verted into a hospital physician, whereby his private and public experience would unite in securing the best results? The position of a family adviser in a hospital surgeoncy has significant bearings. His private experience is medical, and gives him no assistance in the heavy responsibility of hospital duty; his hospital experience is surgical, and gives him no assistance in the heavy responsibility of family medical care. I do not wish to give undue importance to this "hospital difficulty"; but I cite it as another trouble that would be greatly lessened by the change which it is the chief purpose of this paper to urge. To diminish the out-patients to one-tenth, and, it may be, the in-patients to some extent, would facilitate the better organisation of hospital staffs—would render easier the adaptation of men to work.

Before closing, one word on the division of hospital beds. With in-patients as with out-patients, it is the duty of a hospital to do the most good to the greatest number of the gravest cases. These "gravest cases" are those which are most difficult to treat at home: accidents, operation cases, and cases needing exceptional surgical appliances. The gravest medical cases are less grave than these, if they can possibly be treated at home. If this proposition be true, the proportion of surgical beds, in the hospitals of large provincial towns at least, should be much larger than it is. The proportion ought not to be the same in all localities and under all circumstances: sometimes there should be two surgical beds to one medical; sometimes three, or four, or five to one. That pale faces with serious injuries should be seen on temporarily made up beds, while medical cases with comfortable beds, perhaps empty during the day, are enjoying their tobacco on the green, or adjusting their hair to the latest fashion, is an anomaly which fair-minded physicians themselves will help to remove. I am here presuming that the surgeons are so alive to just views on hospital relief and hospital economy that they do not permit their beds to be filled by cases which are not of that "gravest" character already described. If I err in this presumption, there is no ground for asking for a change in the distribution of beds.

It is to be hoped that the discussion on hospitals now going on, in which the public take a real interest, will not tend to lessen their income. There cannot be much fear of this. The closer the inquiry into hospitals, the more clearly seen are the benefits they confer on the sick poor. Let any large town be deprived of its medical charities, say for one month, and their need would be so keenly felt that they would start into existence again with double the number of subscribers and treble their income.

ON THE ETIOLOGY OF AURAL EXOSTOSES.

By JAMES PATTERSON CASSELLS, M.D., M.R.C.S.Lond.,
Aural Surgeon to the Glasgow Royal Infirmary, and Lecturer on Aural Surgery in the Royal Infirmary School of Medicine.

THE following conclusions in regard to the origin of aural exostoses are the result of several years' observation of such cases. They are now very briefly laid before the profession, in order that further, and mayhap wider, observation on the part of others may prove or disprove their correctness. Those of my *confrères* in the practice of aural surgery who are familiar with such cases, and who also know the mystery that has hitherto surrounded the subject of aural exostoses, both in regard to origin and treatment, will find the subject more fully treated by me (illustrated by the kindness of my friend Dr. Foulis, Pathologist to the Glasgow Royal Infirmary) in the next issue of the *Archiv für Ohrenheilkunde*, to which I beg to refer them. Meantime, so far as my knowledge of the subject goes, I may claim to be the first observer who has given a rational explanation of the origin of an aural exostosis supported by clinical and pathological facts. These conclusions are as follows.

Premising that aural exostoses and hyperostoses are totally distinct affections in regard to origin, situation, form, and treatment, an aural exostosis is benign in origin, only to be found on the outer half of the external meatus, has its point of attachment *always* at the posterior wall, is pedunculated, and has its origin in the periosteum of the mastoid, close to the meatus.

The origin and development of an aural exostosis are as follows. At the outset, a subperiosteal abscess forms over the mastoid, and makes its way out into the meatus by way of the line of junction between the cartilaginous and osseous portions of that canal—sometimes even through the cartilage itself—discharging itself, and continuing to do so for some time. By-and-bye, highly vascular granular-like growths sprout from the opening of the abscess and go on increasing in size, while at the same time they are being gradually changed into bony tissue in their interior by the gradual conversion of

their cells into bone-cells. The final size of the osseous tumour, as well as its form, is determined by the original size and form of the granular-like growths. After complete ossification, no further increase takes place in the size of the tumour.

The treatment that suggests itself in such cases, and which I have found effectual, is as follows: in the early stages, removal of the soft growths, and freely laying open the abscess; in the latter, removal of the bony tumour by the *écraseur* (Wilde's) armed with a fine steel wire. In cases in which the tumour so fills the external meatus as to hinder the use of this instrument, I would recommend electrolysis of the tumour, as devised and successfully executed by Dr. Clark of Bristol, and reported by him in this JOURNAL in December 1873.

CASE OF ATHETOSIS.

By G. MACKENZIE BACON, M.A., M.D.,

Resident Medical Superintendent of the Cambridgeshire County Asylum, Fulbourn.

THE following case is a fair specimen of the condition described by Dr. Hammond under the name of *athetosis*. It resembles the third of the series published by Dr. Gowers in the last volume of the *Medico-Chirurgical Transactions*. The illustration is copied from a photograph; and, in order to take this, it was needful to steady the left hand.

Sarah B., aged 44 (in 1877), single, is one of a family of eight children, said to be healthy. She had some illness when between two and three years of age, and has ever since suffered from epileptic fits

and paralytic enfeeblement of the left side. She was admitted into the Cambridgeshire Asylum on March 8th, 1872, and was then described as imbecile from birth. Her condition since admission has not varied much, and may be described as follows.

She is rather tall and well nourished. Her hair is greyish, and she looks older than her years as recorded. Her head is well formed, and has a circumference of twenty-one inches and one-fifth. She has rather prominent eyeballs, has a lacrymal fistula of the right eye, and an external squint of the left. The face is drawn slightly towards the left; and the tongue, when protruded, also inclines to the same side. The left limbs are paralysed, and much contracted. The left arm is shrunken, and held spasmodically to the side. The left ulna measures half an inch less in length than the right, *i.e.*, from olecranon to styloid process; and the circumference of the left wrist is rather less than that of the right, and that of the left forearm at its largest diameter is rather less than that of the right. The left leg measures less than the right in length and circumference; the left foot is incurved, and the heel does not rest on the ground, but is permanently drawn upwards, as in talipes equinus. When placed upright, the patient stands with the left heel drawn up and the toes pointed in-

wards. The left arm is drawn close to the side; and the fingers of the left hand are flexed on the palm, the thumb being flexed on the fingers, and the index finger slightly projected beyond the others. Her ordinary attitude is that of sitting in a chair with her left hand flexed on the forearm, the right hand more or less supporting it. When the right hand is withdrawn and her attention is distracted, the fingers of the left hand are seen to move irregularly and more or less constantly. The movements are principally these; viz., a slow extension of the fingers, the three inner fingers being moved together, and the index one later; then the thumb is extended; and then the fingers are flexed on the palm, the index projecting, and the thumb being flexed over the fingers and under the index. These movements are repeated pretty constantly through the day, but they appear to be arrested during sleep.

The mental condition of the patient is one of imbecility, with occasional attacks of excitement, about three or four times a year, lasting a few days. She is always very touchy and ill-tempered, and requires some tact in management. She has epileptic fits nearly every week, never passing over two weeks without an attack; and at such times is very excitable. Sometimes, during these paroxysms of excitement, she has had convulsive movements of the left (paralysed) arm, and has had the idea that a miracle had been worked, and that she had suddenly regained the use of her limbs. By practice, she has been able to do some coarse sort of knitting, the right hand doing most of the work, and the left supporting the other needle.

A FEW REMARKS UPON THE USE OF TURPENTINE IN DISEASED STATES OF THE SYSTEM OF AN ACUTE CHARACTER.

By R. PERSSE WHITE, L.K.Q.C.P., F.R.C.S.I.,

Surgeon to the Meath Hospital, Dublin.

So long ago as 1860, I was led to try the use of turpentine in a case of typhoid fever in a young lady, which had run a course of twenty-eight days without extreme severity. The diarrhoea was not severe, and was kept in check by acetate of lead, with small doses of opium.

On the twenty-ninth day of the patient's illness, in fact on the first of her convalescence, the symptoms had all abated, and she seemed to have overcome her illness. On the thirtieth day, on visiting her, I found her in a state of terrible excitement. There was some cause, but not enough, to account for her state. Fearing mischief, I at once sent for a leading physician from Dublin. He advised the use of turpentine, but his advice was based on the view that there was uræmic poisoning; for, during his visit, she had severe convulsive movements of her face. The urine was scanty; it was tested, but did not show any morbid condition. On the thirty-first day, her night was terrible, with violent raving and restlessness; no sleep. On the thirty-second day, she was in a worse state and almost collapsed. The sphincters were failing. The turpentine mixture had been continued since the consultation, but there was no benefit from it. She died that night.

In this case, the turpentine was given for the head-symptoms. The next cases in which I used turpentine were various, and at different stages of the disease. In my earlier practice, and in hospital practice, in 1873, when I acted as physician to the Meath Hospital in the absence of my colleague Dr. Stokes, and of his colleague in the medical wards, I had at least one great case which showed the value of turpentine in typhoid fever. Here the chest was, in the latter stage of the fever, attacked with severe bronchitis, the bowels being much too free at the same time. The attack of bronchitis was intense, of the form common at that time; but after the second day she rallied, and passed on to complete recovery. I saw her in health long afterwards. Bronchitis was for some years an almost constant attendant on typhoid, and often the cause of death.

My mode of giving the turpentine was as follows. If bronchitis were present, and even if diarrhoea complicated the case, I gave what was known as my turpentine mixture. $\mathcal{R}$ Terebinthinæ olei, $\mathfrak{z}$ ii; liquoris potassæ $\mathfrak{z}$ ii; mucilaginis acaciæ $\mathfrak{z}$ iv; syrupi papaveris albi, syrupi floris aurantii, $\mathfrak{aa}$ $\mathfrak{z}$ viii; aquæ camphoræ q. s. ad $\mathfrak{z}$ viii. Fiat mistura. A tablespoonful to be taken every fourth hour, the bottle being first shaken.

Since I commenced that treatment, I never lost any case of typhoid from either bronchitis or diarrhoea, or from its sequelæ of ulceration or hæmorrhage. Each epidemic of typhoid (and at present there is a wide-spread and severe one passing over the country) is marked by its peculiar characters. In the present time, most of the cases of typhoid are characterised by intense pain in the abdomen, with enormous flatu-

lent distension. Constipation exists before the illness is developed, and at times during its progress; and when it is removed by purgatives, diarrhoea sets in. I give a short sketch of some cases recently under my care.

I was called to visit a boy residing several miles from the city. The child sickened slightly about September 30th, but nothing was suspected for some days. On Monday, October 4th, I found him very ill, and I at once suspected typhoid fever. He had on Sunday some vomiting and slight diarrhoea, which was, on the 7th, followed by constipation. I found it necessary to give an enema, with turpentine. This brought away a quantity of scybala of a light colour, and gave some relief. The abdomen was at this time tumid, with some pain on pressure. I gave a small dose of castor-oil and turpentine on the succeeding day. It gave much relief, with a similar character of discharge. Between the 9th and 10th, his bowels became a little too free, but the distension of the abdomen had become so great that it pressed up on the heart and lungs, so as to give much distress. I at once ordered about ten minims of turpentine every third or fourth hour in mixture. On the 11th, there was some improvement; the pain was much less. On the 12th, he allowed me to press my hand on his abdomen, which hitherto he could not bear, and expressed himself much better. I need not detail the case. I continued the turpentine for nearly a fortnight, toward the end lessening the dose to twice each day. No diarrhoea returned, but the bowels were slightly free twice most days. After this, slight pain and diarrhoea came on, and a few doses of the turpentine were given with perfect success. This child is now quite well, running about; he convalesced in the sixth week.

The next case is that of a lady, aged 73, without any previous history of illness. On Sunday last, November 18th, she vomited, and diarrhoea quickly set in, severe in its character; blood was mixed with the stools, but in small quantity. When I first saw her next day (Monday), I put her on aromatic sulphuric acid, with small doses of Batley's liquor sedatives. This gave much relief for two days, and at my visit on Wednesday all was well; she had had only two slight motions, with no blood. In the afternoon, profuse diarrhoea occurred four times before 9 P.M.; nine times to 7 A.M. on Thursday; and five times more up to my visit, blood coming in all the later motions. I at once ordered the turpentine mixture, two tablespoonfuls every fourth hour. On Friday morning, she was going on well. The diarrhoea had ceased. There had been only two small motions since the turpentine was commenced. I saw her at night. She still continued in comfort; no more motions since morning. On Monday, November 26th, she continued in comfort; no pain and no diarrhoea; only two small motions in the twenty-four hours. On December 5th, after four days of complete constipation, she had the following draught at bedtime: $\mathcal{R}$ Olei ricini $\mathfrak{z}$ vj; tincturæ sennæ comp. $\mathfrak{z}$ i; syrupi zingiberis $\mathfrak{z}$ ij; mucilaginis acaciæ $\mathfrak{z}$ ij; spiritus terebinthinæ $\mathfrak{m}$ xxv; aquæ cinnamomi $\mathfrak{z}$ ij. This case is not concluded, but all goes on most favourably.

I have several other cases of typhoid on hand at present; but none of them of any peculiar type, except one, who developed jaundice. About the twelfth day it quickly yielded, and the child (five years old) now progresses favourably.

FOREIGN BODIES IN THE EAR.

By W. B. DALBY, F.R.C.S.,

Aural Surgeon to St. George's Hospital.

I AM sorry to say that I read with little surprise in the BRITISH MEDICAL JOURNAL of December 8th, that a child had died whilst attempts were being made to extract a bead from its ear; and with, if possible, less surprise that a *post mortem* examination showed there was no bead or other foreign body in the ear.

Instances of the destruction of the tympanic membranes and injuries to the tympana occurring in a manner similar to what was described are too familiar in my experience; and, if surprise be an element in any emotions I may have on the subject, it is that death is not more frequently the termination of these operations, if such a term be applicable to them.

It cannot be too often repeated (evidently it has not yet been often enough repeated) that, with the exception of a vegetable substance which swells rapidly as it absorbs water, or a living insect, no foreign body in the ear *left alone* can possibly be injurious, and that any subsequent injury is the result of manipulation by inexperienced hands.

In the course of two separate days, I have had brought to my notice four tympanic membranes ruptured in this way; the monotony of one day being relieved by seeing a small stone in the meatus, and behind it