OPHTHALMOLOGICAL HERPES ZOSTER COMPLICATED BY HEMIPLEGIA*

BY

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ZOSTER ophthalmicus is a common clinical entity presenting with pain and the formation of skin vesicles with intense lid swelling, followed by conjunctivitis and sometimes by keratitis, uveitis, and defective vision. Treatment is largely symptomatic. Local complications are frequent, including corneal scarring, secondary glaucoma, paralysis of accommodation, extra-ocular palsies, and optic atrophy.

Pathology.—Herpes zoster is an acute infection involving primarily the first sensory neuron and corresponding area of skin. Herpes zoster virus is closely related to varicella and there is reason to believe that zoster and varicella are due to the same virus. Its occurrence is sometimes associated with pneumonia, uraemia, or intoxication with arsenic or bismuth. It may also be a complication of dorsal nerve root lesions such as syphilitic radiculitis.

The limbs and trunk are usually affected. Ophthalmic and geniculate zoster also occur. Some unusual complications are spastic weakness of the legs, segmental muscular wasting, oculo-motor, abducent, or trochlear weakness, and rarely optic neuritis. The main pathological features are ganglionitis, marked by pan-necrosis with or without haemorrhage and intense lymphocytic infiltration.

The peculiar features of the condition include:

(1) Unilaterality and segmental localization;
(2) Involvement of the posterior horn, nerve root, and spinal ganglion;
(3) Localized lepto-meningitis;
(4) True peripheral mononeuritis in the nerve distal to the ganglion and the anterior nerve root.

Occasionally diffuse inflammation of the meninges occurs, and this may extend to the brain or white matter of the spinal cord. Disturbance of function of other structures innervated by the spinal segment affected can also occur. We report a case of trigeminal zoster complicated by contra-lateral hemiplegia due to meningo-encephalitis.

Case Report

A married woman aged 55 was first seen in the Eye Clinic with zoster ophthalmicus involving the supra-orbital and naso-ciliary nerves. Oedema of the skin of the lids and diminished right corneal sensation was then present; 9 days later she was admitted to hospital with a history of numbness in the left arm for 24 hours, rapidly followed by loss of function of the left arm and left leg. No loss of consciousness or headache was reported.

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Examination.—The patient was conscious. Blood pressure was 155/95. Spastic weakness of the left arm and left leg was found with left facial weakness of upper motor neuron type. Sensation of pain was diminished on the affected side. The left plantar reflex was extensor.

Investigations.—Haemoglobin 13·1 g. = 90 per cent.; white blood count 5,600 (eosinophils 4 per cent., neutrophils 60 per cent., lymphocytes 36 per cent.); blood urea 25 mg. per cent.; serum cholesterol 128 units; Wassermann reaction negative.

Cerebrospinal fluid.—White blood cells 90/mm³—mainly lymphocytes; red blood cells 7/cmm³; sugar normal; protein 200 mg. per cent.; globulin moderate excess; Lange curve 0111210000; Wassermann reaction negative.

X-ray Chest and Skull.—No abnormality.

Electro-encephalogram (May 1, 1964): On the right hemisphere cerebral activity was “slowed” over a wide area and showed almost continuous disturbance focally in the temporo-central area extending slightly anteriorly.

(July 10, 1964): In comparison with the previous record there had been considerable improvement; these findings being compatible with a resolving cerebral lesion and the second record being only slightly abnormal.

Treatment.—She was given intensive physiotherapy and the usual care for the eye condition. Function of the left arm and left leg was regained in 2 months.

Summary

Hemiplegia is an unusual complication of herpes zoster. This is caused by vascular thrombosis consequent upon damage by the virus at the time of invasion of the vessels or tissue. The above case is the tenth to be reported in the literature (Denny-Brown, Adams, and Fitzgerald, 1944; Brain, 1962; Acers, 1964).

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REFERENCES