under discussion. Thus this case of encephalitis following chickenpox had certain features characteristic of both the encephalitis following vaccination and that following measles and the nonspecific encephalitis described by Low.

R. M. S.

[52] **Pneumocephalia intracranialis spontanea.**—L. GUTTMANN. *Zeits. f. d. g. Neurol. u. Psychiat.*, 1930, cxxviii, 82.

This is a useful summary and critical analysis of the condition in which air or gas of one or other kind appears within the cranial cavity, above or below the meninges, or in the cerebral substance, as a consequence of injury or for other pathological reasons. A schematic classification of the known varieties is offered, and a personal case described, with references to the cognate literature.

J. S. P.

[53] **Neurologic complications of pernicious anaemia.**—WILLIAM NEEDLES. *Arch. of Neurol. and Psychiat.*, 1931, xxvi, 346.

Of eleven cases of pernicious anaemia, complicated by subacute combined degeneration, in which adequate treatment with liver was given, signs of subacute combined degeneration developed in five despite therapy. Four cases remained stationary as a result of treatment, while in two cases some evidence of improvement occurred. These figures indicate that in appraising the value of the use of liver as a means of therapy neither complete pessimism nor complete optimism is justified. Why some patients do well while others fail to rally is a problem requiring further study. With regard to patients treated with liver before the onset of nervous complications, despite the favourable observations of Minot and Murphy the reports of other observers show that early and adequate liver treatment is by no means an absolute safeguard against the onset of neurological signs.

R. M. S.

**PROGNOSIS AND TREATMENT.**


A series of four cases are described in which operation for the relief of epilepsy following head injury was undertaken, with good results. Much stress is laid on the value of encephalography. It is pointed out clearly that epileptic attacks are most likely to occur, whatever the site of the wound, if the dura is penetrated and the cerebral substance injured, however moderately. From
a long series of experiments the author has been able to determine that wounds of the brain give rise to two differing types of sequel. A wound which leaves behind it destroyed cerebral tissue results in an extensive glial and connective-tissue scar, well vascularised, which exercises traction on the brain as it continues for a period of years, say, and causes the ventricles to be pulled towards it. This pull, and the plexus of vascular neoformation caught in it, are regarded as of importance in the etiology of focal epilepsy. On the other hand, if cerebral tissue is cleanly excised there results a fluid-filled space without a core of scarred connective-tissue, with little or no gliosis, and with no increase in vascularity. By comparison, such a region is of no pathogenic significance, or little, in respect of subsequent epileptic seizures.

The author considers therefore that clean, radical excision of contracting areas is justifiable, the necessary precautions being taken so as not to remove 'innocent vital areas.'

J. V.


The author describes in much detail a series of some twelve cases of epilepsy, of varying duration but mostly more or less chronic, in some (though not apparently all) of which a history of one or other kind of head injury was forthcoming. He urges the usefulness of encephalography, claiming that in some instances it has furnished valuable information not revealed by ordinary clinical examinations. The serviceableness of operative interference must always be supplemented by medical means; it is wrong in theory and practice to cease the administration of sedative drugs merely because the patient has been successfully operated on. Just as an abdominal case requires dietary and other medical treatment after operation, so does a cerebral case of symptomatic epilepsy.

The paper also contains interesting data bearing on the localisation of function in the cortex.

S. A. K. W.


For several years now the authors have been treating cases of disseminated sclerosis by the method of haemolytic serotherapy, the latter of the two having devoted his Paris thèse of 1930 to the subject. The principle of treatment is
based on the employment, for affections considered to be caused by an unknown virus, of a serum derived from the red blood corpuscles and spinal fluid of patients suffering from disease due to a neurotropic virus. In the present communication a series of fresh cases are described, from which the following conclusions are derived:

1. In the interval between attacks the application of the method prevents the return of acute exacerbations (two cases thus treated; patients under observation for one year).

2. In the first months of the disease, whatever its form, mild or severe, serum effects a functional and organic cure (eleven cures in eleven cases of the kind; two cases followed for four years, one for three, and eight for one). Exception must be made of the rare cases in which the unknown virus rapidly produces definite sclerotic lesions (one case observed). Such cases are characterised clinically by complete absence of spontaneous remission. In the case mentioned the hemolytic serum appears to have arrested extension of the process.

3. It is of value in cases older than one year and in others older still, with undeveloped symptomatology (one case followed for four years, four for three, 33 cases studied in France during the last two and a half years and eleven elsewhere, for more than one year). In these 49 cases the result of serum treatment has been amelioration more or less pronounced according to circumstances, very soon after the first injections in small doses. The improvement is both organic and functional; in many cases the Babinski sign has been modified immediately after injection. No severe relapse or exacerbation has occurred. Chronic cases and those of a serious character developing in the course of two or three years have been favourably influenced in about 50 per cent. (of 30 cases).

J. V.


Twelve cases are quoted. The author considers it important to emphasize the fact that cases with strong general reaction showed marked improvement of the eye functions. Cases however which reacted with slight general reaction were not much influenced by the sulphur treatment. Comparing the results obtained with other methods in treating optic atrophies, he states that among twelve cases treated with sulphur, six showed marked improvement, four presented improvement, one remained unchanged for a relatively long time of observation, and only one case became worse. Although remissions normally occur in optic atrophies this treatment seems to show sufficient promise to make further clinical trials desirable.

R. G. G.

Dr. Frazier has operated on 654 cases of facial neuralgia among 1,317 cases seen in 30 years, by the major method with which his name may be associated, and in the course of his experience mortality has been reduced to 0·26 per cent. Beginning with section of the sensory root in 1901, he started the procedure of subtotal resection—that is, with conservation of the ophthalmic portion of the root—in 1915. From 1918 he has also practised operation without touching the motor root. In his hands the operation as now conceived has proved entirely satisfactory. This paper recounts his experience and adds details to which attention may be directed.

S. A. K. W.


Dial, the trade name for a liquid preparation of diallylbarbituric acid, is a satisfactory anaesthetic for major neurological operations on monkeys, cats and dogs. In monkeys there is a large margin of safety between the anaesthetic and the lethal dose. For the animals mentioned 0·4 to 0·5 c.c. per kilogram intraperitoneally is adequate.

Dial produces a state akin to normal sleep. Its site of action appears to be in the deep nuclei, chiefly in hypothalamus and medulla. In 100 operations under dial of the kind mentioned only one fatality was attributable to the anaesthetic.

J. S. P.

**Endocrinology.**

[60] **Innervation of the thyroid gland: (1) The presence of ganglia in the thyroid of the dog.**—J. F. Nonidez. *Arch. of Neurol. and Psychiat.*, 1931, xxv, 1175.

The present article deals with the structure of ganglia found in the thyroid of the dog.

The author’s descriptions clearly indicate that the thyroid of the dog, investigated from the standpoint of its innervation, may possess typical ganglia embedded in the parenchyma. The same is probably true of other mammals, including man.

That no ganglia have ever been described in sections of the thyroid of