

indeed; but they do occur sometimes, and it is most important that we should be able to recognise them. One of the conditions—viz., that the lesion shall have existed without change for over three years—is obviously a point very difficult of determination, and impossible to establish on a first examination. Hence, it is only after we have had a case of this kind for some time under observation that we are justified in speaking hopefully of the prospect of life. There is one class of case that calls for care and discrimination as regards prognosis. I mean where we have some regurgitation through the mitral valve as the result of sudden dilatation of the left ventricle and independent of actual structural damage to the valve. Some years ago a gentleman consulted me under the following circumstances. He had enjoyed good health until a few days previously, and had never had rheumatism. A few days before his visit to me he had undergone severe and unusual physical strain and had been seized with sudden and severe dyspnoea, which continued up to the time of my examination. I found the heart acting violently, but there was no evidence of hypertrophy. Auscultation revealed a loud bellows murmur at the apex and heard over a wide area. There was no pulmonary congestion, dropsy, or other evidence of systemic engorgement, and the only symptom complained of was the dyspnoea. I formed the opinion that in all probability the case was one of acute dilatation of the left ventricle from overstrain, and that while the prognosis was not free from anxiety, the prospects of recovery were good. I accordingly spoke encouragingly; ordered complete rest and tonics. The case rapidly improved, and in a short time all the troublesome symptoms had disappeared. I have not seen the patient for some time, but have lately heard that now, at the expiration of several years, he remains perfectly well. We must remember that all cases of acute dilatation of the left ventricle do not pursue this favourable course. Sometimes dropsy and the other signs of cardiac failure rapidly supervene and the patient dies, but the prognosis is essentially different from that of organic valvular disease. The particularly loud murmur present in this case leads me to remark that there is no greater error in dealing with cardiac disease than to regard a loud murmur as necessarily indicating a serious lesion. As a matter of fact the rule is rather the other way. In regurgitant mitral disease the loudest murmurs are produced by a small amount of blood being strongly forced through the valve by a vigorously contracting ventricle. The worst sign of all is where a loud murmur gradually becomes feebler and eventually disappears owing to failing contractile power of the ventricle. A murmur may, of course, also become feebler owing to increasing competence of the valve. The clinical signs will serve to differentiate the two cases.

There seems no doubt that occasionally, though rarely, organic valvular disease may entirely disappear. The best observers are agreed upon this point. There is no doubt whatever that the cardiac murmurs often present in chorea pretty frequently disappear, and everything seems to point to the conclusion that these murmurs are organic and not functional. The topic of prognosis in valvular affections naturally suggests the question whether any of the subjects of this affection may be fitly passed for life insurance at some increased premium. Most offices refuse positively to accept any applicant who has any form of cardiac disease; but this is not an absolutely universal rule and the point may arise with any of us. Sir Andrew Clark and Dr. Clifford Allbutt are both of opinion that certain cases in the class under consideration may be safely selected for insurance at some heavy increase of premium. The cases recommended for such a course are such as those previously described as affording grounds for a hopeful prognosis. Cases of mitral regurgitation, which have remained *in statu quo* for several years, where there is no change in the ventricle, no accentuation of the pulmonic second sound, no evidence of embarrassed circulation, and no subjective symptoms, are suggested as fair subjects for insurance at certain rates. Dr. Clifford Allbutt advises that such cases, if accepted, should be put upon the early payment system, so that all the premiums should be paid by the age of thirty or thirty-five. I confess I should hardly feel at liberty at present to recommend for insurance any applicant who presented the signs of organic valvular disease of the heart, though I have little doubt that there will, in the early future, be such an advance in precision of prognosis as to permit of this being done in a manner equitable alike to applicants and to the insurance companies.

## ON FREE FLUID IN THE ABDOMINAL CAVITY OF THE FEMALE.

By JAMES OLIVER, M.D., F.R.S. EDIN., F.L.S.

IN the majority of cases the fluid which is found free in the abdominal cavity resembles the normal transudations of the body. Occasionally, however, it differs from dilute liquor sanguinis as it may be poured out by the rupturing of some cyst or abscess or the bursting of one or more blood-vessels. From the peritoneal sac of a well-fed animal, especially after the ingestion of a good meal, one is able to collect a quantity of serous fluid. Under ordinary circumstances, however, the arterial and venous pressures are so regulated that this liquid does accumulate, but forthwith it finds its way again into the blood through the lymphatics. When therefore dropsy of the peritoneum occurs we may practically consider it as resulting in consequence of some derangement of a physiological phenomenon. The capillary system we know is the seat of the phenomena of nutrition, absorption and secretion, and it is to this system we must look for an explanation of the manner in which dropsy of the peritoneum takes place. If in a healthy animal we ligature the principal vein of a limb it does not follow that by thus interfering with the return of blood we shall produce oedema of this extremity. When, however, we cut the vaso-motor nerves the interstitial meshes of the area so disturbed are forthwith more or less markedly infiltrated by a serous exudation. In this case we destroy that tone of the vessels which is so essential for the maintenance of those physico-vital processes which are for ever going on, and by so doing we favour not only the transudation of serum, but interfere with the rate of absorption. Dropsy of the peritoneum very frequently depends upon inflammatory disease of the kidneys or upon organic disease of the lungs or heart. In this group of cases it is but a portion of a general dropsy, as the universal areolar tissue is similarly infiltrated. It is not my intention to deal at present with this form of ascites, but with that which, generally speaking, is not attended with anasarca elsewhere. The following are a few cases selected from a considerable number belonging to this category which have come under my own observation.

**CASE 1.**—*Free fluid in the abdominal cavity in association with fibroid induration of the stomach and general fibroid thickening of the peritoneum.*—A. L—, aged thirty-five and married twelve years, had one child ten years ago. Menstruation, established at the age of twelve, has usually lasted five days. She was last unwell fourteen days before coming under my care on Oct. 20th, 1888. Since Oct. 1887—i.e., for twelve months—the patient has complained more or less constantly of a “grumbling pain” in the abdomen. This pain has never been severe. During this same period she has also complained of sickness. At first she vomited only occasionally, but latterly she has been sick at least once every day. Sometimes she has experienced severe stabbing pain in the region of the stomach, especially after the ingestion of food. About July, 1888, she remarked that her abdomen was increasing in size, and since then it has gradually become more and more prominent. There is nothing to note about the bladder except that the patient states she has always had to micturate frequently. During the last three weeks the bowels have been opened two or three times a day. Throughout this illness the menstrual discharge has recurred regularly every four weeks, and there has been no variation as to amount. The patient thinks she has gradually been losing flesh during the last two years.

**Physical signs.**—The abdomen is prominent, but not tense; it is tender all over to the touch, and dull to percussion to midway between the pubes and umbilicus; this dullness extends into the right flank, whilst the left is resonant; the dullness on the right side is not affected by altering the position of the patient; fluctuation is readily elicited. The vaginal examination revealed nothing of note in the pelvis.

From the date on which this patient came under my observation—viz., Oct. 20th, 1888—until April 3rd, 1889, when she died, the stomach emptied itself of its contents once or oftener every day. During this period she was tapped twice. The first tapping was performed on Dec. 28th, when a gallon and a half of straw-coloured serum was drawn off; at the second tapping, on Jan. 5th, one gallon only was removed. The temperature throughout was practically normal.

*Necropsy.*—On opening the abdomen a large amount of straw-coloured serum escaped, and with it flakes of lymph. The large bowel in its whole extent was enormously distended, whilst the small intestines were firmly matted together. The omentum, which was spread out like an apron, was firmly adherent to the pubes. The serous covering of the liver was much thickened. The stomach was so contracted that its capacity was only equal to about three fluid ounces. Its wall, which was uniformly thickened, measured five-eighths of an inch in thickness. The pyloric orifice was so constricted that it must have been difficult for even fluid to pass through it. The pelvic peritoneum was so much thickened that it was impossible to recognise the ovaries as such. In both chests the parietal and visceral pleuræ were firmly and universally adherent. The microscopic examination of sections of the stomach revealed only a very great excess of fibrous tissue.

This case is one of very great interest. The serous membrane of the chest as well as of the abdomen was so universally the seat of change, and the stomach itself was likewise so extensively invaded by fibrous tissue, that I am inclined to attribute these changes to some disturbance of the sympathetic nerve, and this disturbance was most probably of the nature of sclerosis. If in an animal we cut out certain ganglia of the sympathetic violent inflammation of the peritoneum and pleura is exceedingly apt to follow. Unfortunately the sympathetic was not examined in the above case, as the idea that the whole train of events might probably have been due to change in this system did not suggest itself to me until some days after the necropsy. On studying carefully the results obtained by experimenting upon the sympathetic I am firmly of opinion that had it been examined some very decided structural change would have been detected. This hypothesis is sustained, too, by the clinical facts. For twelve months prior to coming under my care she had complained more or less constantly of a "grumbling pain" in the abdomen, and occasionally of severe stabbing pain referred to the epigastric region. About the same time she noted a proneness to sickness. For three months she had observed that the stomach had been gradually increasing in size. To what, then, I ask, may the dropsy of the peritoneum be attributed? In consequence of the change in the stomach the patient was gradually being starved, and yet a fair quantity of serous fluid was passing out of the vessels into the abdominal cavity. When the peritoneum is opened in the case of animals which have been starved very little fluid is found in this sac; it is, in fact, dry. The change in the texture of the peritoneum would undoubtedly interfere with the process of absorption, for the lymphatic orifices and channels would be more or less completely closed and obliterated, and direct absorption would also be interfered with, for in order that this may proceed the fluid should be in as immediate contact with the capillary vessels as possible. The structural change in the peritoneum did not, however, interrupt the transudation of serum—in fact, the fluid passed out more abundantly than it ought to have done. Now, it is hardly likely that the increased exudation was due solely to the structural state of the peritoneum, although it may have been aided by the change, whereas it probably was due to some disturbance of the vaso-motor nerves.

*CASE 2. Dropsy of the peritoneum in association with malignant disease of the omentum.*—E. N—, aged fifty-three, a widow, had one child twenty-eight years ago. She has never had any miscarriages, and she ceased menstruating seven years since. During the last twelve months the patient has remarked that her abdomen has been gradually increasing in size, and for four months she has complained more or less of pain all over the abdomen. There is no bladder or rectal trouble, neither has there been any swelling of the feet or legs.

*Physical signs.*—The abdomen is prominent but not tense. It is dull to percussion everywhere except in the epigastric area. The dullness in the left flank is not affected by the position of the patient, whereas the right flank becomes resonant as she lies on her left side. Fluctuation is readily elicited. On palpation there is no evidence of the existence of a new growth in the abdomen. The vaginal examination reveals nothing of note. An exploratory incision was advised and made. On opening the abdominal cavity a large quantity of deep amber-coloured fluid escaped. There were no flakes of lymph. The omentum was converted into a nodulated malignant mass and here and there secondary nodules were observed in the peritoneum.

What is the cause of ascites in cases of this description?

Extensive degeneration of the peritoneum is said to be a cause of dropsy of the abdominal cavity. In the case which I have just recorded and in the majority of cases of malignant disease of the omentum effusion of serum takes place usually at a very early stage, and before the peritoneum has become extensively diseased. In the late stage, when the serous membrane is studded with malignant growth, œdema of the lower extremities is almost invariably noted. This anasarca of the limbs, it would appear, is to some extent the result of pressure, since one leg is usually markedly œdematous before the other. It is probably also determined by the general constitutional enfeeblement of the patient. In those cases in which the growth is malignant the serous exudation goes on steadily increasing and accumulating, whereas when the growth is of a benign character there is sometimes a lull; and patients often tell us that on one or two occasions the abdomen has diminished in size and has even, in fact, returned to its natural size. These diminutions are due to an actual decrease in the amount of the fluid and are not to be considered as resulting simply from an alteration in the state of the intestines. There is in reality a lessened transudation and an increased absorption of liquid. Transudation of serum takes place more profusely from the peritoneum covering a malignant than a simple growth, and the blood state induced by the presence of a malignant growth favours not only the exudation of serum, but hinders endosmosis.

*CASE 3. Fluid in the peritoneum in association with a deposition of tubercle in this membrane; recovery under treatment.*—On May 20th, 1891, Mr. Harley of Rainham, Essex, consulted me regarding E. L—, aged eighteen, a single woman. The patient began menstruating at the age of thirteen, and the discharge had usually lasted three days. For five months prior to coming under my observation there had been a total suppression of the catamenial discharge. About the same time—i.e., five months ago—the patient remarked that the abdomen was large, and it has gradually become more and more prominent. During this same period she has occasionally complained of pain in the abdomen and back. Three months since there was œdema of the left foot and leg, but this passed away in a couple of weeks. She has not lost flesh, neither has she complained of bladder nor rectal trouble.

*Physical signs.*—The abdomen is prominent and tense. The percussion note is dull from the pubes to two inches above the umbilicus, and the area of dullness extends laterally on each side to a line drawn vertically from the anterior superior spine of the ilium. Both flanks are resonant. Fluctuation is readily elicited. On palpation a small nodule is detected on the left side, a little above the anterior superior spine of the ilium and midway between it and the linea alba. At the upper limit of dullness and on the left side is felt a more solid body, which appears to be intestines matted together. Vaginal examination: The uterus is low in the pelvis. The os looks downwards, and the body is felt anteriorly and on the right side, lying on the pelvic floor. Fluctuation is conveyed from the abdomen to Douglas's pouch. The bladder was emptied by the catheter, one ounce of urine being drawn off. The temperature was 100.6° F. Under treatment the abdominal swelling gradually disappeared, and on March 6th, 1892, Mr. Harley informed me that this patient was practically well. Since August she had menstruated regularly every month and lost as usual. "But," he added, "for three weeks now there has been a small amount of bloody discharge every day." I have seen cases similar in many respects to this one recover not only under general treatment, but also after the removal of the ascitic fluid by abdominal section. Sometimes the peritoneum has even been studded with what appeared to be miliary tubercle, and yet the fluid did not reaccumulate. A few of the cases, in fact, appeared to be perfectly well when seen twelve and eighteen months after the abdominal exploration.

What is the cause of the dropsy of the peritoneum in cases of this class? If the change in the serous membrane is the cause of the excessive transudation of fluid in these cases, and the deposition of tubercle in the lymphatics the probable cause of the interference with absorption, it is difficult to understand how the fluid disappears in some cases under treatment and does not reaccumulate in others after abdominal section. Under the latter circumstance it is not even necessary to drain the abdominal cavity after the completion of the operation. In some cases of tubercular peritonitis there is œdema of both lower extremities as well as dropsy of the abdominal cavity, and the amount of effusion is ap-

parently regulated by the general condition of the patient. I am therefore of opinion that the transudation in cases of this group is due to an alteration in the composition of the blood, and that the effusion takes place first and most markedly into the meshes of that tissue which is the seat of irritation. To some extent it is determined and regulated by a disturbance in the relationship of the arterial and venous pressures. In many cases of tubercle improvement in the state of the constitution does take place, and this may account for the disappearance occasionally of the fluid from the abdominal cavity under general treatment and for the non-accumulation after evacuation by abdominal section. In cases of malignant disease of the peritoneum we cannot hope for absorption or arrest of secretion, for the blood dyscrasia steadily progresses and the constitution of the patient is gradually undermined.

**CASE 4.** *Fluid in the peritoneum in association with papilloma of the ovaries, tubes and pelvic peritoneum generally; no evidence of cystic change; papilloma rather adenomatous than malignant in character.*—H.—, aged thirty and married eleven years, has had two children, but no miscarriages. The last child was born nine years ago. Menstruation established at the age of fourteen; has usually lasted five days. The discharge recurs regularly every month, and is neither altered in amount nor character. She was last unwell fourteen days ago (Aug. 23rd, 1891). For three months the patient has remarked that the abdomen has gradually increased in size. At no time has she complained of pain.

**Physical signs.**—The abdomen is prominent but flaccid. The percussion note over the greater part of the anterior surface of the abdomen is resonant. Both flanks are dull. The right flank becomes resonant when patient turns on to her left side, whilst the note in the left flank is not altered by position. Vaginal examination: The uterus, which is fairly central (mesially) is pushed rather towards the pubes. It is surrounded by free fluid. On the right side is felt a small tender swelling, probably the ovary. On the left side is felt only some ill-defined thickening. For five months I kept this patient under observation, and during this time I failed to detect any evidence of material change in the abdominal state. Important changes, however, were noted in the pelvis; the small swelling which I had at first noted to the right of the uterus had gradually increased in size and become more irregular, and other nodules of varying size were also detected in the neighbourhood of this the first swelling. The thickening noted to the left of the uterus had not apparently altered. Abdominal exploration was now advised and was performed. On opening the abdomen a large quantity of deep-amber-coloured serum escaped. The omentum was occupied by what at first sight appeared to be a few flaccid cysts; on closer inspection, however, these swellings proved to be simply localised exudations of serum between the folds of the omentum. In the pelvis, and apparently springing from the right ovary, was found a papillomatous mass about the size of a turkey's egg. This mass, which was extremely friable and very vascular, was removed. On the left side a similar but more sessile mass was also found, but this could not be removed. The pelvic peritoneum was studded with small nodules of a similar character. The ovaries and tubes, as such, were not detected. The abdominal peritoneum was apparently unaffected.

In this case the disease was confined to the pelvic peritoneum; and I am of opinion that an increased transudation of serum took place from these highly vascular papillomatous growths, and that there being no compensatory increase in absorption, but possibly rather an interference with this process in consequence of the condition of the patient, the liquid accumulated and produced dropsy of the peritoneum.

**CASE 5.** *Fluid in the peritoneum in association with cystic and malignant disease of both ovaries and malignant disease of the omentum; necropsy.*—H. H.—, aged forty-eight, a single woman, ceased menstruating twelve months ago. Four months ago—in July, 1891—the patient began to complain of general soreness in the abdomen and, at the same time, accidentally she detected a small lump in the lower abdomen on the right side. The abdominal discomfort was aggravated by any exertion. Since July the abdomen has gradually become more and more prominent, and she has lost flesh. Seven years ago the patient says she had an illness similar to the present one and that she then as now complained of soreness in the abdomen and also detected a swelling on the right side. The swelling, however, she alleges, disappeared after three or four months'

time, and she considered herself well till the occurrence of the present illness.

**Physical signs.**—The abdomen is so greatly distended that the skin is tense and glossy. The percussion note over the lower part of the abdomen from the pubes to the umbilicus is absolutely dull and this dullness extends towards both flanks. The left flank is dull whilst the extreme right is resonant. The upper limit of the dullness is somewhat concave in outline. Obscure fluctuation is detected over the area of dullness. Chest: Both chests below the level of the scapula are dull to percussion, and clear serum was drawn off from the right by an exploring syringe. Vagina: The vaginal roof is occupied by a hard swelling, which projects somewhat posteriorly. The cervix is pushed forwards and to the right. The body of the uterus appears to be embedded in a pelvic mass. On passing the catheter it strikes against a hard body.

There was no oedema of the legs until the patient had been under observation seven days. On Nov. 3rd, 1891 (about a month after the patient had been in hospital), I inserted a small trocar at a spot midway between the pubes and umbilicus, but I only drew off fifty-two ounces of a dark greenish fluid. The specific gravity of this fluid was 1020, it contained peptone and became solid on boiling, its reaction was alkaline. The withdrawal of this fluid afforded no relief, and the abdominal tension was unaltered by the tapping. On Nov. 27th she died.

**Necropsy.**—The pericardium and heart were normal. Both pleural cavities contained a quantity of fluid, that in the right was clear whilst that in the left was deeply blood stained. A few small white nodules of growth were observed in the lungs. These were situated immediately under the pleura and were flattened. A large quantity of ordinary ascitic fluid escaped on opening the abdominal cavity. The peritoneum, which was much thickened, was studded with malignant nodules of small size. The omentum was a malignant mass. The liver, spleen and kidneys were normal. The uterus contained several fibroid growths, two of which were calcareous. It was adherent to the bladder and to two large cysts. One cyst arose from the right horn of the uterus and reached the umbilical level. It passed in front of the uterus somewhat and occupied a central position. It did not invade the pelvis. It contained a greenish fluid, and it was evident that this was the cyst which I had tapped during life. It was unilocular, and at its base were found cancerous-looking nodules. Passing from the left side behind the uterus and filling the whole pelvis was another cyst, smaller, but also unilocular and exhibiting cancerous nodules at its base. This cyst had pushed the uterus towards the right wall of the pelvis.

The diagnosis in this case was extremely difficult, although the physical signs indicated the existence of some malignant change. The history tended to mislead. The patient affirmed that seven years previously she had suffered in a very similar manner, and that then a tumour was detected on the right side, but which soon afterwards disappeared. It is impossible to say what may have been the nature of this swelling, although it is more than probable that it was not an ovarian cyst. The fluid drawn from the right pleural cavity being ordinary serum did not help us in deciding the cause, whereas if the left chest had been explored and hæmorrhagic fluid had been drawn off, the presumption would have been strongly in favour of malignant changes. The fluid drawn from the abdominal cavity did not even allow of a more complete examination, but merely informed us that we had tapped a cystic accumulation. It was impossible to draw off the ascitic fluid, as the area of dullness was so limited and the distension of the abdomen so great.

**CASE 6.** *Fluid in the peritoneum in association with a multilocular ovarian cyst with no adhesions, but with evidence here and there of degenerate change in the cyst wall in consequence of a partial twist of the pedicle.*—M. M.—, aged fifty-seven and married thirty-five years, has had nine children. The last child was born sixteen years ago. The catamenia ceased at the age of forty-nine. Eight months ago—about March, 1891—the patient noticed that on walking the womb dropped and that sometimes it even came outside altogether. About the same time she remarked that the abdomen was increasing in size and it has gradually become more and more prominent. There is no swelling of the legs.

**Physical signs.**—The abdomen is distended, but not tense. It appears to be more prominent a little to the left of the umbilicus. Over the front of the abdomen is an area of dullness, extending from the pubes to two inches and a half above the umbilicus and transversely from the left anterior

superior spine of the ilium to a line rising vertically from a spot a little external to the middle of the right Poupart ligament. The limit of dulness is not, however, sharply defined. Both flanks are resonant. Midway between the umbilicus and the ensiform cartilage is felt an irregular mass, some of the nodules of which, especially on the right side, appear to be cystic. Below the umbilicus, and more especially to the left of the middle line, the fingers on dipping sharply displace free fluid, and come upon a hard mass which appears to be continuous with the irregular mass already noted. The vaginal walls are very flaccid. The cervix uteri is located rather towards the right wall of the pelvis.

Having seen several cases very similar, I expressed the opinion that we had to deal with a multilocular ovarian cyst and free fluid in the peritoneum, and advised operation. The abdomen contained a large quantity of ascitic fluid. The tumour which was removed was a multilocular ovarian cyst of the right side. There were no adhesions. The pedicle was twisted, but not sufficiently to produce strangulation. Here and there the cyst wall presented patches in a state of fatty degeneration. The cyst contained no papillomatous or malignant growth. Since the operation in October there has been no evidence of reaccumulation of fluid in the peritoneum. It seldom happens that a large quantity of ascitic fluid is noted in association with a simple multilocular ovarian cyst with no adhesions. It is fairly frequently observed when papillomatous growths are detected in the interior of the cyst, and which have extended more or less completely through the entire thickness of the cyst wall. In cases of this latter description rupture of the cyst often takes place. When the papilloma reaches the peritoneal covering of the cyst the general peritoneum is exceedingly liable to become similarly affected; and in many cases of this character, after the successful removal of the tumour, the patient dies eventually with malignant disease of the peritoneum. I am unable to give a feasible explanation of the manner in which dropsy of the abdominal cavity takes place in association with fatty degeneration in the wall of an ovarian cyst; suffice it to say that they are correlated. I have also seen dropsy of the peritoneum in association with fibroid of the uterus, whose structure had undergone degenerative change at spots.

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## FRACTURE OF BASE OF THE SKULL WITHOUT INJURY TO THE BRAIN.

By R. D. MOTHERSOLE, M.S., M.D. LOND., F.R.C.S. ENG.

IN his instructive and interesting lecture recorded in THE LANCET of Aug. 20th Mr. Page remarks: "A fracture of the base is not in itself of much moment; its only importance lies in the fact that a basal fracture cannot well occur without grave concomitant injury to the brain." The comparative rarity with which this fracture occurs, apart from cerebral injury, leads me to think that a short account of two such cases may be of some interest. They came under my notice as senior house-surgeon to the Liverpool Northern Hospital in 1890.

The first case was reported by me in the *Guy's Hospital Gazette* for 1890, in order to emphasise the distinction between fractured base with and without brain injury. A robust man of about forty had a heavy cask roll on to his head as he lay on the ground. If he lost consciousness at all it was only for a few seconds. On admission to the hospital there was bleeding from both ears; that from the left soon ceased, but the right continued to bleed for twenty-four hours. From the position of cuts and bruising on the sides of his head it appeared to have been "nipped" in the bi-temporal diameter. In three days' time facial paralysis appeared on the left side. He declared all along that there was nothing much the matter with him, and was with difficulty persuaded to remain in hospital even for a week. In this case there seems certainly to have been a fracture through the left petrous portion, and the copious hæmorrhage from the right ear makes it probable that a transverse fissure extended right across the base of the skull.

The second case occurred a few weeks later. R. B—, a man of forty-seven, was admitted on Sept. 8th, 1890. While taking a barrel of whisky down a flight of steps, descending backwards and steadying the barrel with his knees, he slipped and fell forwards against the steps, the barrel rolling over his

head. He did not lose consciousness. On admission into the hospital he had some cuts on his nose and forehead, with fracture of the nasal bones; there was no hæmorrhage from either ear. Next day a copious discharge of clear, serous fluid came on from the left ear, containing a small proportion of albumen. On the 10th a considerable quantity of clear, colourless fluid continued to drain away. On the 12th his temperature, which had been 100° the previous night, rose to 101.6°, and he had an attack of vomiting at 10 A.M. Towards noon he was alternately drowsy and restless, and his speech was somewhat incoherent; the discharge from the ear had almost ceased. He was placed in a dark, quiet room, and his diet reduced from two pints to half a pint of milk per diem. At 1 P.M. twitching of the left leg and right arm was noticed, but in the evening his temperature fell to 101° and he became quite sensible. For two or three days he complained of pain in the head, and on Sept. 15th paresis of the left facial muscles was observed. From that time he improved steadily, and left the hospital on Oct. 11th apparently quite well except for slight weakness of the muscles on the left side of his face.

Although these two cases may be considered rather trivial to be reported, they illustrate very well how the base of the skull may be cracked without injury to its contents. The second patient would appear to have had a slight attack of simple aseptic meningitis. I may be pardoned for differing from Mr. Page, where he says that a fractured base without brain injury "need not cause you more concern than a fracture of the tibia or fibula." The course of the above cases will justify me in this slight criticism of his valuable lecture. I am indebted to Messrs. Puzey and Hamilton for permission to publish the cases, which were admitted under their care.

Bolton.

## FOUR HUNDRED CASES OF PHTHISIS.<sup>1</sup>

By F. M. SANDWITH, M.D.,

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DURING the past seven winters 104 phthysical visitors have been treated by me in Egypt, and during the last two years I have had under my care some 298 hospital in-patients. The visitors have all been from England, with the exception of six from France, Australia and the United States.

### ENGLISH PATIENTS.

It is not intended in any way to make a comparison between the English and the Oriental cases, because all the former, travelling for their health, were well provided with money and friends to help them to take care of themselves. Moreover, the bulk of them were chronic cases, not suffering from fever and not in the last stage of the disease. Hence the extraordinary difference in mortality. I have taken pains to eliminate all cases of "threatened phthisis" and of doubtful delicacy after pneumonia or other diseases, because these are the cases that are obviously the best to send abroad for one winter. I have also taken some pains to inform myself as to the after-condition of patients who improved during their stay in Egypt. The 104 cases may be classed as follows: 72 improved, 18 stationary, 7 worse, 7 deaths. The seven deaths in Egypt consisted of six men—all of whom were obviously doomed before their arrival, and some of whom were only permitted to travel to Egypt under the personal escort of doctors and nurses—and an old case of fibroid phthisis, complicated by progressive muscular atrophy, who died of acute pneumonia in the less diseased of his two lungs. The number of improvements is very encouraging to those who send patients to Egypt and will compare favourably with those of other winter resorts. The majority of the patients have reached Cairo in November, have spent two or more months, from the middle of December, at Luxor in Upper Egypt, and have then spent their time till the middle of April in Cairo itself, at Helouan or at the Pyramids. In April patients go to Ramleh, near Alexandria, or more often to the Riviera, not reaching England till the very end of May. As people in England still have a very exaggerated idea about the heat of Cairo, I should like to take this opportunity of

<sup>1</sup> A paper read before the Section of Medicine at the Nottingham meeting of the British Medical Association in July, 1892.