any detail here of the varied topics with which this part of the subject evidently teems, it will perhaps be sufficient generally to remark, that all those objective sensations or impressions that are in any way provocative of emotional feeling, agreeable or disagreeable, pleasurable or painful, or the like, appear to be of those of which the memory takes the surest and most lasting cognizance. The dog or horse, for instance, which has happened to be the subject of the lash, requires afterwards only to be shown the instrument of correction for a very sufficient remembrance; and the force, so to speak, with which the castigation, and the circumstances connected with it, has impressed itself on its memory, will be found to bear a certain ratio to the severity with which it has been administered, or rather, of the conflicting feelings of fear and anger of which it was the source. Again, the spaniel will often be found to exhibit all the indications of joy, when he observes his master resuming some particular habit which he was accustomed to wear during the hours of sport. The enjoyments connected with the pursuits of the field are thus excited, by the aid of associations, in the remembrance, as distinctly and vividly as they might have been by the sight of the gun.

Still it cannot be doubted for a moment that animals are somewhat susceptible as well of the retention of impressions of objects or things that are unattended by any sensible emotional manifestation. The fact of the horse, which has happened to make a new and unknown journey, being capable of himself accurately to retrace his steps by the identical route which he had been led to pursue in his outward course, even under circumstances the most unpropitious, clearly proves his having been influenced very distinctly by the ordinary impressions of the different objects witnessed by the way; and further, that his actions in so far were stimulated and guided by a right exercise of the memory. So also in other cases. But I have already transgressed my limits.

It is but right, however, to add here, that the ultimate tendencies or final cause of memory in animals, are all essentially subservient either to common animal gratification or enjoyment, or to purposes of a utilitarian character, whether in reference to themselves or others of the race. The ground of this statement were easy of proof; and I had intended at first to have gone into the consideration of the topic at some length, as well as the relation which memory bears to several of the active feelings or emotions, and intellectual operations of which animals are susceptible; but the trespassing further on the well-known and acknowledged liberality of this journal might, in an individual of my pretensions, be considered as presumptuous. A volume of notes, on the Principles of Action in Animals, which has now long laid by me, and out of which these papers have been culled, may be one day laid before the public in a separate form.

Lisburn, February, 1846.

CASE OF

ENCEPHALOID DISEASE OF THE PELVIC VISCERA.

By ROBERT HARDY, Esq., M.R.C.S. Eng. Hull.

History.—I was first called to attend Master A. R—, aged five years and six weeks, in June, 1844. I found him labouring under an acute attack of pain in the bladder, resembling one of the paroxysms from calculus in that viscus. Previous to this, his health had been always vigorous, his parents playfully terming him the "John Bull" of the family. A complete stoppage of urine having occurred, and the warm bath, anodynes, aperients, &c., having failed to give relief, the catheter was used twice, on one of which occasions a calculus was distinctly recognised at the extremity of the urethra. In a few days the symptoms were relieved, and though he occasionally suffered slight pain, and some difficulty in passing his urine, he had no further acute attack till the August following, when the same difficulties occurred as when he had been first seen, and the catheter &c. was used as before, for his relief. The calculus being a second time recognised by the catheter, Dr. Alderson was called in, and subsequently, Mr. Wallis, surgeon, was desired to make an examination of the case, which he did, and found that the calculus had now descended into the membranous portion of the urethra. The catheter on this occasion was used very gently, and it was hoped that the stone would be shortly voided, and our little patient effectually relieved. As far as could be ascertained, (and great care was taken in the matter on the part of his nurse, who was a highly intelligent woman,) no calculus was ever voided from the urethra, but from this period forward, all symptoms of stone vanished, and he continued to have the

full command of his bladder till within six or eight months of his death, subsequently to which period it dribbled away involuntarily, and particularly during the night. Soon after the use of the catheter last alluded to, pains and hardness were set up in the perinæum, and we concluded that the small calculus had escaped into the cellular tissue, between the urethra and rectum. Some feverishness having been set up, the perinæum was leached and fomented, salines and aperients were administered, and the pain was early relieved. The swelling, however, gradually increased, and continued equally hard, and we hoped for the ultimate discharge of the calculus through the perinæum, though, as yet, there were no indications of its approach to the surface.

The urgent symptoms having become relieved, (about the latter end of August,) he was removed into the country, where he remained for about a month. On his return, his general health appeared considerably improved, but the swelling and hardness of the perinæum were considerably increased, though no fluctuation could be detected. He had had no return of vesical irritation, or difficulty, in voiding his urine, during his stay in the country. (N.B.—Dr. Alderson, on seeing him, now gave it as his opinion that the disease was encephaloid.)

From the very commencement of his illness, his bowels had assumed a constipated condition, which now became somewhat urgent, requiring powerful and frequently repeated purgatives, in order for its relief. This state of things got worse and worse during the succeeding autumnal and early winter months, it being frequently five or six days between the periods of defecation, in despite of the powerful means had recourse to for the patient's relief.

In the meantime, the tumour increased rapidly, pushing itself more outward, and extending first to, and then rapidly around, the intestinal rectum; no doubt, also, it was pressing at this period on its parietes internally, and forming a serious mechanical obstruction to the discharge of its contents. A side view of the pelvis now demonstrated that great deformity was proceeding therein, its posterior aspect being projected very considerably backward, especially at its inferior parts, which had become also elongated. In these two directions the swelling continued steadily to increase till the period of his death, the enlargement and deformity in the last stages of the disease having become truly hideous.

In Christmas week, 1844, matters became so urgent with regard to the bowels, that it was found necessary to have recourse to a small gum-elastic tube, carefully passed up the obstructed rectum, through which stimulating injections were passed. Partial relief was thus obtained, and, for three or four days afterwards, occasional evacuation of fæces, pressed small as a catheter, and flattened, were forced off with difficulty. This was again succeeded by obstinate constipation, from the causes before named, and the injections were now ordered to be used twice per week; they were continued up to November, 1845, but they had latterly failed to have the desired effect, and it was evident, from the immensely distended abdomen, and occasional violent pains within that cavity, that unless Nature got some relief, the child's life would be speedily terminated. At this period he was suddenly seized one evening with violent convulsions, which continued nearly all night. During these paroxysms, large evacuations per rectum took place, both of flatus and fæces. The internal resisting forces were broken down, and thenceforward, till death, the fæces were being continually forced through the bowel, the sphincter ani having previously lost its resisting energy.

In the latter stages of the disease, and more especially after the convulsive paroxysms, before referred to, our little patient had occasional febrile attacks, accompanied with pain, referred always to the bowels and stomach. These were usually relieved in three or four days by saline with gentle anodyne medicines, the latter becoming more and more necessary, until given regularly every evening, and occasionally in the morning, if he became very unhappy. With the exception of the febrile periods now named the appetite remained good, and the sleep sound, till within a few days of death, nor did he ever complain of violent pain in the affected parts, but more of a sense of uneasiness and heat; these symptoms were greatly alleviated by cooling lotions, which were continued to the end of life, and which no doubt greatly aided in keeping the skin covering the diseased parts intact. For many months before death a red excrescence had pushed itself out of the extremity of the rectum, and occasionally bled a few drops of blood. The greatest care possible was used by his nurses to keep him dry and clean, by which means he received great alleviation from suffering.

From the commencement of his illness he evidently lost

flesh; but within the last six months of death, emaciation rapidly proceeded, and at the period of his decease it was extreme. Though occasionally peevish, as might be supposed, yet, generally speaking, his spirits were buoyant; he amused himself with his books and toys, and in conversation with his attendants and friends. When inclined to play with his brothers, he knelt on his knees and hands; and when resting, he laid on his face or on either hip. He had no closing convulsions, or severe attacks of pain, but appeared to pass off the stage from sheer inanition, his faculties remaining vigorous till within a few hours of his death.

From the first decided appearance of external tumefaction, the encephaloid character of the disease became more and more evident, by numerous venous trunks being seen traversing the skin. These became especially evident about the apex of the sacrum, and this part, which also formed the apex of the tumour, was more especially the seat of heat and tenderness, becoming, towards the last, bright and shining, as if ready to lacerate.

Within the last eight months, the skin round the anus and on the perinæum became tuberculated, but never gave way. On the day succeeding death, (March 13th, 1846,) a post-mortem examination of the body was made by myself and assistants, in the presence of Dr. Sandwith, who kindly took down the following notes on the occasion:—

"Emaciation of the body extreme; abdomen tumid; an immense tuberculated tumour, commencing at the scrotum anteriorly, runs backward to the anus, which it surrounds, and is filling up the whole space situated between the tuberosities of the ischia, extending posteriorly, and also upwards to the base of the sacral bone. Its surface is very irregular, with a fungous excrescence shooting out of the right side of the anus.*

"The skin covering the tumour is traversed by numerous vessels, especially over the lower extremity of the sacrum, and surrounding the anus.

"The right groin is occupied by a hard tumour of uneven surface, of the size of a lemon; and a similar one, but much smaller, is found in the opposite groin. The whole hypogastric region is occupied by a solid tumour, the apex of which reaches to the umbilicus.

"On dividing the large perinæal tumour from the scrotum, backwards to the rectum, its outer layer is found of the density and appearance of ordinary carcinomatous tumour, and creaks beneath the scalpel. As the incision is deepened, the scirrhus matter becomes mixed with softer material of the same general character, interspersed with numerous bloody points; and deeper still, it has the appearance and consistence of brain intermixed with coagula,—the true fungoid tumour.

"The whole of the rectum is affected by the disease, and is so compressed and straitened that the little finger can with difficulty be passed through its lower two-thirds. The mucous lining is found to be intact. The excrescence before referred to, as pushing out of the bowel, is found to be nothing more than an internal hæmorrhoidal tumour.†

"On opening the abdomen, the large tumour before spoken of was found to consist of the urinary bladder, the upper third of which appeared healthy, and the lower two-thirds invaded by the disease. On opening this viscus, the diseased portion of the anterior wall was found full two inches in thickness; its posterior wall from five to six inches thick: in both cases white, and of scirrhus hardness. The upper third of the bladder, though much thickened, was found healthy in structure; it contained a few ounces of clear straw-coloured urine, of the usual odour. The cavity of the diseased portion was completely obliterated, or diminished so as to form a small canal of the calibre of the urethra, with which it was continuous. The urethra itself was found pushed considerably towards the left side of the pubic symphysis, but its mucous lining remained entire, as was also the case with the bladder.

"The disease was found completely to envelop the ossa pubis and lateral parts of the pelvic inlet, and to extend upwards to the alæ of the ilia."

As we had already spent much time in the above examination, we did not minutely examine the other abdominal viscera, but a view of their exterior led us to infer that they had not partaken of the fungoid disease.

Hull, April, 1846.

* The nodules on the surface of the tumour were chiefly on the perinæum, and resembled in appearance blisters raised by scalding water, making advance towards a state of sphacelation.—R. H.

† A careful exploration of the diseased mass situated between the rectum and urethra was instituted, but no calculus was met with, though several points of gritty matter were found interspersed through the mass, especially near the pubic symphysis.—R. H.

CASE OF ANEURISM OF THE FEMORAL ARTERY CURED BY COMPRESSION.

By THOMAS MACKERN, Esq., M.R.C.S., Litherland, near Liverpool.

SURGICAL science is daily approaching, with steady, unswerving efforts, the summit of its sphere of usefulness. Its progress is powerfully accelerated by any improvement which secures to its practical operations the greatest amount of safety, coupled with the utmost economy of time and pain.

Among those improvements, compression of the artery, as a substitute for the ligature in certain cases of aneurism, is destined to assume an important position.

The almost certain immunity from the various risks that too often result from the most skilful operation by the ligature, demand for the treatment by compression the serious attention of the surgeon, when with this we remember, that in the event of failure, the pressure employed serves to facilitate the cure by the ligature, and, above all, that it saves the patient's mind and body the humiliation of the knife. To pass by this mode of treatment, without examination and experiment, is a most culpable breach of duty towards the profession and the public, of which, however, I am satisfied few medical men in this liberal and enlightened age will be guilty. In the infancy of any discovery, every fact relative to it is of importance in the settlement of its claims; I therefore lay the following addition to the statistics of this operation before the profession.

Philip M—, aged thirty years, of sanguineous temperament, well-developed frame, and hitherto in the enjoyment of excellent health, which, however, he has severely tested by free and frequent libations; by occupation, master of a canal-boat, a life of comparative ease; is occasionally obliged to raise heavy weights, and has frequently ridden the horses employed on the canal. He presented himself to me on the 15th of December, 1845, on account of a swelling which existed on the inner side of the right thigh, and which, he stated, first made its appearance about sixteen months since, while in bed. He then distinctly felt a small tumour, with a slight pulsation, accompanied by pain. He gave it no particular attention for six months, during which period it increased in size and pulsation, but never interfered with the due performance of his duties. Within the last three months the pain and pulsation and size of the tumour had increased sufficiently to cause him considerable alarm, and he applied to several surgeons in Liverpool, who proposed tying the vessel, but he obstinately refused to be "cut." After examination, during which I found a large irregular aneurism, situated on the femoral artery, where it enters Hunter's canal, I explained to him the nature of the disease, and proposed trying the milder measure of compression, to which he gladly assented.

I employed the Italian tourniquet, (Signorini's,) and commenced the compression immediately below Poupart's ligament, without entirely suspending the circulation in the vessel. For the first week I did not allow the instrument to remain on longer than half an hour at three different periods of the day. In the course of three weeks, he could bear it on for six or eight hours, shifting it occasionally along the course of the vessel. The tumour now became solid, and could not be diminished by pressure; and several new vessels were formed round it. As there was no disturbance of the system, and the heart maintained a healthy action, I gave him directions to keep on the instrument as long as possible, and he generally had it on for half the twenty-four hours. I could not induce him to use it at night; moreover, as he lived at some distance from my house, I was compelled to trust to his discretion in its use, and confinement to bed, which confidence I found he occasionally abused, of course, delaying the cure. The pressure was commenced on the 20th of December, and the instrument was laid aside on the 26th of January, the pulsation having quite disappeared, and a most sensible difference in the size of the tumour being apparent. In the first fortnight, small doses of digitalis and tartar emetic were used; after which, as the circulation was moderate, he was allowed the free use of animal food, to increase the fibrin in the blood. The after-treatment consisted in an elastic bandage over the seat of the aneurism; and a week after the cessation of the pulsation, with the cautious use of the limb, he returned to his employment on the 14th of February, and has remained to the present time free from any inconvenience, the tumour having nearly disappeared.

I am quite satisfied, if this case had been more under my control and inspection, as in an hospital, the pulsation would have ceased in half the period. As it was, the time occupied