pigmented once more. Banifex contains the washings of an emulsion of micro-organisms which have been collected from as many birds as possible in different areas and over a period of a few years. The emulsion from which the washings are made contains 1000 million micro-organisms per c.cm. Two injections made intra-muscularly on consecutive days give the best results. Once the nerves become involved, leucaemia appears or tumours form, treatment is unavailing. Anahaemin has not given in my hands the results in fowls obtained in man, but this may be due to my not having treated the cases which are best suited to this remedy. Whether vitamin E, which contains α- and β-tocopherol, is able to disperse the hydrated protein particles as some have alleged, I am unable at present to decide.

REFERENCES


NOTE ON PHLYCetenular Ophthalmia

BY

SIR JAMES BARRETT, K.B.E.

MELBOURNE

The discussion on phlyctenular ophthalmia calls for some comment. It was in Southern Australia some time ago a very common condition, and after much experience I came to regard it as a deficiency disease. It was frequently seen in girls whose diet consisted largely of tea and bread and butter. With a full diet and the usual local treatment it disappeared. It is now in private practice almost a curiosity.

But the evidence adduced by Dr. Sorsby and others re-opens the question.

Tuberculous disease in Victoria has been greatly lessened though it is still unpleasantly frequent. The hypothesis is obviously that if a phlyctenular ophthalmia case gives a positive tubercular result tubercle is to be regarded as the cause.

The lessening of tuberculous disease may be due to better conditions and greater care taken to avoid infection, but it may also be the expression of a biological process of elimination. Furthermore if the current view is taken both tubercle and
Phlyctenular ophthalmia may be due to malnutrition and may not be directly associated. However, in order that the statement of the case may be complete I append a report by Dr. Bell Ferguson, State Director of Tuberculosis, in Victoria, who writes as follows:

"In reply to your query I beg to submit the figures for the last 20 years—death rate per million.

At the present time we have on the books of this Chest Clinic the following eye cases:

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phlyctenular conjunctivitis</td>
<td>4</td>
</tr>
<tr>
<td>Sclerosing keratitis</td>
<td>1</td>
</tr>
<tr>
<td>Iridocyclitis</td>
<td>1</td>
</tr>
<tr>
<td>Eales' disease</td>
<td>2</td>
</tr>
<tr>
<td>Interstitial keratitis</td>
<td>1</td>
</tr>
</tbody>
</table>

Of these nine cases six have demonstrable tubercle of the lung.

In my experience these ophthalmic cases of tuberculous origin are exceedingly hyper-sensitive to tuberculin. We are accustomed to using tuberculin in low dilution and with great caution over a prolonged period with a view to reducing this allergy, and taking the greatest care to avoid, if possible, or to produce only the most minimal focal reactions in the eye.

The response to tuberculin, indeed, may be regarded as definitely deciding whether the eye condition under consideration is tuberculous or not. Tubercle should be remembered as a possible cause of many obscure diseases of the eye and judicial use of tuberculin as outlined above will help to substantiate the diagnosis.

The cases have been sent from the Eye and Ear Hospital with the exception of one (Phlyctenules) occurring during pneumothorax treatment at a sanatorium.

We use the response to tuberculin treatment as a test in these eye cases commencing usually with a mild bovine tuberculin such as P.T.O. (Bayer) initial dose 0.000,000,002 c.c. and doubling the dose until some reaction appears."

It will be, therefore, obvious that though the decline in the quantity of tuberculous disease has been great much still exists. But phlyctenular disease has declined to a much greater extent as already indicated.

Two questions arise in mind as in other eye diseases. (1) Is the fact that phlyctenular and other ophthalmic cases give a tuberculin reaction a certain indication that the cause is tuberculous? (2) May not both tubercle and phlyctenular ophthalmia be alike products of malnutrition.
Anterior staphyloma of the cornea in European countries is more rare than in sub-tropical ones, such as Palestine.

Epidemics of acute conjunctivitis, especially during the dry and hot seasons of the year, aided by the exceedingly widespread trachoma, lead to frequent ulceration of the cornea which is one of the main causes of blindness among the population of Palestine. (Strathearn, Shimkin, Ticho.)
NOTE ON
PHLYCTENULAR
OPHTHALMIA

James Barrett

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