by one and a half across the base, and is one inch high. The two last crusts formed very quickly. The pain was considerable during the three years, but increased very much during the last twelve months, when the progress of the ulcer was more active; the discharge, which was very offensive, increased, and the general health was affected.

When I saw the patient in August, 1851, there was a large ulcer occupying the front and outer part of the fore-arm, and extending from the bend of the arm to within an inch and a half of the wrist. The whole surface was very coarsely granulated, and in some parts had more the appearance of fungous growths; some of the masses were as large as a small arbutus-berry, and, owing to the roughness of their surface, had a very similar appearance. To the surface of the most prominent part of some of these, a thin, hard, dark scale was attached, and by the aggregation of several of these scales the ulcer at that part was covered by a corresponding thin crust. Similar incrustations had separated with the removal of the dressings. The edge of the ulcer was raised, thickened, and everted. The surface bled very freely when disturbed, and the discharge from it was extremely offensive. The patient was very much enfeebled, and lay in a semi-conscious state. She died exhausted September 2nd, 1851. The question of removal of the limb had been put to the patient twelve months previously by Mr. Sicard, but she had refused to consent to it; she had lately requested it, but the low condition she was in prevented its being accomplished.

These three cases illustrate some of the varieties of this affection. The formation of incrustations in the last case, though to a greater extent, is analogous to what is observed in the formation of scabs in some instances of epithelial cancer of the lips and face. The tendency of the formation of scales on the surface of the granulations, which existed to the last, is a point pathologically interesting, for I suspect that they were an epithelial formation, and, if so, they would afford an illustration of the continuance of an early and peculiar character of the ulcer, which might have been expected to disappear in the more active progress of the disease; a microscopical examination would, however, be required to determine this satisfactorily.

It is a matter of confessed importance in endeavouring to attain a correct knowledge of disease that, at the same time we are careful not to associate together disorders in their nature essentially different, we should guard against unnecessary distinctions, grounded on differences in the degree of development, or a few slight variations of external form. It is with the view of avoiding a distinction of this latter kind, which was apparently inferred, and which does not seem really to exist, that I have offered the foregoing remarks, and would suggest that the forms of disease before mentioned, which have been considered peculiar to cicatrix, should be regarded as epithelial cancer of that tissue; and thus a step, in simplifying our knowledge of disease, and as a consequence, in directing our remedial measures, will be gained.

Since the preceding was communicated, I have met with several published cases, which appear to me to be examples of the same disease, though they have not been distinctly noticed as such. They are nearly all instances of the disease invading bone, the malady having originated in a cicatrix which had followed an injury, and which had remained sound for some period. The mode of origin, the warty growth, and peculiar aspect of the ulcer, its unceasing though slow destructiveness, its manner of spreading, and the success of complete removal, as well as some other general points of resemblance, led me to think that they belonged to the same disease.

I will simply add the references to these cases, observing that the one related by Mr. Stanley, at page 366 of his work, is particularly interesting from the fact, that Mr. Paget, by a microscopical examination of the growth, discovered the existence of scales resembling the epithelial scales found in carcinoma of the skin, thus affording an additional confirmation of the identity of the two diseases.

Stanley on Diseases of Bone. London: 1849. Page 65, Case 1 and 2; page 360 to 367, Case 1 to 6.

Ormerod's Clinical Collections. London: 1846. Page 55.

Descriptive Catalogue, Museum, St. Bartholomew's Hospital. London: 1846*

Pathological Catalogue, Museum, Royal College of Surgeons, Vol. II., Nos. 639, 640.

In conclusion, I will refer to a lecture by Mr. Humphry, "On Epithelial Cancer," recently published in the *Provincial Journal*, (No. xviii., 1851, p. 477,) in which he has given an excellent and clear description of this form of cancer, and alluded to the analogy between it and this warty disease of cicatrix.

CASE OF RETENTION OF BILE AND DISTENDED GALL-BLADDER.

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Read at the Quarterly Meeting of the Bath and Bristol Branch, Dec. 17, 1851.

THE following case, as being at once rare and involving a nice point of practice, may be considered worthy of being placed on record:—

John Morgan, aged 35, a man of spare habit, and by trade a butcher, was brought to the Bristol Royal Infirmary, on the 22nd of September, 1851, in a state of imminent danger. He had already been ill three weeks, and severe pain and urgent vomiting, from which, during the greater part of that time, he had little or no respite, had at length reduced him to a condition of extreme collapse. To judge from his looks, one would

* Page 10, Nos. 29 and 30.—Page 13, Nos. 42, 42a.—Page 29, Nos. 124, 125, 126, 127.—Page 445, No. 40.—Page 453, No. 54.

have said he was a man dying from some internal rupture. His features were sunken, his surface was growing cold, and his pulse could scarcely be felt. An enormous swelling, which was pointed out as the seat of the pain, and was the apparent cause of the other symptoms, occupied the whole upper half of the belly. Its lower margin evidently formed by the edge of an enlarged liver, could be readily traced, extending across the belly from one flank to the other. Just above and to the right of the navel, over a space as large as the palm of the hand or more, the swelling was much more prominent than elsewhere. Bulging abruptly out at this point from the surface of the general enlargement, it had just the look of a large abscess, which had reached the stage of "pointing." Over the same place fluctuation could be distinctly felt, and from its marked and superficial character, it was plain that the walls of the sac, whatever the sac might be, were very thin. The extreme tenderness of the part, however, prevented the examination that would have been necessary to trace its exact outline.

The history which the patient gave of this formidable state of things was brief and simple. Twenty-two days before admission, being at the time in his usual health, he supped plentifully on oysters, and got drunk on strong beer. At day break, on the following morning, he was seized with severe pain in the belly, followed by urgent vomiting. The quantity of fluid thrown up was very large, and exceeded much, he thought, what was taken in the shape of drink. For three days the bowels could not be made to act, and the case altogether appeared to have the character of ileus or intestinal obstruction, and, indeed, was so treated. At length, after taking much drastic medicine, and having repeated enemata, he was freely purged; and from this time the bowels remained loose, acting generally several times in the twenty-four hours. The vomiting did not the less continue; so that from the day of attack to that of admission—from the 2nd of Sept., that is, to the 23rd—little or nothing had been retained on the stomach:

The swelling and hardness in the upper part of the belly first attracted his attention about a fortnight before he was brought to the hospital, and had continued to increase from that time.

There were two other points of much interest in the case, as to which the testimony of the patient was very clear and precise. The first was, that there had never been the slightest shade of jaundice; and the second, that the matters ejected from the stomach were often green, and possessed the common characters of bile. The colour of the stools he had not particularly noticed. He had never on any former occasion suffered from gall stones, jaundice, or other palpable hepatic disorder; nor had he ever received a blow or other injury in the neighbourhood of the liver.

As to his general history, he further confessed that he had drank to great excess for many years; but that he could not discover that his health had, as yet, suffered in consequence. The more accurate results of clinical inquiry showed, however, that he had not escaped the penalties which attach to these fatal habits.

Taking all these points into consideration, the question now was,—What was to be done in the present emergency? As all the suffering appeared to be connected with the abdominal swelling, and as many circumstances pointed clearly to the distension of the sac, as its chief cause, the opening of this sac by puncture seemed to offer the most obvious means of relief. The great urgency of the case, the thinness of the sac itself, and the great tenderness of the parts around it, all seemed to invite to the operation. On the other hand, before taking so hazardous a step, it was, at least, necessary to have clear views as to the nature and seat of the tumour. But, unfortunately, these were not easy to obtain.

Many who saw the patient were of opinion that it was an abscess; but there were strong objections to such a view. In the first place, as far as could be ascertained, none of the common causes of abscess of the liver had been in operation; there had been no blow or other injury; and there was no reason to suspect present or former ulceration in any part of the intestinal tract. The positive evidence was still more opposed to this notion. There could be no reasonable doubt, in fact, that the illness, whatever its nature, was set up by the debauch of the 1st of September. Now, suppuration may possibly happen after an excess of this kind; but it is certainly not among the common consequences of a drinking bout. Inflammation thus excited in a hydatid cyst already existing is the only case that occurs to the mind in which such a result might ensue with any degree of probability: and even such a case as this is, as far as I know, entirely hypothetical. The only remaining alternative seemed to be, that the enlargement was caused by retention of bile, through some obstruction of the common gall duct; and that the sac was a distended gall bladder. And yet to this again there appeared to be—as, in the absence of all prior personal experience of such a case, I then considered—these two very great objections:—First, that there had been no jaundice; and second, that the matters rejected by vomiting were often green, and possessed the other characteristics of bile. There was every reason to believe the man's testimony as to this last point; for, according to the nurse's report, the matters vomited soon after admission were distinctly green and bilious.

Amid this perplexity I resolved not to meddle with the tumour, but simply to apply a large poultice to the belly, and to endeavour by appropriate means to allay pain and stay vomiting. With this view, and proceeding on the notion that an excessive development of acid in the *primæ viæ* might be an important element in the case, I ordered ten minims of Liquor Potassæ, and three of Liquor Opii Sedativus, to be taken every three hours. A single large opiate had been already administered. The event proved in a signal way the soundness of the motives which had led to the adoption of an expectant plan. The vomiting ceased after the first dose of medicine until ten at night, when he threw up a large pewter full of what the nurse described as green bile, but which, unfortunately, was not kept for exami-

nation. This crisis was followed by a sense of very great relief, with an almost total cessation of pain; and from that time the sickness never returned.

On the following day all pain had ceased; the abdominal tumour had entirely disappeared; and the liver had retreated nearly within its natural limits. Some slight tenderness in the epigastric region was all that remained of the truly formidable state of things that existed there the day before. The countenance was free from anxiety; the surface had recovered its natural warmth; and the pulse had fallen from 120 to 80. Hunger was now the chief complaint. The starved body was no sooner released from pain than it asserted, in its own emphatic way, its demand for the material needed to restore its natural proportions.

An alkaline mixture, containing equal parts of carbonate of magnesia and bicarbonate of soda, was now prescribed, with ten grains of compound extract of colocynth at night. The bowels did not move until the following day, after an enema. Some large and quite clay-coloured lumps were first voided, followed by more liquid matters, evidently tinged with bile. The evacuation was not examined so minutely, perhaps, as it should have been; but nothing like gall-stone was seen in it.

The remaining part of this singular history is soon told. From the first moment of relief the patient continued to mend, with scarcely an interruption. On the 4th of October he was strong enough to get up, and was, in all respects, convalescent. On the 29th of the same month he left the hospital, having gained six pounds in weight during the last fortnight of his stay. Two circumstances were, however, noted, a knowledge of which is important to the pathology of the case. The whole time the patient remained under treatment the stools were of a pale drab colour. They were not devoid of bile, but were only scantily tinged with it.

The other circumstance alluded to referred to the state of the kidneys. For the first four or five days the urine was distinctly albuminous. It was also *very acid*, and on being allowed to stand, threw down an abundant precipitate, which by examination with the microscope was ascertained to be almost wholly composed of lithic acid in large crystals. It contained, besides, some well-marked casts of the uriniferous tubes; and, as the specific gravity was never lower than 10.25°, the presence of albumen was supposed to depend on the existence of, perhaps, recent nephritis. This supposition was entirely confirmed by the sequel. On the 3rd of October the albumen had disappeared, and could never be detected again in subsequent examinations.

Many important reflections occur to the mind in dwelling on this remarkable case. In the first place, the obscurity which at first hung over its nature, was, in regard to the immediate source of danger at least, entirely removed by the event; for, it is scarcely necessary to remark, that after the crisis which occurred on the night of admission, there could no longer be any doubt, notwithstanding the absence of jaundice, and the frequent presence of bile in the *ejecta*, that the abdominal enlargement was caused by retention of

bile, through some obstruction in the course of the common gall-duct; and that the sac was, after all, a distended gall-bladder. One of the important points of the case consists, in fact, in showing that the concurrence of the circumstances here specified constitutes no bar to such a conclusion. It may be further added, that a little consideration suffices to show that the anomaly they seem to offer is more apparent than real. For, it is not too much to say, that this anomaly is at once explained by reference to the exactly analogous circumstances which are often observed in the case of retention of urine. In the one case, as in the other, the gland continues to separate from the blood the elements of secretion, so that the system is kept free from taint. In the one case, as in the other, these elements are cast out into the natural receptacle, which provides, by its gradual distension, for the gradually increasing accumulation. In both, again, the gland, as well as the bladder, yields to the distending power, and makes room, in its own way, for the fluid which the bladder has no longer space to hold. The parallel does not even terminate here, but extends to the mode in which that partial relief is obtained, by which alone, in many cases, rupture is averted; for there can be no reasonable doubt, that the bile which occasionally appeared in the matters vomited, in the case of John Morgan, had escaped from the gall-bladder by the same mechanism as that by which small instalments of urine distil from the over-distended urinary bladder in cases of retention there. The outward discharge of this bile, as proving communication between the biliary passages and the intestinal to be still extant, although obstructed, was, I need scarcely add, a fact of the first importance in regard to treatment. Very probably, too, it alone rendered the continuance of life possible for so long a period under such circumstances; for, failing the relief thus afforded, it is but too probable that the gall-bladder, tense as it was in spite of such relief, would have given way under the constantly-increasing distension.

In the absence of direct evidence the nature of the obstruction itself must of course remain a matter of conjecture. Judging from the circumstances amid which it arose, on the one hand, and the persistence of a partial communication on the other, the probabilities are, that it was caused by inflammation and swelling of the lining membrane of the duodenal and of the common gall-duct, propagated upwards from the gut. Microscopic examination of the stools might, perhaps, have thrown some light on this question, but want of time and other circumstances prevented my having recourse to it.

The great length of time the obstruction lasted tells much against the notion that spasm was much, though it might have been partly, concerned in it. Many of the circumstances of the case, however, among which I may mention the characters of the urine, coupled with what we know of the pathology of this class of affections, renders it not improbable that the irritant action of an excess of acid in the upper part of the *primæ viæ* might have played an important part in the phenomena. The continued deficiency of bile in the stools, after the

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.