body is interesting and agrees with the general concept developed earlier (Davson and Duke-Elder, 1948) that the barrier separating the blood from the vitreous body is more selective than that separating it from the aqueous humour. The fact that urea, on the other hand, penetrates so readily into the vitreous is interesting: it may be suggested (at this stage purely as a conjecture) that it may, like the sugars, enter by way of the retinal and uveal capillaries, while the other substances may be restricted to the latter.

SUMMARY

The rate of penetration of certain nitrogenous substances (creatinine, urea, glycine and alanine) from the blood into the intra-ocular fluid has been studied. The rate at which they cross the blood-eye barrier is much slower than can be accounted for by a process of simple transudation or dialysis through inter-cellular spaces and suggests a transference through cell bodies.

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INTERSTITIAL KERATITIS OCCURRING IN A CASE OF REITER'S DISEASE

BY

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GIBRALTAR

A NUMBER of cases have already been described in the literature. All of them have the variants of diarrhoea, urethritis, polyarthritis, conjunctivitis and iritis, etc., but as far as can be discovered no case has previously been described with interstitial keratitis.

A case of Reiter's disease was admitted to the Military Hospital, Gibraltar, in 1946. He was, as is usual, a young healthy male of 24 years of age. He had had no venereal contact for 3 months and no history of previous venereal disease. His first symptom was dysuria for 12 hours and then a muco-purulent discharge from the urethra, and within 24 hours of its appearance he was in Hospital. Smears revealed pus and epithelial cells, but no organisms, and no organisms appeared on culture. There was a slight temperature only. The complement fixation test for G.C. and the Kahn and Wasserman were negative.

Treatment with sulpha-thiazole gave no results, and eleven days after commencement of treatment he developed a conjunctivitis with no discoverable organisms in the discharge, and simultaneously his left knee joint became painful. The leucocyte count was 10,500 per cu. mm.

	Per cent.
Neutrophile polymorphs ...	79.5
Eosinophiles ...	Nil
Basophiles ...	Nil
Lymphocytes ...	14
Monocytes ...	6.5

The conjunctivitis gradually recovered within a few days and the pus began to clear from the urethral discharge, but the knee became more swollen and slightly painful. The orthopaedic surgeon reported much effusion and some local heat, with restriction of movements. The synovial membrane was not swollen. Nothing abnormal was seen on X-ray.

With rest in bed the joint became less swollen, but about a fortnight later the patient complained of gradually failing vision in the right eye, without any pain, and the eye was flushed.

When he was referred to the eye clinic a "ground glass cornea" could be observed as the patient walked across the room, but he had no pain nor photophobia, although there was a ciliary and conjunctival flush.

On examination the right vision = 6/18 N.I., left vision = 6/6. Interstitial and deep keratitis were present in the right eye. The ocular tension was normal, but the A.C. was deep. The pupil was small and fixed, and the fundus of the eye could not be seen clearly.

The left eye was normal.

The Wasserman was repeated and was again negative. Routine treatment was given for the right eye, and a week later the left eye became flushed. The right pupil had dilated poorly with atropine, the cornea was clearer, and the iris could be seen, with enlargement of its vessels. On slit-lamp examination of the right eye, residual interstitial keratitis was seen. The endothelium was swollen, and showed a mass of white lines. The anterior surface of the lens capsule was covered with a brownish network, with brown spots.

The right eye cleared slightly in the course of the month, but iritis began in the left eye. In this eye the attack was severe, and within a week the tension was low, and the vision diminished to finger-counting.

All investigations as to cause were negative. Penicillin was given intramuscularly (1½ million units) with no effect.

This young man was finally invalided home with eye symptoms still persisting.

The theories and treatment of this disease have been discussed in many recent papers, and I am only publishing this case as it presents interstitial keratitis combined with keratitis profunda and iritis.

The most significant feature of this case was the development of new signs in different parts of the body, and the recovery of the old. Particularly severe and persistent were the eye signs. Secondly the absence of pain was notable.

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