CASES DEMONSTRATED AT THE M.R.C.P. CLASS.

Case presented by J. St. C. ELKINGTON.

H. W., male, aged 59.

History of present illness.—Three years ago began to notice numbness of both hands which felt as if he had boxing gloves on. After a few weeks the legs began to feel the same, and the left leg dragged slightly. In walking his legs felt tottery and he felt as if he would fall to the left. There was slight precipitance of micturition but no loss of control.

Since that time there has been a gradually increasing weakness of all the limbs but particularly those on the left side. He is still able to walk with a stick.

There have been no other symptoms.

Past History.—Apart from a squint which has been present since birth he has had excellent health. Venereal disease is denied.

Family history.—Negative.

On Examination.—The patient is an elderly man of thin build but otherwise healthy. He walks in an ataxic manner, with the trunk flexed to the left, and drags the left leg.

Diminution
of Pain &
Temperature

Cranial nerves.—Fundi, visual fields and acuity normal. Pupils are equal and circular, reacting normally to light. There is a marked internal squint of the left eye without paralysis of the left external rectus. On full deviation to the right an irregular horizontal nystagmus is present. In other respects the ocular movements are normal. The muscles of mastication act normally; the corneal reflexes are brisk and equal. There is dulling of sensation to pin-prick over the territory of the ophthalmic divisions of both trigeminals but more on the right than the left. The seventh, eighth, ninth and tenth cranial nerves appear normal. There is bilateral weakness and wasting of the sternomastoids and upper trapezii, more marked on left than right side. The tongue is normal.

Motor system.—There is wasting of the deep muscles of the neck and of the supra- and infraspinati, more marked left than right. No other local atrophy is present. Tone in the left arm and leg is much increased and is spastic in quality, that in the right limbs normal. Power is much reduced in the left arm and leg and in the trunk, and only moderate in the right limbs. Co-ordination

tests show a marked intention tremor in the left arm and leg, and a less severe one on the right side.

Reflexes.—The biceps, triceps, and supinator reflexes are much increased, left more than right. The abdominal reflexes are absent. The knee jerks and ankle jerks are accentuated, left more than right. Ankle clonus on the left side. The plantar reflex is equivocal on the right, and extensor on the left.

Sensation.—Light touch is normal throughout. Pin-prick and hot and cold are diminished over the neck and trunk down to the nipples, and the upper limbs on both sides but more on right than left. They are completely lost on the right half of the body below the nipple (see diagram). Passive movement and sense of position and vibration sense are diminished in the left arm and leg.

Diagnosis.

(1) **Topical.**—It is clear from the paralysis of the limbs without damage to the motor function of the cranial nerves, and from the crossed sensory loss that there is a lesion of the spinal cord. The spastic condition of the left arm and leg indicates that the pyramidal tract is damaged on the left side above the cervical enlargement. This is borne out by the wasting of the deep muscles of the neck supplied by segments, Cervical 2, 3 & 4. The wasting of the spinati indicates that the lesion is extending down as far as the upper portion of the cervical enlargement. The sensory loss throws further light on the localisation: the right sided loss of pain and temperature senses indicates damage to the spino-thalamic tract on the left side of the cord. The dissociated loss to pain and temperature over both forequarters is probably due to damage of the fibres in the neighbourhood of the central canal as they decussate. The loss of vibration sense and sense of passive movement on the left side show that the left posterior column is involved. The analgesia on the forehead is to be explained by interference with the descending root of the fifth cranial nerve as it turns into the substantia gelatinosa Rolandi. The nystagmus is the result of the involvement of the lower part of the posterior longitudinal bundle. Thus the whole of the symptoms and signs may be explained on the basis of one single lesion in the cervical cord at the second—fourth segments predominantly on the left side, but also involving the region of the central canal thus:—

C 2, 3 or 4,

R.

L.

(2) **Pathological.**—The commonest central lesion in the high cervical cord is syringomyelia and this disease frequently produces a picture exactly like the present case. The late onset and steady progress are both unlike syringomyelia of the common variety but do not completely exclude it. Intra-medullary neoplasms originating in or around the central canal frequently produce a very similar picture and may be associated with a secondary syringal dilatation of the central canal above the lesion. This diagnosis would agree well with the late onset and progressive course and is quite consistent with the absence of root pains. The spinal fluid has twice been examined and on neither occasion showed any abnormality and manometry was normal. These findings are consistent with the presence of an intra-medullary neoplasm. Pressure upon the cord by an extra-medullary neoplasm is a possible but unlikely cause, because of the absence of root pain or changes in the cerebro-spinal fluid and the plentiful evidence of involvement of the central region of the cord. It must be remembered, however, that extra-medullary tumours may produce very deceptive signs and, especially when high in the cervical region, may produce no changes in the spinal fluid until very late. Since they are so readily amenable to surgical treatment, the possibility of an extra-medullary tumour should always be considered, and repeated re-investigation of the spinal fluid carried out so that loculation may be detected at the earliest possible date. Syphilis can be excluded in this case both clinically and serologically. Disseminated sclerosis is a possible but unlikely cause of this patient's trouble. The progressive and solitary lesion is unlike that of disseminated sclerosis though the disease may run an atypical course in the rare cases when it attacks individuals past middle age.

On consideration of these facts an intra-medullary tumour is the most probable pathological diagnosis.

A CASE FOR DIAGNOSIS.

Case presented by W. BURTON WOOD, M.D.

ERNEST L., aged 8, submitted to candidates for diagnosis as a case of pulmonary disease.

Recent History.—The patient was recently admitted to the Victoria Park Chest Hospital suffering from cough and malaise, said to be the sequel of an attack of Whooping Cough in the summer of 1932.

Family History.—The patient's mother died of pulmonary tuberculosis a few months ago.

Physical Condition.—The patient is a fair-haired, clear-complexioned, blue-eyed child.

The external appearances in a case of this kind are important, for though they should not be allowed to pre-judge the issue, they are often very helpful. The majority of children suffering from chronic pulmonary disease fall into one of two groups:—(a) the chronic catarrhal group; (b) the tuberculous group. The former comprises by far the greater number of children suffering from cough. Chronic pulmonary catarrh is liable to lead to Broncho-Pneumonia, of which pulmonary fibrosis and bronchiectasis may be the sequels. The child with a "damaged lung" usually has a muddy complexion, and the eyes and hair lack lustre. The appearance thus differs from that of the tuberculous child whose complexion is usually fair and whose eyes are bright.