obstruction had given way, would admit of various interpretations. It might possibly have been owing to an early stage of cirrhosis, brought on by the drinking habits in which the patient had so long indulged, although this is improbable; or the secreting power of the liver might have been more or less impaired, as that of the kidney is often known to be under the like conditions, by the prolonged and severe pressure to which the secreting element had so long been subjected; or, lastly, some amount of obstacle might still have existed to the free flow of bile into the intestine.

Finally, it would be an omission to take leave of this case without remarking what a strong motive it furnishes, not less in the unexpected deliverance from so desperate a state by the common resources of nature, than in the probably fatal risk averted by abstaining from surgical interference, for extreme reserve, as well as caution, in attempts to relieve fluctuating tumours connected with the liver, by simple puncture with the knife or trocar. Altogether to proscribe such attempts would be, no doubt, to go too far.

In the 27th volume of the *Medico-Chirurgical Transactions* a case is recorded by Mr. Barlow, in which the operation of tapping a gall-bladder, distended by retention of bile, was not only followed by no ill result, but was, most probably, the means of saving life. Many circumstances, and among them some connected with its own history, concur to show, however, that it would not be safe to make the course followed in that particular case a rule of practice. For this one case of success many could be related in which the operation was the actual cause of death, and where the introduction of the trocar sealed the fate of the patient. It is a matter of experience, in fact, that in the majority of such cases the gall-bladder is non-adherent; and thus it happens, that (by the common mode of proceeding) the immediate effect of the puncture is to cause the pent-up bile to escape into the peritoneum, and thus to hasten on that very catastrophe which it is the great object of art to avert. But, notwithstanding all these difficulties and objections, it must still be confessed, that this mode of relief *will* occur to the mind as a possible means of saving life where death might otherwise be inevitable; and thus, in spite of former mishaps, on the one hand, and unexpected recoveries on the other, it will still remain to be a source of perplexity in all desperate cases. In solving this perplexity, the occasional presence, or the contrary, of bile in the *ejecta*, is an element of far too great importance to be lost sight of. Where it was at length determined, after due deliberation, to risk the operation, it might be worth considering whether the chief peril attaching to its performance might not be averted by proceeding in the mode now practised in the first steps of the operation for the extirpation of ovarian cysts,—namely, by securing the sac to the walls of the belly before making the necessary opening for the discharge of its contents.

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OBSERVATIONS ON HYDATID DISEASE OF THE LIVER.

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PART II.*

THE last communication referred to the development, generation, and decadence of acephalocyst hydatids; in the present their distribution, symptoms, and treatment will be considered.

Although hydatids are most frequently found in the liver, yet the spleen, kidneys, lungs, and brain are obnoxious to their attacks; and there is hardly a tissue in the body which has not, at some time or other, been the seat of these pernicious parasites. The superficies of the body, consisting of a greater or less amount of cellular tissue supporting the true skin, is, especially after severe contusions, liable to be affected by acephalocyst hydatids. The nidus of the parasite is in the cellular tissue beneath the basement membrane of the true skin.

Case.—A man, aged 46, of intemperate habits, fell backwards whilst carrying a heavy weight, and struck his back against a log of wood. He experienced considerable pain beneath the angle of the right scapula, where there were evidences of a considerable bruise for several days. After the lapse of a week, the tenderness and pain having subsided, he noticed that the swelling was not decreasing so rapidly as it had done. After a while a decided tumour appeared at the above spot, grew rapidly, gave him no pain, and produced no constitutional disturbance. He was admitted into the Colchester Hospital, under the care of my colleague, Mr. Waylen, some months after the accident. A tumour as large as an infant's head was found below the right scapula; its form was rather irregular; it presented the sense of fluctuation very indistinctly; the skin was moveable over it, and manipulation produced no pain. An incision let out pus and many acephalocyst hydatids, some collapsed, others globular and containing secondary cysts. Cysts continued to be discharged for a fortnight; no constitutional disturbance followed, and the man was discharged cured.

It would appear that the parasite found a proper nidus in a bloodvessel implicated in the contusion; that it grew gradually; and at last, owing most probably to those intrinsic changes described in my last paper, suppurated.

Usually considerable constitutional disturbance follows the opening of superficial hydatid sacs, on account of the sloughing of the external fibrous tunic. It is to be remembered that the older the hydatid the thicker is the fibrous coat; and that the vascularity of this last tissue decreases with its thickness. Open, then, all tumours made out to be hydatid, occurring in the superficial cellular tissue, as soon as possible.

* Concluded from page 654, No xxiv., of last volume.

The buttocks are frequently the seat of hydatids, after blows, kicks, or violent contusions; and from the depth of the cellular tissue, very serious consequences follow occasionally surgical interference. I would suggest that the fibrous sac be removed, to prevent its sloughing.

Acephalocysts are very seldom found in the muscular system, but in BONE they exist more frequently. Stanley, in his admirable work on the diseases of bones,* gives the best description of the disease. He writes (page 189):—"Globular hydatids have been found in bones of every form. Usually they have been developed only in a single bone. In a case, however, which occurred in St. Bartholomew's Hospital I found them in two bones—the os innominatum and sacrum; and, in the history of another case, it is stated that the entire osseous system was beset with tumours containing hydatids. The development of hydatids in bone has not, in general, been accompanied by pain or irritation of any kind; but, as the consequence of their increasing number, the following changes have occurred in the bone itself:—First, the expansion of its walls, either generally, so as to produce an enlargement of the whole bone, or in a limited extent, so as to produce a well-defined tumour; then absorption of the walls, in one or more situations, has ensued, permitting the escape of the hydatids from the bone into the soft parts around it. The presence of the hydatids in the soft parts contiguous to the bone has excited suppuration, so that on puncturing the swelling they formed; puriform fluid, mixed with the hydatids, has been discharged. Further, it has happened that during the absorption of the walls of a bone filled by hydatids, a slight muscular effort caused the bone to snap, and, in such a case, the occurrence of the fracture afforded the first indication of serious mischief in the bone. Hydatids developed in other organs are contained in adventitious cysts; and there appears to be a similar structure connected with their formation in bone, a smooth white membrane being found closely adherent to the walls of the cavity in the bone in which the hydatids are lodged.

Case.—A woman, aged 54, was admitted into St. Bartholomew's Hospital, having a globular and somewhat pendulous tumour, about the size of the closed hand, situated upon the nates, directly over the right sacro-iliac symphysis. She stated it had been five years in progress. A few weeks before her admission it had been punctured, and purulent fluid, mixed with hydatids, was discharged. The tumour again enlarged to its original size, and on being punctured a second time, only purulent fluid escaped. A free incision was now made into the tumour, with the effect of discharging a large quantity of hydatids, with fragments of bone and purulent fluid. Severe constitutional derangement ensued, which in a few weeks was fatal.

On examination numerous globular hydatids were found in the interior of the right os innominatum, and also within the sacrum. In both these bones the cancellous texture had disappeared, and the surrounding

walls were much thinned, and widely separated from each other, a large cavity being thus formed in the bone, in which the hydatids were lodged. There were also apertures in the walls of each bone, through which some of the hydatids had escaped into the surrounding soft parts. The cavity in the sacrum communicated also with the spinal canal, in which there were numerous hydatids. A smooth white membrane lined the cavity in the os innominatum and sacrum. There was a mass of hydatids between the extensor muscles of the spine, which was unconnected with the contiguous bones, and another mass in a cyst attached to the ovary.

The foregoing case shows the uncertainty there may be in the diagnosis of the tumour produced by hydatids, which have escaped from the bone where they were formed, into the parts around it. The hydatid cyst protruding from a bone, forms a soft elastic swelling, which has been mistaken for the tumour of malignant disease; and when, by the absorption of their membranous cysts, the hydatids have escaped into the surrounding cellular tissue, exciting suppuration in it, the swelling has presented the characters of chronic abscess. When, owing to the increasing accumulation of hydatids in a bone, its walls become thinned and expanded, the tumour may then communicate to the fingers the peculiar crackling sensation which belongs generally to osseous cysts with thin sides. But, in some instances, the walls of a bone filled with hydatids do not become thinned, they simply expand in such a manner as to form a circumscribed unyielding tumour, having the characters of an osseous growth from the bone. Such was the nature of the tumour, and, consequently, the difficulty of its diagnosis, in the remarkable case recorded by Mr. Keate, of an enormous collection of hydatids between the two tables of the frontal bone. In this case the outer table was removed; the hydatids were carefully removed, and the wound filled with lint, dipped in a solution of sulphate of copper. The cavity filled up by granulation, and the patient recovered. Stanley proceeds:—"The treatment suited to a case of hydatids in bone will depend on the situation and extent of the disease. If the hydatids occupy the larger portion of a bone, and have occasioned much destruction of its walls, the removal of the entire bone, or of the limb in which the disease is situated, may be necessary. But there are cases in which it is expedient to scoop out the hydatids from the cavity in the bone; and in treating such cases it should be borne in mind, that the bone is not diseased, otherwise than as its walls are expanded, or a part absorbed, consequently that no more of the bone will require removal than is sufficient to effect the dislodgement of the hydatids; for when this has been done, and astringents or stimulants have afterwards been applied to the bone, no reproduction of the hydatids has ensued. Healthy granulations have filled the cavity in the bone, and the wound has healed soundly over them."

Acephalocyst hydatids have been found in the sheaths of tendons, where they have been treated as "ganglia." Synovial membranes do not appear to form a nidus for

* A "Treatise on the Diseases of Bones." By Edward Stanley, F.R.S.

the parasite. The cysts found in the larger joints are not acephalocysts.

In the substance of the brain we occasionally meet with large solitary acephalocysts, with a very thin external fibrous coat. The compound parasite is very rare. All parts of the brain are obnoxious to the attacks of hydatids; the morbid phenomena differ with the seat and rapidity of the growth of the cysts. The choroid plexuses are frequently the seat of vesicles or cysts, which, although they are called hydatids, are not parasites, but simple cystic degenerations of the acini and villous appendages of the plexus; in aged persons they usually contain yellowish-looking sand, and vary in size from that of a pin's head to that of a bean. Rokitsky speaks as to the rarity of the occurrence of acephalocysts in the spinal cord; their nidus is even outside the dura mater. In one case the cyst forced its way into the canal of the arachnoid. Even in the large nerves they rarely exist. Hydatids have been removed by operation from beneath the conjunctiva; and they occasionally exist in the orbital cellular tissue.

Case.*—Chas. Rowell, 42 years of age, was admitted under my care into the London Ophthalmic Infirmary, on the 3rd of January, 1820, with protrusion of the globe from the orbit by a deep-seated tumour, which had been growing seven years. When this patient was admitted into the infirmary, the tumour had advanced so far between the upper and inner portion of the eyeball and the eyelid, as to have thrust the globe completely out of the orbit. The upper lid, greatly stretched and inflamed, covered the eye and the tumour; the lower was completely everted, and its membranous lining appeared as a thick fleshy mass. The conjunctival covering of the globe was thickened by chronic inflammation, the consequence of exposure. The structure of the eye was uninjured; the pupil round, and about in the middle state; the iris motionless. Vision was destroyed. The tumour was firm, and apparently affixed to the orbit; it afforded, on pressure, an obscure sense of fluctuation. To relieve the distension and pain, and acquire some further insight into the nature of the disease, a puncture was made into the most prominent part of the swelling, and about a dessert-spoonfull of clear watery fluid escaped; considerable diminution of suffering ensued. When I examined the part, two days afterwards, I found a soft, opaque, white substance in the puncture, and proceeded to remove it with a pair of forceps; it proved to be an hydatid, and a few others escaped when pressure was made on the swelling. Some more came away on the following day, and I afterwards cleared out the whole collection, amounting to half a teacupfull, by enlarging the puncture, and injecting water forcibly into the sac. Inflammation and suppuration of the cyst followed, without much pain. The discharge then gradually diminished, and the opening closed in about a month. The eye returned to its natural situation, and all uneasiness ceased. In March a little motion of the iris, and slight perception of light had returned.

Hasse declares that the muscular structure of the heart is occasionally the seat of parasites, but not of the

acephalocyst hydatid. In animals this is not true. I have already noticed Andral's case, which proves the presence of hydatids in the blood-vessels, and have noticed their influence upon the calibre of the affected vessels.

Lung.—After much constitutional disturbance, great and violent cough, with or without hæmoptysis, collapsed acephalocyst hydatids are occasionally expectorated. They may have been originally deposited in the parenchyma of the lung, or as is most frequently the case, may have passed by the process of ulceration, from the convex surface of the liver into one of the bronchial tubes. In the first instance, the acephalocysts are not tinged yellow by the bile, neither are they expectorated in any quantity at any one time; the reverse is the case when the liver is the organ primarily affected. Andral once found nearly the whole of the inferior lobes of both lungs transformed into capacious sacs, but usually one lung is alone affected; the acephalocysts, about the size of pigeons's eggs, being surrounded by a dense and laminated protective sac, formed from the parenchyma of the lung, are very firmly fixed. In cases where acephalocysts have been expectorated, a communication between a bronchus and a suppurating sac is found, which may still contain perfect hydatids floating in pus. The amount of condensation around the sac is strangely small, and it is quite the exception to find any inflammatory action going on in their neighbourhood. Death appears to be caused by pressure upon, and occasionally ulceration into, the bloodvessels, by great encroachment upon the region of the heart, by gradual destruction of the affected lung, by abscess and its consequences, and by simple exhaustion. A solitary example is given by Hasse, of an hydatid detached through inflammation making its way into the pleural cavity, leaving in the upper and middle lobes of the right lung a cavity in communication with the bronchia, and determining pneumo-thorax. Both simple and compound acephalocysts are found in the lungs; they appear to choose the inferior lobes and that part furthest removed from the pleura for their seat, their diagnosis is therefore very difficult. Dyspnœa is the earliest symptom and continues to the end; it increases steadily and is relieved to a certain extent, by the expectoration of the parasites. Occurring without any other symptoms—without any inflammatory attack, the dyspnœa is hardly to be accounted for by the physical signs. The cysts are too deep to influence percussion at their early stage, and on account of the supplementary character of the vesicular murmur in the upper regions of the chest, their presence entails; the patient is usually said to be the subject of emphysema. But after a while most fearful bronchitic irritation and cough set in, the dyspnœa increases, and low down in the posterior regions of one or both sides of the chest, we may detect slight and diffused dulness on percussion. The vocal fremitus is diminished in intensity, and hæmoptysis occurs after a while; the heart may be displaced and the affected side bulged out; there is no prominence, however, of the intercostal spaces, and

* Lawrence. Med. Chir. Trans., Vol. 17, p. 48. See Middlemore, vol. 2.

consequently no evidence of empyema. At the seat of dulness, the natural vesicular murmur is, as this increases, masked by blowing or tubular sounds, accompanied by large moist râles. If the hydatid sacs ulcerate into a bronchus, their contents are gradually expectorated, a singular change of the physical signs resulting, mucous râles are heard over the whole of the affected side, and gurgling at one or more spots; the dulness on percussion has vanished, tympanitic resonance being produced; the tubular breath sounds have become amphoric, and various degrees of pectoriloquy exist. These physical signs vary, however, with the amount of the contents of the cavity. I am not aware of any but a fatal result in these cases, but when the liver is primarily affected and the hydatids ulcerate through the lung, recovery is by no means unusual. Hydatids in the lung, which have not attained to very great size, cannot be diagnosed; the case may be taken for one of emphysema, complicated with sub-acute bronchitis; when, however, the dulness on percussion is at the inferior part of the lung, the rest of the organ being unusually resonant, the opinion cannot hold. Pleurisy is contraindicated by the transmission of the vocal fremitus. Cancer of the lung, of the infiltrated kind, and unaccompanied by enlarged bronchial glands or mediastinal tumour, is distinguished by the almost invariable flattening and retraction of the affected side. In hydatid disease the side is enlarged; in both diseases hæmoptysis, pain, cough, and scanty expectoration at first occur, but in cancer the constitution suffers most. The nodular form of carcinoma cannot be distinguished. In a case with which I was familiar, nodules of melanosis were deposited here and there in the parenchyma of the inferior lobes of both lungs. During life a careful stethoscopist distinguished the presence of some portions of tissue more dense than the surrounding lung, in fact, all the presumed physical signs of hydatids existed. When cancer is combined with tumour, the mediastinal dulness is so increased, and the signs of pressure upon the great vessels, œsophagus, and bronchi, are so decided that the differential diagnosis is of no difficulty. In cases of chronic pneumonia, the dulness on percussion does not gradually increase as in hydatid disease, remedies have more effect in allaying the cough, and hæmoptysis is rarer than in the affection before us; the history of the case is of great assistance in the diagnosis. With such very negative evidence as the above, we must esteem the diagnosis of hydatid disease of the lung to be almost impossible, except under very favourable circumstances. When acephalocysts are deposited in the tissue of the liver, near to its convex and superior surface, their growth soon brings them in contact with the fibrous envelope of the organ, the diaphragm becomes adherent, and the pleural layers also, most distressing lung symptoms ensue, and after a severe fit of coughing the patient expectorates pus, collapsed hydatids, and, sooner or later, bile.* Recovery is very usual, all the symptoms being

relieved by the evacuation of the parasites, suppuration of the sac appears to occur, the adherent diaphragm and pleuræ are pierced, abscess of the parenchyma of the lung follows, bursting at last into a bronchus, the abscess determines a communication between the sac and the air. Hasse once found a shrivelled acephalocyst beneath the costal pleura.

Liver.—Hydatids affect the liver in preference to any other organ and are found in all parts of it, rarely in the left lobe and most commonly in the right, where they attain to their greatest size; they are to be met with deep in the parenchyma or superficially and pushing forwards the capsule of the organ, and generally exciting adhesion between it and the side. One cyst or several may exist; they are found of all sizes, from that of a nut to a size which enabled them to hold several pints of fluid. Those deposited deeply cause absorption of the substance of the liver in their immediate neighbourhood by the pressure coincident with their growth, and after a while reach the surface. When the acephalocyst has become superficial, that part of it which is in contact with the capsule of the liver has no external fibrous sac, it is simply covered by the capsule and that part in contact with the liver still retains its accessory covering. At first little inconvenience results from the presence of hydatids in the liver, but as they increase in size, the edge of the liver descends below the cartilages of the ribs, and the patient suffers from dyspepsia, and pain in the shoulder and side. Jaundice rarely occurs until a late period, nor does the portal circulation suffer, except the hydatids are large or so numerous as to cause pressure upon the great venous trunks. Tumour below the rib in the right hypochondriac region, and elevation and expansion of the lower cartilages are the first physical signs of the disease; the tumour is ill defined, moves with inspiration and expiration, is frequently painful to the touch, and when percussed gives a most peculiar vibratory thrill to the finger, so unique as never to be forgotten if once felt. From causes already explained, the tendency of the tumour is to enlarge, the liver increases in size, the belly feels hard and nodular, and after a while the portal and systemic veins suffer, the case ending by effusion into the cavity of the peritoneum with œdema of the legs, accompanied oftentimes by displacement upwards of the heart and lungs; or, the tumour, owing to changes in its walls, already alluded to, may burst into the transverse colon, or into the duodenum, into a gall-duct, or the gall-bladder. A natural cure is frequent under these circumstances, as also when the acephalocyst opens by ulceration through the umbilicus, (see Case in Paper I.) or when its contents pass into a bronchial tube. But when the hydatid ulcerates and opens into a bloodvessel, into the cavity of the peritoneum—unless the structure of this membrane be very much covered by false membranes, or into the pleural sac, recovery is most unusual. The tumour, as has been proved by Case 6, may burst in two directions at once—into the bronchus and into the intestine. Recovery ensues, rarely however, by the nutrition of the acepha-

* See Dr. Durrant's case, *Provincial Medical and Surgical Journal*, No. 5, 1851; my case, *Ibid.*, No. 24, 1850; and Dr. Todd's lecture, *Med. Times*, January 3, 1852.

locyst being suspended, the fluid is absorbed, the fibrous sac contracts, and the acephalocyst is folded up within it. (See Case 5.)

When a tumour appears in the right hypochondrium, unaccompanied by pain and severe constitutional disturbance, not preceded by inflammatory symptoms and fever, and possessing the peculiar vibratile thrill on percussion, moving also with the efforts of respiration, we may safely diagnose hydatid tumour of the liver. Abscess of the liver is preceded by constitutional disturbance of the severest character, and in this climate, in my experience, is much rarer than hydatid disease. Swelling around the cartilages of the lower ribs may simulate the disease for a time, but pain exists, and there is no vibratile thrill. Abscess high up in the abdominal walls, or within the sheath of the rectus, is distinguished by the previous history of the case, the vague feeling of fluctuation, and the non-movement with the expiratory and inspiratory efforts. Malignant disease of the liver rarely takes on the form of tumour; usually the patches of the adventitious deposit are not raised above the surface of the organ, indeed their centre is usually depressed. An enlarged and distended gall-bladder is likely to be mistaken for hydatid tumour; but the swelling commences near the median line, is accompanied by jaundice and much constitutional disturbance, and the edge of the liver can be traced to its margin. By keeping up the powers of nutrition we may hope to arrest for a time the march of hydatid disease. Turpentine, iodine, and mercury may be given in small and repeated doses with effect; but I know of no instance of a cure. The evil day is put off for a while, and not for ever. We must look to surgical interference for aid; for, except under the most unfavourable circumstances, puncture of the acephalocyst is a safe cure. When the health is at a low ebb, and the tumour large and old, the operation will nearly always fail; but it is quite justifiable if the tumour be recent, not very large, and if the health be not much depressed. When a large, and consequently old, sac is punctured, the fibrous envelope usually sloughs; or, at any rate, so much suppuration occurs from its inner surface as to destroy life; but when the contents of a moderate-sized sac are let out the fibrous envelope collapses to a considerable extent; and on account of its being recent, tolerably thin, and not affected by those intrinsic changes alluded to in my last communication, is not liable to slough. It is of the greatest importance that before an acephalocyst of the liver is punctured it be satisfactorily determined that it adheres to the parietal layer of the peritoneum, that there will be little danger of any of the fluid escaping into the peritoneal cavity. Unfortunately this can rarely be done; but it can, with certain aids, be brought about. It is usual for the acephalocyst to be adherent; its increased size and constant motion upwards and downwards tend to the production of false membrane. Some surgeons, therefore, bandage the patient, to keep the tumour steady, and open it with a trocar, and enlarge the opening in the skin and superficies afterwards. A large opening into the sac is useless;

indeed, absolutely dangerous; for a little manipulation will remove any secondary cysts from the opening, and the danger of some of the fluid coming in contact with the peritoneum is in an exact ratio with the size of the incision. Others open by cautery by potassa fusa; and to this plan I certainly adhere; the risk of non-adhesion is done away with, and time is no great object. The simple serous cyst, a serous sac containing a clear watery fluid, is occasionally met with in the liver; it possesses none of the characters of the parasitic acephalocyst.

Acephalocysts are found in the spleen, in the sub-peritoneal cellular tissue, and in the substance of the kidney. Usually when an acephalocyst exists in the spleen there is another in the liver; but it does occasionally happen that such is not the case. Rokitansky says:—"It rarely attains the size it reaches in the latter organ, but is otherwise not distinguished by any peculiarity." In my third case hydatids were found in the omentum; but there were others in the liver. Beneath the peritoneum they grow with great rapidity, and attain an enormous size; and are not to be mistaken for simple non-parasitic growths. In the kidney acephalocysts have grown to the size of a child's head. They may burst either into the colon, and their contents be passed out with a motion, or into the pelvis of the organs; and the fluid and secondary cysts will pass into the bladder, and be ejected with the urine. Rokitansky denies the existence of acephalocysts in the bladder; they are occasionally found in the cellular tissue covering it, and also in the cellular tissue around the rectum. In the female, when they occur in these positions, they greatly complicate the diagnosis of ovarian dropsy. Hydatids have been found in the substance of the uterus. It need hardly be remarked, that the so-called hydatids of the placenta are not acephalocysts, but simple serous vesicles, derived from the villi of the chorion. The cysts in the kidney which are most commonly found, upon examination, are proved not to be acephalocysts. Such is the case in cystic disease of the breast.

Beautiful as these acephalocysts are in structure, their presence in the system is most baneful to life; rapid in their growth, and influencing all parts within their range by their mechanical effects, they, by their very existence, denote a low and ill-nourished constitution. We must, first of all, endeavour to increase the powers of assimilation, and then consider whether there be any drug capable of arresting their growth and determining their absorption. I can give but little assistance from my personal experience. Oil of turpentine in small and repeated doses, and inunction of strong iodine ointment, certainly arrested the progress of the disease in my fourth case, which came under my care two years ago, and is now alive, and in a better state of health.

Above all internal remedies stands surgical interference. From what I have seen, I believe that the sooner a tumour, declared to be hydatid in its nature, is opened, the better; and I am satisfied, that as medical statistics are more carefully collected, that the above opinion will be proved to be correct. Of the etiology of acephalocyst hydatids we are very ignorant.

Rokitansky denies the coexistence of hydatids and tubercle in the same economy. Andral and others have seen them together, and therefore multiply the Professor's dogmatic assertion.

January 17, 1852.

Hospital Reports.

QUEEN'S HOSPITAL, BIRMINGHAM.

CASES ADMITTED UNDER LANGSTON PARKER, ESQ.

Extracted from the Clinical Records,

BY W. J. MOORE, ESQ., RESIDENT SURGEON.

Recovery after very Extensive Injuries.

To prognosticate correctly the termination of disease very frequently requires great amount of discrimination and tact, only to be acquired by a corresponding experience; and this remark also is applicable to injuries requiring the aid of the surgeon. Perhaps the most important point to take into consideration is the age of the patient, as it often is found that the same amount of injury which a young subject rapidly and easily recovers from would prove fatal to a person of more mature years; and indeed it is daily noticed that the younger a patient is, down to a certain age, with so much more facility will he rally after extensive injuries. At the same time it must be remembered that children of two or three years old should form exceptions to this remark. Should a person in good health meet with extensive injuries, and have "youth on his side," he has, at least, "half the battle;" and in exemplification of this remark a case is brought forward which lately occurred in the practice of Professor Parker, at this hospital:—

George Hudson, aged 13, was brought to the Queen's Hospital on the 8th of August last, having some ten minutes before been caught by one of the leather bands which are used to impart motion to the grindstone in one of the adjacent sword manufactories. He was carried round the stone before the machinery could be stopped; and on examination at the hospital the following injuries were apparent:—Bruise of both legs, the right being most hurt; both thigh bones were badly comminuted in their whole extent of shaft, the knee-joints, however, being intact; comminuted fracture of the right forearm (ulna and radius), partial dislocation of the wrist; several cuts and bruises on the fingers; extensive laceration of the left forearm and arm, the humerus being broken in several places, and the ulna and radius being in a still worse condition; the elbow-joint laid open; several superficial cuts and bruises on the head.

There was, notwithstanding these injuries, a partial sensibility present; but the surface was cold, the pulse intermitting, and the countenance pallid; concussion, in a minor degree, being established. There had been little or no bleeding from the lacerated parts, and the brachial artery although bruised, was not quite torn through. The laceration of the integuments extended

quite into the axilla, but on the outer side, over the deltoid, it was freer from injury, and afterwards served as a flap on removal of the limb.

The patient was placed on a bed, and some warm tea given immediately; and in the course of an hour the pulse was much stronger, and the surface warm. The left humerus was then sawn off very near the head, but the shoulder-joint was not opened, and the flap made from that portion on the outside, before mentioned, as having escaped with little injury. Three ligatures were applied, and the stump dressed in the usual manner. Two straight splints were used to keep the thighs in apposition, aided by four shorter ones round the fractured parts. The arm was reduced and bound up, and the head shaved.

In the evening the boy seemed going on well. He was sensible, but did not complain of pain; and there was some difficulty in getting him to answer questions. The pulse counted 100, and had tolerable force. The head was hot and the conjunctiva congested. He was ordered a dose of calomel.

August 9th. *Morne.*—Has been muttering much during the night, but is again sensible; the pulse counts 120; head is hot; bowels not opened, but tongue clean. Half an ounce of castor oil directly. Cold to the head.

Meridie.—Oil has not operated; intellect does not seem so clear as it appeared this morning; pulse 120. Rept. Ol. Ricini.

Vespere.—Has been gradually becoming worse; breathing and heart's action are very quick; head very hot; muttering delirium; pulse 120; bowels not moved. Applicant. Hirud., vj., tempor.; Hab., gtt. j. Ol. Croton statim.

12, P.M.—The croton oil has procured copious stools; there is still muttering delirium present, and in most respects he remains in *statu quo*.

10th.—There has been much wandering during the night, but this morning he is again sensible, the pulse counting 100, and the head less hot; breathing quiet. In all respects evidently better.

11th.—Sensible, and now begins to complain when the splints are adjusted, or the stump dressed; bowels moved to-day without medicine.

12th.—Going on well; suddenly this afternoon he had an attack resembling syncope, all the characteristics of such a state being present. The strong ammonia was applied to the nape of the neck, which produced almost instant reaction.* In the evening much headache was complained of, with much general irritability, and three leeches were applied to the temples, with benefit.

13th.—Going on well. The inner portion of the integument next the axilla looks red and inclined to slough, and fears were entertained lest the artery should be opened by that process. Instructions were given to the attendant, and instruments kept at hand ready for such an occurrence.

14th.—Going on well.

15th.—The slough has become detached this morning

* The application of the strong ammonia to the back of the neck and spine will be found one of the most serviceable remedies in cases of fainting, concussion, hysterical insensibility, and the like. Care, however, must be taken in its application lest it should escape and interfere with the respiration of the patient.