wide-based and ataxic. Reflexes: right biceps diminished, right triceps and arm absent from old injury to elbow. Abdominals absent, otherwise reflexes normal in all respects. No sensory loss.

It was suggested that this was a lesion of the upper end of the central tegmental tract near the third nerve nucleus, due to a petechial hæmorrhage.

Bilateral Sacral Plexus Lesion—Polyarteritis Nodosa.—GERALD PARSONS-SMITH, O.B.E., M.D. Man, aged 44.

Past history.—October 1948: Primary syphilis (W.R. ++; treponema isolated) treated with complete course of arsenic, bismuth and penicillin which produced normal serological reactions. 1930: Malaria. 1924: Typhoid.

Family history.—Father died of disseminated sclerosis.

History of present complaint.—May 1948: Gradual onset of lassitude and excessive malaise. 3.6.49: Sudden attack of severe upper abdominal pain lasting twelve hours; associated with fever and severe frontal headache.

15.6.49: Dull aching pain in joints of right upper limb, lasting three days. Four days later sudden onset of pain of left sciatic distribution; this improved over a period of six weeks leaving some numbness of dorsum of the foot. He continued to feel very run down and lost weight. During this period he had two attacks of very severe abdominal pain similar to his first attack.

12.8.49: Acute onset of right foot-drop with blunting of sensation over the outer side of leg. Admitted to St. George's Hospital on 7.9.49 under Dr. H. Gainsborough and Dr. J. R. Nassim, to whom I am indebted for permission to show this case. Stated he had some blurring of vision in both eyes for three days about this time.

Present condition.—Protracted fever around 100° F. Lost 2 stones in weight. Except for some generalized arteriosclerotic changes and persistent tachycardia his cardiovascular system shows no abnormality. B.P. 140/80.

Nervous system.—Cranial nerves and brachial plexus normal. Severe pain in the muscles of both legs. Both thighs are wasted, 1 in. more wasting on the right. Muscle power diminished, especially in right anterior tibial muscles. Right-sided foot-drop and weakness of right plantar flexors. Knee-jerks present, ankle-jerks absent. Patchy sensory loss in right L.5 distribution, hyperæsthesia of soles of both feet, sensation otherwise normal.

Investigations.—Blood-count: R.B.C. 3,700,000; Hb 77%; W.B.C. 17,900 (polys. 85%, lymphos. 9%, monos. 4%, eosinos. 1%, basos. 1%). E.S.R. 37 mm. in one hour. Urine: red cells and granular casts. Stools: positive for occult blood. C.S.F. normal.

Pulsometer curve shows a complete R.D. of the right tibialis anticus muscle.

I.V.P.: normal excretion.

Muscle biopsy: R.tib.ant. (Prof. Theo Crawford): Endarterial proliferation of the small vessels with perivascular collections of inflammatory cells. In places there is fibrinoid necrosis of the media, and the picture is characteristic of polyarteritis nodosa.

Comment.—The sudden occurrence of the neurological symptoms in the lower limbs exemplifies the vascular basis of the peripheral neuritis in polyarteritis nodosa.

Boeck's Sarcoidosis of the Nervous System.—DENIS WILLIAMS, M.D.

G. M., male, aged 39. Bank clerk. Married, with two healthy daughters. Family and previous medical histories are not contributory.

History.—The patient was in excellent health until May 1948 when his left arm became clumsy. Two months later, attacks of extensor rigidity in left leg began on climbing stairs. These symptoms persisted virtually unchanged until June 1949, although he had two attacks of loss of consciousness lasting some hours in December 1948 and April 1949, the latter preceded by a motor dysphasia. In June 1949 his left leg began to go into rhythmic clonus, in attacks lasting twenty to thirty seconds and followed by transient weakness. Two months later he experienced two types of attack: one in which he suddenly fell backwards recovering immediately; the other of clonic movements simultaneously affecting the left face, arm and leg without alteration of consciousness. He had no cough, his weight was steady, there were no skin lesions and he had no symptoms referable to other systems.

On examination.—The patient was normal mentally, and his intellectual performance was average but was not thought to be up to the expectation for a man of his background.

The cranial nerves were normal except for a slight pallor of the right optic disc. There was a mild left hemiplegia, involving arm and leg equally with slight increase in all tendon reflexes and an extensor plantar response. The abdominal reflexes were symmetrical. There was inco-ordination falling away and rebound, with an irregular intention tremor on the left side, as well as the hemiplegia, and it was clear that he had a combined cerebellar and pyramidal lesion on that side. Sensation was perfectly normal.

Heart normal, B.P. 150/90.

No abnormal signs were found on examination of the chest and there were no enlarged glands.

Very frequent attacks involving the left side of the body in tonic and clonic movements were observed in hospital. They lasted for about ten to twenty seconds and included a slow tonic contraction of the arm outwards and upwards.

Investigations.—Blood-count: R.B.C. 5,410,000 per c.mm.; Hb 116%; C.I. 1·07; W.B.C. 4,000 per c.mm. (polys. 62, lymphos. 34, monos. 1, eosinos. 3%).

E.S.R. 1 hour 5 mm., 2 hours 13 mm.

Blood proteins: Total protein 7·35 grammes %. Albumin 3·4 grammes %. Albumin: Globulin 1 : 1·16.

Cerebrospinal fluid: Pressure 180 mm. Free rise and fall. Clear and colourless. Cells—none seen. Protein—0·07 gramme %. Nonne Apelt weak positive. Pandy positive. Lange—0001110000.

W.R. negative in blood and C.S.F.

Mantoux reaction negative 1 : 10,000 and 1 : 1,000. No tubercle bacilli were seen in repeated examination of sputum, and in culture of gastric washings.

The electro-encephalogram was recorded on two occasions in Nottingham, where it showed epileptic discharges and a focal abnormality in the *left* temporal lobe. These observations were confirmed. The report (18.10.49) read "The E.E.G. is abnormal and repeated epileptic discharges occurred. These appeared to arise in the *left* hemisphere with occasionally a phase reversal in the temporal aspect of the frontal lobe, somewhere about the Sylvian point. This observation is the same as that which was made earlier at Derby. I cannot find any evidence of a right-sided parietal lesion to account for his left-sided tonic attacks."

X-rays of the chest (18.10.49) were reported upon as follows: "There is an irregular coarse mottling present in both lung fields and both hilar shadows are prominent. The appearances are unusual and are consistent with sarcoid changes. There is pleural thickening in the lower part of the oblique fissure." Previous X-rays reported upon in Derby in the summer had led to the diagnosis of Boeck's sarcoidosis.

Ventriculography carried out on two occasions by Mr. Clark Maxwell in Derby showed a normal ventricular system.

X-rays of the hands showed small cyst-like areas in the heads of both first metacarpals.

Liver biopsy was contemplated but was not carried out owing to the high level of the liver dullness.

There was general agreement that the clinical picture and the X-ray appearances were those of sarcoidosis. In the central nervous system lesions were present in both cerebral hemispheres, as shown by the attacks, the hemiplegia, and the E.E.G. abnormalities; in the left cerebellar mechanism, and probably also in the right optic nerve. Involvement of the central nervous system in Boeck's sarcoidosis is uncommon but has been described on several occasions.

Hereditary Perforating Ulcers of the Foot.—REGINALD KELLY, M.D., for DENIS WILLIAMS, M.D.

E. P., aged 24.

Family history.—Younger brother, mother and maternal uncle, maternal grandmother and great-aunt all suffered from the same disease.

Enuresis until the age of 15. First ulcer appeared at age of 21; since then recurrent, usually painless, penetrating ulcers on under-surface of both great toes, right third toe and right fifth toe with osteomyelitis of the proximal and terminal phalanges of the right big toe. No abnormalities of sensation or gait noticed by patient.

On examination.—Both big toes are enlarged and indurated, right more than left. On both there is a deep ulcerated area, punched out and dry on the left, ragged with a dirty, wet slough at the base on the right, with no normal granulation tissue. The ulcers are painless and there are similar ulcers of the same dry type as the left on the third toe of the right foot.

Loss of all forms of sensation on periphery of both feet with secondary level in stocking distribution on both legs up to mid-calf level below which there is a mild impairment of sensation. Pathological sweating at level and distal to both ankles; a flair reaction is obtained within the area of sensory impairment. Tendon-jerks preserved but ankle-jerks considerably more sluggish than knee-jerks.

Investigations.—X-rays: Spine, no abnormality; feet, osteomyelitis of proximal and terminal phalanges of right big toe.

C.S.F. normal. W.R. negative. E.M.G.: the small muscles of the medial border of the soles of both feet and the left tibialis anticus were examined; only normal voluntary action potentials were seen, there was no spontaneous activity and nothing to suggest a lower motor neurone lesion in the feet.