dust which collects there and which may contain septic material. This should be done three times a day. In many cases this simple precaution is sufficient to prevent constantly recurring attacks of conjunctivitis. It must not be forgotten that dental apical abscesses and pyorrhoea are a fruitful source of ophthalmic trouble.

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