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OCULAR CASES OF MEDICAL INTEREST*

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THE following cases were encountered some years ago while I was abroad on active service. This has unfortunately made it impossible to give absolutely complete reports or to make full acknowledgements to the service practitioners who sent in these cases for consultation.

Case Reports

Case 1. Myopathica Atrophica.—A yeoman of signals aged 22 years was admitted to the Military Hospital, Gibraltar, on August 31, 1943. He complained of having difficulty in facing the light for 10 days. The eyes ached but did not water, and had become bloodshot in the last 2 months, but especially in the last week when he attended the American hospital at Londonderry for conjunctivitis. Moreover, he had been losing weight for the last 6 months with much thinning of the arms, legs, and chest, more especially on the right side; the left arm gave more trouble when signalling (semaphore) and tired more easily; he lost control of the right leg occasionally. His face was much thinner and he was becoming "pot-bellied". He was sleeping well.

Past History.—The patient had been knocked unconscious at the age of 13 years and had sustained severe bruising of the forehead but no fracture of the skull. There was no amnesia for the period of the accident. He had spent 2 weeks in Shotley Naval Hospital for "bronchitis" in 1936. A right herniotomy had been carried out in 1938. He had had anti-syphilitic treatment in 1940 (fifty injections of N.A.B.) at Singapore. He had developed severe tonsillitis 8 months ago.

Family History.—His father was dead (heart trouble); his mother, who was alive, had been suffering from "some obscure muscular disease" for the last 20 years. There were two sisters, both alive and well.

Examination.—The patient had a drawn, haggard look with staring eyes, the bulbar conjunctivae being rather injected with darkish vessels. Facial muscular wasting was present with atrophic ectropion and weakness from wasting of the orbicularis oculi. The sternomastoids were wasted as well as the shoulder muscles. Organic reflexes normal.

The conjunctivae over both globes appeared thicker than normal, with thickened, dilated, tortuous, purple veins, and had a dry, greasy appearance. The arteries were also dilated but not so much as the veins. Photophobia but no lacrimation was apparently present. At no time did the patient give any sign of epiphora despite the atrophic ectropion and the engorgement of the conjunctival vessels. The pupil reactions were normal. There was no evidence of any intrinsic ocular muscle weakness. The bulbar appearance was that of a chronic episclero-conjunctivitis of a diffuse nature which was apparently secondary to exposure owing to the incapacity of the patient to close his lids properly over the globes. Other evidence of "exposure keratitis" was not seen.

The visual acuity was 6/6 without correction in both eyes. Both fundi were normal.

The case, being truly medical, was transferred to the physician, Major Leonard West, R.A.M.C., who reported on the general condition as follows:

Looks drawn and jaded. Wasting of facial musculature, both scapula and shoulder muscles affected. Right brachio-radialis affected, while there is also wasting of the right interosseus muscle. Right leg adductors and tibialis anticus wasted.

General appearance "pot-bellied" with some "winging" of the scapula on the right side.

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Drags the right foot but the power is good in both feet with the exception of the right on dorsiflexion. No evidence of tremor or fibrillation. Superficial and organic reflexes normal. No Rombergism. Deep reflexes difficult to elicit and responses sluggish. No gross scoliosis present. Throat, larynx, lungs, heart, and abdomen normal. Urine, no albumen or sugar. Kahn test negative. Patient writes with his right hand but is otherwise left-handed. Electrical reactions as follows: muscles of shoulder girdle normal; quadriceps and hamstrings normal; calf muscles and peronei normal; anterior tibial group no faradic reaction. Galvanic reaction fairly quick except in tibialis anticus, right and left, where it is almost absent.

Diagnosis.—Myopathic atrophy with exposure episclero-conjunctivitis.

Case 2. Processional Caterpillar (*Ctenocampa processina*) Hairs in the Eye.—An aircraftman aged 22 years got some cigarette ash in his left eye while watching and handling processional caterpillars on North Front, Gibraltar, some 24 hours previously in a very blustery wind. He admitted squeezing some of the caterpillars, but he had not touched his eye until some ash went into it, when he rubbed it with his fingers. He now felt that there was something in the eye still and came to have the "foreign body" removed.

Examination.—The conjunctiva over the left globe was very red and injected with considerable temporal chemosis; the area of chemosis was dimpled in the centre as if it had been burnt in that area. The dimpled zone was covered with a sticky viscid mucopus of a pearly-white appearance. The whole appearance resembled that of "pitting" when an oedematous surface is pressed with the finger. Circumciliary injection was present, suggesting iritis, but there were no keratic precipitates. The corneal limbus nearest to the swelling looked oedematous also. The fundus and lens were clear. The ocular tension was normal. There was no staining of the cornea.

The slit-lamp examination showed the true nature of the injury, as the pitted zone of the conjunctiva was full of golden barbs which were migrating into the corneal region near the limbus. There was a most severe conjunctival reaction about the barbs, and 10 days later they had migrated into the cornea where they became encapsulated in a white shroud—a protein-precipitation reaction—and looked like an Egyptian mummy in a sarcophagus. At a later stage, fibrous tissue enveloped the barbs, and the affected barb would become quiescent. As new barbs entered the cornea, so the reaction of the globe was maintained with acute exacerbations of the lesion. It seemed highly probable that these very minute barbs would ultimately penetrate the globe and destroy it. While he was under my care, keratic precipitates did not develop. The ultimate fate of this aircraftsman's eye is unknown as he was invalided home, but the prognosis is poor.

Case 3. Accidental Solanaceous Mydriasis.—A soldier in the Pioneer Corps, aged 22 years, complained that while he was squeezing a small, green "apple" some of the juice had entered both eyes, causing him great pain and making him "blind".

Examination.—Both globes showed marked congestion and injection of the bulbar conjunctiva. The lids were in a state of blepharospasm, and on raising the lids a considerable amount of lacrimatory fluid escaped from the conjunctiva, where it had been trapped by the spasm. The visual acuity was 6/24 in both eyes, and the patient was quite unable to read any print of reasonable size. The pupils were grossly dilated and inactive to light. The patient denied that he had had atropine put in them at the First Aid Post, and this was confirmed. The addition of correction for distance and of +3·00D sph. resolved the visual condition in both eyes.

Diagnosis.—Traumatic mydriasis was due to the accidental instillation of an alkaloid from an indigenous solanaceous plant recognized as Egyptian Henbane (*Hyocyamanus muticus*). This plant, which is well known in the Mediterranean zone, both East and West, bears a small, green fruit like an unripe tomato about 1·25 in. in diameter. It is called "Sakan" or "The Drunken", and among various other names given to the

fruit by the armed forces are "Gibraltar Tomato", "Monkey's Apple", and "Spanish Apple". It yields 83 per cent. of its alkaloids as *L. hyocyamine*, an 0·5 per cent. solution of which is equivalent to a 2 per cent. solution of atropine.

Case 4. Melanosarcoma of the Macular Area.—A Chief Petty Officer, R.N., aged 38 years, with 22 years' service, first attended the Military Hospital at Gibraltar on September 30, 1941, complaining of some impairment of reading during the last 4 weeks, with alteration in the shape of the letters, which appeared bent. He had always been a dead shot and had never had a squint or any ocular injury. He had been in perfect health, and had been through a number of important actions, and at sea most of the time. The right eye was the one that was giving trouble.

Examination.—He was a strong, healthy type, not nervous, introspective, or unduly sensitive, of good physique, quick and intelligent. The visual acuity in the right eye was 6/36 with +1·50 D sph., and 6/9 with +0·50 D cyl., 180°. The metamorphopsia could be corrected. In the left eye the visual acuity was 6/6 +0·75 D sph. and 6/5 with +0·50 D cyl., 85°. The pupil reactions were normal, the right cornea clear, and there were no other obvious abnormalities in the ocular media to affect the form of the retinal image. The right fundus showed "scattering" of the macular reflex, with heightened reflexes over the whole area. The macula lutea did not look abnormally coloured, but may have shown a slight increase in its normal yellowish appearance. The reflexes from the vessels as they emerged from the optic disc were much increased. The ocular tension of both eyes was normal.

X-rays of skull and orbits were negative, Kahn test negative, and physician's pathological report negative.

Progress.—The patient was told to report again in one month, but he went to sea on active service, and did not report again until January 19, 1942. He complained that objects appeared more bent than ever, and that he had difficulty in seeing clearly with the right eye for both distance and near. He had no other complaint.

The visual acuity in the right eye was 6/60 with +1·50 D sph., and 6/18 with +0·50 D cyl., 180°. It was not possible to correct the metamorphopsia.

The right fundus showed heightened reflexes, especially along the retinal arteries as they issued from the disc, where they almost resembled "pipe-stem" sheathing. The macular reflex was now absent, with some very slight disturbance of the pigment layer. The foveal pit had disappeared, and there seemed to be a potential detachment of the central area of the retina, or even a very small shallow detachment of this area which could not be seen ophthalmoscopically as there was no increase in the hypermetropia.

The ocular tension of the right eye was normal, anterior transillumination negative; visual fields showed relative scotomata for red, green, and blue, with $\frac{1}{4}°$ and $\frac{1}{2}°$ targets.

The Kahn test was negative, the sinuses, teeth, and tonsils clear of infection, blood pressure 142/82, and urine clear, without sugar or albumen.

X-rays of the skull, right optic foramen, and right orbit were negative.

Further interrogation elicited the fact that the patient's mother had died from "malignant pigmented ulcers of the leg" some years previously.

Diagnosis.—A provisional diagnosis of very early melanosarcoma of the macular region was made. The patient was discharged to the U.K. for further opinion and enucleation of globe, and entered the Royal Naval Hospital, Gosport, where a report on the pathology of the globe later confirmed the diagnosis of melanosarcoma.

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