sultation. At that time, his visual acuity was 20/40 OD and 20/25 OS. Mild to moderate conjunctival redness and swelling were noted. By slit-lamp biomicroscopy multiple tarantula hairs were present at both levels of both halves. Some hairs were also noted to protrude through Descemet’s membrane posteriorly into the anterior chamber. Hairs embedded in the corneal stroma were surrounded by focal, whitish, intrastromal infiltrates, while hairs protruding posteriorly into the anterior chamber were encapsulated with dense, ‘mutton fat’ inflammatory precipitates (Fig 1). A mild iritis was also present. The remainder of the ocular examination showed nothing remarkable.

As the spider hairs appeared deeply embedded in the corneas, we did not attempt to remove them. In order to reduce the existing inflammatory reaction in the anterior eye segments, topical corticosteroids were instilled in both eyes about 10 times each day during waking hours. A rapid decrease in the ocular inflammation was observed within 48 hours, and the corticosteroid eyedrops were tapered slowly over a period of three months. The embedded hairs gradually underwent resorption, and by 10 months none were visible. The visual acuity returned to 20/20 in both eyes, and the patient has remained symptom-free.

The irritative effects of tarantula hairs are thought to be mainly mechanical, though a toxic chemical or hypersensitivity phenomenon has not been ruled out. Cooke et al. classified the hairs from Theraphosid spiders into four types. In small mammals, such as mice, a generalised inflammatory reaction from type IV hairs involving the respiratory tract may produce death from asphyxia. It is believed that type III hairs, which are long and thin with many stumpy barbs, are most likely to penetrate skin and cause severe urticaria in humans. Brachypelma smithi, a large colourful species native to Mexico and often sold in pet stores, has type III hairs. Eye injury from hairs have included keratitis, conjunctivitis, iritis, and putative choriotinal scarring. We recommend that extreme caution be exercised during and after handling these spiders.

Patients suspected of having ocular injuries should be examined closely by slit-lamp biomicroscopy.

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Lactic acid and neovascularisation

Stir,- My opinion was that the British Journal of Ophthalmology is one of the best ophthalmological journals all over the world, but reading your editorial in the June issue I am disappointed. In your editorial you cite my work and then write: 'Later attempts to confirm this by demonstrating excess lactic acid in the vitreous of kittens and rats whose retinas has been rendered ischaemic were unsuccessful, and lactic acid seems to have been dropped.' This was the work of Gerke et al., and I am sorry that you have not read my answer to it. I reported that in cases of ruberosis iridis the lactic acid concentration of the aqueous humour is significantly increased, and stated that 'the findings of Gerke et al. (1976) prove that at the beginning of the proliferative phase of experimental fibroplasia the lactate content of the inner layers of the retina, i.e., of the least part of the investigated specimens, did not rise to a degree which could have significantly increased the lactate concentration of the whole vitreous-retina-chordoid specimen'.

Since then I have summarised my work on ocular neovascularisations several times, and I know of some work of others confirming my findings. For example, Deem et al. and Cunha-Vaz have found that after a single injection of lactic acid into the vitreous there was an intense endothelial proliferation or thymidine uptake—this is, the first signs of neovascularisation—in the retinal veins of experimental animals. I see that you have not met with these publications either.

I have not dropped the lactic acid and I am still working in it, and my results prove the following: (1) The lactic acid concentration of vascularising tissues is increased. (2) Increasing the lactic acid concentration of avascular tissues leads to vasculisation. (3) In cases of avascular swelling the lactic acid concentration is decreased. (4) L-lactate induces more intense corneal vascularisation than D-lactate foreign to the organism. (5) L-lactate concentration stimulates the thymidine uptake and the proliferation of cultivated vascular endothelial cells in vitro.

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** Many thanks to Professor Imre for his kind words about the BJO. As to the question of lactic acid and its role in neovascularisation, I am delighted to hear further details of this and also congratulate him for his determination in pursuing his researches. I am sorry he was disappointed that the editorial coverage was not complete, but the main function of this sort of editorial is to stimulate interest, and this seems to have been successful. I would be the first to admit that this type of editorial can never give complete coverage of a difficult subject like this. - ed, BJO.

Aqueous humour in insulin-dependent diabetic patients

Stir,- I read with much interest the article by Hayashi M, et al. which reported on the decrease of aqueous humour formation in insulin-dependent diabetic patients, as measured by means of fluorophotometry. It is interesting to note that in 1965, by means of other methods (the suction cup of Rosen gren...
Lactic acid neovascularisation.

G Imre

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