scopical characters. I have not been fortunate enough to have examined an ovary so affected.

I have met with a small group of cases which I can only class under the head of ovarian neuralgia. They have been characterised by acute lancinating pain, referred to the region of the ovaries, generally on both sides, coming on paroxysmally, without any reference to the ovarian functions. No physical signs of disease have been found in these cases, and they have all occurred in women approaching the menopause. They have all been addicted to outbursts of overindulgence in drink, taken, as they allege, to deaden the pain. Whether this inebriety was a cause or a result of the neuralgia, or whether the neuralgia in some of the cases may have had any actual existence, I am unable to say; though the special character of the pain and its site have been described by the sufferers with a constancy which would seem to vouch for its reality. In connection with this affection, I would here strongly urge the necessity for the medical profession combating strongly against the wrong women are often allowed to do themselves by taking spirits to relieve ovarian and menstrual pain. No habit can be more pernicious, or more likely to lead to the most deadly mischief, both physical and moral.

As one of the unusual conditions described in connection with ovarian abnormalities, I may here just allude to ovarian gestation, only to say that I cannot recognise its occurrence. With the solitary exception of a case referred to by Ritchie, as reported by Dr. Willigk in the *Prager Vierteljahrsschrift* for 1859, all the cases have broken down on examination. I have been unable to gain access to the original account of this case, so that I am not in a position to give an opinion on it. I have had occasion elsewhere to investigate the pathology of extrauterine gestation, and I have quite satisfied myself that all such cases are tubal in their origin, and that even those cases where it has been asserted that the sac was formed by the trumpet-like expansion of the tube united to the ovary are open to suspicion.

[To be continued.]

CLINICAL LECTURE

ON

A CASE OF CEREBRAL TUMOUR: GLIOMA.

Delivered at the Bristol Royal Infirmary.

By R. SHINGLETON SMITH, M.D.Lond., B.Sc.,
Physician to the Infirmary.

WM. PARSONS, aged 38, labourer, married, was admitted to the Bristol Royal Infirmary on January 17th, 1874. Six years ago, he met with an accident—"some concrete fell on his head". He was stunned at the time, but soon recovered, and was not obliged to give up work. After that time, he complained occasionally of pain in the head, but continued his work till two and a half years ago, when he was admitted to the Infirmary in consequence of a fit. Twelve months ago, he again gave up work, and was admitted for "whitlow". At that time, he complained of pain in the right side of the head; there was some tenderness over the right parietal eminence; he had several attacks of convulsions whilst in the house, and he was found to have well-marked optic neuritis. His mental condition was also defective; memory was very deficient, and he talked in an imbecile manner. He occasionally got out of bed, and went back to another bed by mistake. There was no motor paralysis. The distal phalanx became necrosed from the whitlow, the finger was amputated, the wound healed, he was sent home, and he again continued his work.

Five months ago, he was again admitted for fits and other nervous phenomena. The optic discs were in a condition of commencing atrophy, but he did not complain of any defect in vision. His mental condition was that of semi-imbecility, but no local paralysis, either motor or sensory, could be detected. He still complained of pain, and some tenderness on pressure, always at the same spot, the right parietal eminence. The head showed a want of symmetry, in consequence of slight but distinct prominence at the right temporo-parietal region. There were no gastric phenomena requiring notice.

He again left the house, and endeavoured to work as before. He continued to go through his regular daily work as a navvy on a new railway in process of construction, till eight weeks ago. His master, however, had noticed his condition, and, although he accomplished a fair amount of work, did not consider it safe to trust him in any post of danger. He seemed so senseless and careless that there was some risk of his being run over by the engines at work on the line.

Eight weeks ago, he fell off a plank, and again struck his head on the

right side; he lost his senses for a time, but walked home afterwards, and in the night following he had a fit. Since that time, he had two other attacks of convulsions. Six weeks ago, some weakness in the left arm and the left leg was first observed; this was gradually increasing, and he, therefore, again applied for admission to the Infirmary.

No history of syphilis could be gathered from him at any time, nor were there any traces of syphilis to be discovered. He was looked upon by his friends as a steady, hard-working, strictly temperate man.

His condition, on admission, was as follows. He dragged his left leg in walking; the left arm was weaker than the right; no deviation of features or strabismus. He was half conscious; answered questions in a slow and hesitating manner. He complained of giddiness, and occasional pain on the right side of the head. Pulse 56; appetite good; no vomiting; temperature, in the evening, 99.4. On the following day, January 18th, he was noted less conscious than before; he only spoke when roused, and then muttered unintelligibly. Both pupils were insensible to light; the right widely dilated, the left small. There was very little motor power in the left arm, but he drew the left leg up when directed to do so. His tongue deviated slightly towards the left, but there was no asymmetry of the mouth, nor strabismus. Sensation was unimpaired; the bladder was distended and overflowing, requiring the catheter. He seemed very restless, occasionally shivered, and the left leg and left arm were drawn up and became rigid. He took any food given him, but did not ask for anything. There was no vomiting. The urine was specific gravity 1020, not albuminous. Temperature, morning, 99.6; pulse 64; respiration 28. Some thickening in the skin over the right temporo-parietal region was noticed, but he did not indicate any manifestation of pain on pressure over this part.

During the day, he had five or six attacks of bilateral convulsions, became completely unconscious, was sick only once, after a purgative powder had been given, and died at half-past ten in the evening.

POST MORTEM EXAMINATION. *Head.*—There was some induration in the scalp of the right temporo-parietal region; no abnormal adhesion of the scalp. The cranium was slightly unsymmetrical, being somewhat more prominent on the right side. The calvarium was thin at the right parietal eminence; the bone was paler than elsewhere, slightly softened, and allowing the light to be seen through. The dura mater separated without difficulty from the bone. The right side of the brain was visibly larger than the left. Induration was to be felt over the right temporal and parietal convolutions (middle and posterior lobes) with firm adhesion of the dura mater. Two distinct nodular masses were embedded beneath the convolutions of this region; one of the size of a small orange, but more of an elongated oval shape; the other, of the size of a large walnut, with fairly distinct outline, "shelling out" with some difficulty from the brain-tissue. In section, these masses were of a greyish yellow colour, marked with vessels, here and there, of distinctly harder and firmer consistence than the surrounding brain-matter; the convolutions around these tumours were flattened out, and gelatinous looking, but indurated. There was sclerosis of a considerable portion of the surface of the middle and posterior lobes of the right hemisphere, with considerable thickening of the dura mater, and partial adhesion. The central white substance was pale and somewhat softened. Both lateral ventricles were distended with an opalescent fluid containing flakes of lymph. Nothing abnormal was seen at the base of the brain, and there were no traces of any former injuries (from accident) to the bones or meninges.

Thorax.—The left side was contracted; the left lung was firmly adherent everywhere, a mass of old cavities, quite honey-combed, the cavities being lined with a smooth shining membrane and having vessels running across and through them. The lung-tissue between the spaces was in a fibrous condition. The right lung was large; crepitant everywhere. The other organs were healthy; there were no traces of syphilis, nor any other tumours besides those found in the right hemisphere of the cerebrum.

Microscopic Examination.—The tumours were found, on section, to present a finely granular appearance, with a faintly visible reticular stroma, studded sparingly with blood-vessels. In parts, a cellular structure could be made out, the cells being scattered about in a fine stroma in an irregular way, with no tendency to any alveolar arrangement. For the most part, the cells seemed to have undergone granular degeneration and to have lost their original outlines, but not uniformly so, for here and there the cellular structure was very evident. The cells were of a somewhat varying character, the more numerous having the appearance of free nuclei of about 1-500th of an inch in diameter, whilst the larger ones were distinctly nucleated, and measured about 1-250th of an inch. The edge of the tumour was visibly distinct from the nerve-tissue, the tumour being surrounded by a membrane of a finely fibrous texture, containing a very large number of blood-vessels. In section, a dark coloured ring, consisting of a number of vessels lying almost side

by side, separated the tumour from the brain-tissue, and from this ring a few vessels could be traced running into the texture of the tumours itself. The vessels outside the tumour were all surrounded by a cellular infiltration of the intervening tissues, and the perivascular lymphatic sheaths were much distended by epithelial proliferation from their walls; the calibre of the vessels was much diminished by the surrounding cell-growth. Small masses of red corpuscles were seen, surrounded by a cell-growth extending to as much as twelve times the diameter of the calibre of the vessels, the growth being of a fibro-nuclear structure, arranged in a concentric manner around the calibre of the vessel, and limited externally by a finely fibrous investing membrane, no muscular coat being visible. In some cases, the vessel seemed to be altogether obliterated by this investing growth. Between the vessels was a fibrous cellular structure resembling that within the vascular sheaths. Outside the investing membrane of the tumour was the degenerated and infiltrated *brain-tissue*. This was much more vascular than the tumour itself, but the vessels did not present anything abnormal, there was no infiltration of their sheaths, nor was there of the vessels within the tumour, the perivascular proliferation being limited to those vessels found in the membrane surrounding the tumour and separating it from the brain-tissue around. Wasted nerve-cells, broken up nerve-fibres, and leucocytes (of inflammatory origin) infiltrating the tissue were visible in the cerebral tissue immediately surrounding the growths. The tumours then had a sarcomatous structure, of the variety described by Virchow as *glioma*. The changes in the blood-vessels around the tumours, and in the brain-tissue in the neighbourhood of the morbid growths, must presumably be the result of slow changes of a subinflammatory character.

REMARKS.—This case presents several points of interest on which a little comment is justifiable. First of all, we have to consider the question—

What was the cause of his disease? He himself attributed it to a blow which he received six years before his death. Was he justified in forming this inference? It is not unusual to have a history of this kind in cases of morbid growths, as, for instance, scirrhus of the mamma. In many cases, doubtless, the association of an accident with a morbid growth is quite an afterthought, a mental condition only resulting from an inherent desire to find out a cause for any given effect. But, putting aside such cases where the association of tumours with previous accidents is purely imaginary, there remain a large number of instances where the two are connected together in the relation of cause to effect. When we consider what takes place in all inflammatory processes, especially bearing in mind the results of recent researches by Cohnheim and others, is it surprising that injury done to certain tissues should result in an abnormal kind of cell-growth at sometimes protracted periods after the original accident which set up a local and, perhaps, a rapidly subsiding inflammation? The leucocytes which escape from the vessels may, perhaps, remain in a condition of dormant vitality, and afterwards gradually set up a process of cell-proliferation resulting in some of the varieties of sarcomatous tumours, or of the more highly organised carcinomatous growths. This patient, Parsons, did not have a fit till two and half years after the original accident, but he had occasional headaches during the interval, and had never experienced any similar symptoms previous to the time of the blow.

The *diagnosis* of his condition presents some points of interest. When he first came under observation, he complained of occasional fits, the first of which came on two and half years after the time when he received the injury. His age (38) was opposed to the idea that it was an ordinary case of epilepsy, a disease which rarely manifests itself for the first time between the ages of twenty and forty. Then, again, he complained at that time of deep seated pain always localised at the same spot, on the right side of the head. An ophthalmoscopic examination of the fundus oculorum was not then made, but, doubtless, it would have been of material assistance in enabling one to arrive at a diagnosis. The conclusion formed of his condition was that he had some thickening of dura mater, perhaps a spicule of bone projecting into the brain-substance on the right side of the head, which was setting up the irritation resulting in the epileptiform convulsions. Eighteen months afterwards, when he again came under observation, it was easier to come to a definite decision as to the cause of his symptoms. He then had decided mental deficiency, showing that the grey matter on the surface was considerably involved, the convulsions persisted, but were more frequent than before, and he then had an advanced condition of optic neuritis such as is usually found in cases of cerebral tumour. It was clear that an abnormal growth of some kind existed within the cranium, that it involved the surface of the brain in the right temporo-parietal region, and that the base of the brain was not involved. There was never any affection of individual nerves to be noted, and vomiting was never at any time a marked symptom.

The next point to be ascertained was—"What was the nature of the tumour?" The situation was not that occurring with *syphilitic* growths, which usually involve some of the nerves at the base; besides, there was an absence of history and of all the usual evidences of syphilis.

The presence of pain and tenderness, and the existence of frequent attacks of convulsions, combined with the traumatic history of the mischief, were points in favour of some chronic *inflammatory changes in the meninges*, but this alone did not seem sufficient to account for all his symptoms. The morbid process seemed too slow and too prolonged for any form of *malignant growth*, and there was an absence of any *scrofulous* changes elsewhere in the organism to justify the supposition of a scrofulous or tubercular growth. A fibro-plastic tumour, *i.e.* one of the forms of sarcoma, of which the most probable in nerve-tissue is *glioma*, would account for all the symptoms, and we were bound to arrive at a decision in favour of this form of morbid growth by a process of exclusion of all other frequently occurring abnormalities.

When he came into the house for the last time, the day before his death, he had paralytic and other symptoms superadded to those previously noticed. His condition of stupor, the inequality of the pupils, and especially the extreme dilatation of one, indicated that the central ganglia were becoming involved, but still there was no implication of any of the ocular muscles or of the parts to which the cranial nerves at the base are distributed (the optic nerves alone excepted). There was some pyrexia at this time, indicating the existence of inflammatory change within the cranium, and it seems probable that the aggravation of his symptoms and the acceleration of his death were due again to a traumatic cause: another blow which he had received eight weeks before his death.

As regards *prognosis* in a case of this kind, one cannot be too guarded. Having made the diagnosis of the existence of a cerebral tumour, and having surmised that it is of a non-malignant character, we should be justified in stating that the patient may live for years, but that he holds his life on a very uncertain tenure. Some vital part may be attacked, some inflammatory mischief may be set up, or, perhaps, hæmorrhage may take place at any moment, possibly during a convulsive fit. The uncertainty of diagnosis in all cases of cerebral tumour should render an usually guarded prognosis necessary in these cases.

The *treatment* is, unfortunately, the most unsatisfactory part of such a case as the one we are considering. After having included the supposition of a syphilitic origin to the growth, we are helpless to treat the disease itself. But, inasmuch as there is always scope for doubt as to the nature of cerebral growths, and as the beneficial effects of iodide of potassium in syphilitic growths is indisputable, it is always desirable to give the patient the benefit of the doubt, and ascertain if any good can be obtained from this drug. After having administered the iodide in gradually increasing doses, commencing at four or five grains and continuing up to twenty or thirty grains, during a period of three or four weeks, we may conclude that no good will result from further continuance unless some good results have already begun to be manifested.

Presuming that this treatment is of benefit, we have very strong ground for the assumption that the disease is of syphilitic origin; but the facts do not warrant a positive decision in favour of syphilis, for the drug tends to cause absorption of inflammatory exudations as well as of those of a more specific character.

Should our efforts to treat the disease itself be unavailing, we are compelled to do what we can to relieve any symptoms which arise during the course of the disease; our efforts must, therefore, be directed towards the relief of pain, the prevention of convulsive seizures, and the checking of any inflammatory and congestive symptoms which may arise.

ON MORPHIA IN SOME CASES OF INSANITY.

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I VENTURE to record, in outline, the influence exercised upon certain subjects of chronic melancholia, by the prolonged use of small or medium doses of morphia. Stimulant and tonic effects were sought; narcotism, or any modification of it, was studiously avoided. In this attempt, the views of Dr. Anstie, as to true stimulation by opium, and the treatment of lowered function and devitalisation as exemplified in pain or spasm, are, in some sort, applied to the management of the functional depression, or organic deterioration, inducing varieties of melancholia. By giving it in moderate and stimulating doses only, it was hoped that morphia would tend to rouse defective cerebral function, and restore healthy nutrition; that the benefits derivable from the stimulant action of the alkaloid on the cerebrum and circulation would be secured without any of the drawbacks attending narcosis, or flowing from de-