NEUROLOGY

[178] Voluntary extrusion of the eyeballs (Propulsión do los ojos voluntariamente).—H. FERRER. Revista Oto-neuro-oftalmol., 1928, iii, 403.

This presumably genuine case is altogether remarkable and is probably unique. The subject is a young man who has the power of extruding either eyeball, or both, voluntarily to such an extent that it surpasses the degree of proptosis seen in the worst cases of exophthalmic goitre. The photographs accompanying the description of the case are nothing short of amazing.

According to the reporter of the case the "feat" is accomplished by contraction of the obliques and relaxation of the four recti.

S. A. K. W.

PROGNOSIS AND TREATMENT.


The use of convalescent serum of both human beings and monkeys has been shown to be of value in the treatment of the disease whether naturally acquired or artificially produced. The quantity of blood obtainable from monkeys is insufficient for practical therapeutic purposes. Human donors are hard to obtain. The quantity of blood one can remove from an individual patient is strictly limited and only a small number of successive bleedings can be made from the same patient. The yield of serum is small—only about 150 c.c. being available as filtered serum from each bleeding.

The blood flowing from the convalescent's vein is collected in a vessel containing oxalate solution which is gently agitated during the whole venesection to insure that the anticoagulant is thoroughly mixed. The reds then are allowed to settle to the bottom and the supernatant plasma is syphoned off. A sufficient quantity of calcium chloride is added to the plasma and a clot quickly forms which, when complete, is separated from the side of the vessel with a sterile glass rod or platinum loop.

The specimens of serum from separate donors are arranged in groups and those of the serum of the same group are pooled, and filtered through Pasteur Chamberland F. candles into collecting bottles. Serum is classified as belonging to one of four groups according to the length of time that has elapsed since the donor suffered from the disease. Sterility tests are employed throughout, and safeguards are used to prevent transfer of infective disease from the donor to the recipient.

J. V.

After citing the favourable results obtained by a number of previous workers, the author refers in more detail to the experiences during the New Zealand epidemics of 1924 and 1925. Some 60 per cent. of cases were admitted to hospital at a suitable stage for serum treatment. Under favourable conditions all the patients received intrathecally 10 to 15 c.c. of convalescent serum at body heat, given very slowly by gravity after the removal of from 15 to 20 c.c. of spinal fluid, also very slowly. The older patients received in addition 20 c.c. of serum intravenously and the injections were repeated within 24 hours if the condition required it. The results were highly gratifying, the conclusion being reached that human convalescent serum is a specific in producing prompt recovery and preventing paralysis if given in the preparalytic stage.

As a result of experiences in Victoria in 1925, the 1928 epidemic found the authorities much better prepared. The adults affected in 1925 had been kept under observation, and broadcasting was used to trace others who had moved. Various minor points in technique of venepuncture are described, and it is stated that from convalescent adults 15 to 20 oz. of blood were easily removed at one sitting. The potency of the serum is rather low, and it depreciates at room temperature. In Melbourne during the summer and autumn of 1928 13 litres of blood were obtained from convalescents and old patients, principally the adults affected in 1925, and the serum yield has varied between 40 and 50 per cent. The cost of the serum at present is estimated at about two shillings per c.c.

It is very important to make the injection of serum as soon as possible after examination of the spinal fluid has confirmed the diagnosis. For this reason the procedure followed in New York in 1916 has been adopted in Melbourne. In cases seen in consultation outside the hospitals the apparatus for immediate bedside examination of the spinal fluid is always taken; lumbar puncture is performed if the clinical data point to the disease, and the enumeration and microscopical investigation are made at once; the lumbar puncture needle remains in situ, and if the diagnosis is confirmed serum is injected. Thus only one puncture is necessary, and no time is lost.

J. V.


Poliomyelitis after the development of paralysis may be divided into three stages.

1. The acute stage, dating from the onset of the illness until the disappearance of tenderness, a period varying from a few days to three months.
2. The convalescent stage, beginning at the end of the acute stage and continuing as long as recovery of function is proceeding, usually up to the end of two years.

3. The chronic stage, after the termination of the convalescent stage, when the condition is more or less stationary.

   Apart from serum therapy, for the acute stage the author recommends sedatives for the first few days to induce rest. The usefulness of hexamine is doubtful. If bulbar involvement is threatened, it is wiser to give glucose and saline per rectum than to worry the patient with repeated attempts at swallowing. The patient should be nursed on a hard bed with a firm mattress, a cradle being used to support the bedclothes. From the outset rest should be as complete as possible and nursing disturbance reduced to a minimum. Details are supplied of plaster beds. Immediate splinting is essential.

   Treatment for the second stage is summed up as follows:
   1. Obtain the co-operation of the parents for long-continued rest.
   2. When the tenderness has gone, commence muscle re-education.
   3. Splinting must be constantly supervised and modified to prevent stretching of weak muscles.
   4. If abdominal weakness is present, a cloth corset or belt is necessary, even during recumbency, to prevent stretching of weak muscular groups.
   5. Standing may be allowed daily for a few minutes, but not if a position of deformity is assumed in order to stand.
   6. Sitting, which favours flexion of the hips, scoliosis and footdrop, should be avoided.
   7. By keeping the patient from walking during the first year the number of cases of complete recovery is greatly extended.

   J. V.


The general conclusion in this paper is one of suspension of judgment. Marburg is rather sceptical as to the actual influence of radiation on the substance of gliomatous tumours. He has examined histologically three cases of tumours submitted to radiation for longer or shorter periods, without being able to satisfy himself that any definite and recognisable process of involution or sclerosis can be set down to its action. He also points out the unsatisfactory nature of some recent classifications of gliomata, in view especially of the fact
that most of these neoplasms are polymorphous. The most one can say is
that in some cases one type predominates. For this among other reasons he
hesitates to accept evidence that radiation acts on cell and fibre structures in
gliomas. But he considers it acts beneficially on the processes which lead to
rise of intracranial pressure.

S. A. K. W.


Beneficial palliative results of radiation treatment of gliomata of the brain
are of a sufficient degree and frequency to warrant its further trial. Patients
dying within less than a year after operation respond less favourably to the
treatment than those whose tumours allow a longer duration of life. Of 19
verified cases eight showed some benefit from radiation, while two were possibly
helped. The dangers of immediate reaction were exemplified in two cases.

Cellular gliomata respond better to radiation than non-cellular. The
benefit consists in relief of increased intracranial pressure and diminution of
focal signs and symptoms. The duration of relief in a given case cannot be
predicted.

Since patients vary in their immediate reaction it is desirable to estimate
tolerance by making the first application a fraction of the so-called erythema
dose. This precaution is specially important in cases of posterior fossa tumours
or of marked intracranial pressure. Pre-operative radiation has certain
obvious dangers and disadvantages which make the procedure inadvisable.

It seems desirable to administer maximum doses within four to five weeks
after the institution of radiotherapy. The dose to be given should be based
on the size, location, and depth of the tumour.

J. V.

[184] The treatment of serous meningitis by radiotherapy and the use of
hypertonic solutions (Sur le traitement de la méningite séreuse par la
radiothérapie et les solutions hypertoniques).—E. FLATAU. Revue
neurol., 1928, i, 675.

A useful précis of the genesis and etiology of meningitis serosa is followed by
an account of the author’s method of treatment, apart from operative measures.
Radiotherapy is directed mainly over the regions of the third and lateral
ventricles. It is carried out every two to three days for some five or six times;
and this is repeated every six weeks for a year, if necessary. In addition,
hypertonic solutions are utilised; the author employs a 40 per cent. solution
of glucose, injected intravenously, 10 c.c. at a time, every other day for some
ten to twenty times. He claims satisfying results.

J. V.
Parkinsonian rigidity.—E. Arnold Carmichael and F. H. K. Green.

1. Tincture of stramonium in large doses lessens Parkinsonian rigidity and increases the ability to perform fine rapid movements as recorded graphically.
2. It appears to improve the mental condition of the patient.
3. It does not affect the tremor.
4. It is at least as efficacious as subcutaneous hyoscine in large doses, is better than hyoscine by the mouth, and may be given continuously over a long period of time.
5. The optimum dosage necessary to produce this effect varies in individual cases, though it commonly lies between 45 and 60 minims thrice daily.
6. Toxic symptoms even with this large dosage are rarely severe; they may be combated in various ways; they appear to be more common in elderly patients with idiopathic paralysis agitans than in the younger post-encephalitics.
7. The whole tincture of stramonium is more efficacious than atropine or levo- and dextro-rotatory hyoscyamine.
8. The action of stramonium is palliative and not curative.

Authors’ Abstract.

Endocrinology.

Ophthalmoplegia in Graves’ disease.—A. M. Wedd and H. H. Peyumar.

The authors record a case of recurrence in Graves’ disease, where the second attack was ushered in by diplopia. The most striking feature of the recurrence was an almost complete external ophthalmoplegia. The patient ultimately perished in a thyroid crisis characterised by high fever, delirium, dysphagia and loss of sphincter control.

Autopsy in their case revealed marked changes in the suprarenal, thyroid and thymus glands. They regard the thyroid picture as representing an exhausted state, while both the thymus and the adrenal cortex showed degenerative changes.

They comment on the fact that in some cases of myasthenia gravis lesions have been found in the suprarenal glands, and that Marinesco has reported several cases which were benefited by adrenalin administration.

The combined occurrence of Graves’ disease and myasthenia gravis is discussed, but they favour the view that myasthenia may be a classic symptom of Graves’ disease, and was so in their case. They also quote several cases from the literature showing that ocular and cranial nerve palsy may occur in true Graves’ disease. In their own case they regard the ophthalmoplegia as being part of the latter affection.

P. W.