LETTER TO EDITOR.

AN ALTERNATIVE DIAGNOSIS FOR CASE OF
"ANONYMOUS MEMBER."

DEAR SIR,

I read with interest the article by "M.D. Anonymous" on a Neurological Case for diagnosis in the September Journal. As a young surgeon, however, I feel that his line of clinical deduction is singularly biased towards medical conditions.

I read and re-read the history of the case before proceeding to the examination findings and his summing up. I must say that on this patient's history alone my diagnosis was already in favour of a condition not even mentioned by your contributor in his final summing up.

Recapitulating the facts of the case; the history was that the patient fell on his head with sufficient violence to cause some degree of concussion, possibly at that time he may have been treated as having some sub-dural or subarachnoid hæmorrhage. Note, however, that an X-ray picture revealed no fracture either fissured or depressed. A month later he started to have mental changes, seven months later he started to have fits. At first these were of an idiopathic epileptiform type, later of a Jacksonian type with signs of localisation of the pressure on the left fronto-parietal region.

Surely from this history alone your contributor ought to have considered the probable presence of a Traumatic Meningeal, that is, Sub-Arachnoid Cyst!

These cysts start as a sub-dural hæmorrhage, which gradually organises. The clot becomes laminated and undergoes fibrosis, whilst the surrounding membrane forms a cyst wall. The cyst grows larger usually by secretion from its walls, and gradually autolysis of the blood clot rather than by any connection with the cerebrospinal circulation which is usually outside around the cyst in the sub-arachnoid space.

With the growth of the cyst erosion into a blood vessel coursing in the wall may take place, or some sudden change of posture may cause a sudden increase of intra-cerebral vascular pressure which might cause a rupture of a thin walled vessel in the sac wall. As this would cause an increase in size of the cyst and with several hæmorrhages, it is easy to follow that the cyst will gradually exert more pressure on the surrounding structures, such pressure slowly increasing until the cyst ruptures causing possibly death to the patient, though it is more likely before this stage that the physical signs are such that a decompression or exploration may have been carried out.

These cysts usually but slowly enlarge and thus go on for months or years, usually following a skull injury which in the first case was treated as a severe concussion, with possibly signs of an underlying sub-dural or sub-arachnoid hæmorrhage. Their presence is shown either early or late, depending on the degree of pressure exerted by them on the skull, the membranes or the underlying brain tissue. Early symptoms being headaches due to dural stretching, dizziness due to interference with the surrounding cerebral blood and cerebrospinal fluid circulations, whilst later with enlargement of the cyst signs of cortical irritation followed by atrophy as shewn by the onset of paralysis set in.

Usually meningeal cysts are found in the frontal region of the cranial cavity, especially in the falx cerebri due to tearing and hæmorrhage from the superior

longitudinal sinus or one of its tributaries. Though the other meningeal reflections may form pockets for blood to collect in, or the hæmorrhage may strip the dura from the lateral aspects of the calvarium. Should the cyst be one-sided then pressure on one side of the brain may be first expected. If the parietal region be the first to feel the pressure then fits of a Jacksonian type may be the first symptom; if, however, as in the case under discussion, the pressure on the cortex is felt further forward on to the frontal lobes, then the higher mental processes such as memory and reasoning powers may be the first to show interference. If the left frontal region be the part affected then speech will be interfered with. As the cyst grows larger then the pressure will be felt also on the motor areas as irritability going on to paralysis shewn clinically by fits, twitchings and later paralysis, either of a hemi, or paraplegic type. If the cyst be in the midline then the motor symptoms may affect both legs first.

If the cyst be not removed it may by its sudden increase in size due to hæmorrhage, cause sudden death. It will be remembered that hæmorrhage into an adenomatous thyroid may cause not only a similar sudden increase of size, but even more alarming symptoms of pressure, as it will be recollected that the thyroid is invested by a definite fold of cervical fascia which binds it on to the trachea. It will be appreciated that any sudden increase of size as by hæmorrhage into the gland will cause pressure on the trachea with dyspnoea and even practically suffocation.

Should the history of trauma to the skull be followed later by signs and symptoms suggesting the formation of a cyst then an X-ray may help to confirm this diagnosis as the organising blood clot gets impregnated with calcium deposits which will cast shadows in the suspected region of the skull. If localisation can be made then operation can be undertaken and by turning back a bone flap over the area suspected, removal or evacuation of the cyst may be carried out.

I well remember the late Sir Percy Sargent vividly describing this condition at one of his Fellowship classes at St. Thomas's Hospital and venturing an opinion that the then recent sudden death of a certain Metropolitan Magistrate had been due to one of these cysts which had not been operated upon, even though that gentleman had sustained a fall followed by signs suggesting the presence of one of these cysts.

In the case under discussion the story fits in with this condition, the clinical signs point to some form of slowly increasing intracerebral tumour, whilst as your contributor stated, the X-ray showed shadows in the parietal region of the skull which he puts forward as evidence in favour of one of the glioma types of tumour. Your contributor went near to my diagnosis in that he thought of a sub-dural hæmatoma but did not go on to the possibility of a cyst having formed from the hæmatoma, which possibility could be confirmed by exploration or autopsy.

Yours faithfully,

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G. O. TIPPETT.

The foregoing letter was submitted to the anonymous author of the neurological problem, and he has replied as follows:—

The correspondent has very correctly emphasised the place of traumatic meningeal cyst in differential diagnosis. It must be pointed out, however, that in the original paper there appears the following statement: "The recent development of paralysis is difficult to associate with such a diagnosis (*i.e.*, post-traumatic