effect becomes visible. In the second course, the dose is increased ; in the third, inunction is preferred ; in the fourth, inunction, together with frequent doses of calomel, with or without opium. In strumous cases, the bichloride, combined with the compound tincture of cinchona for adults, and the grey powder for children, with some preparation of iron, have been found most useful.

In all cases, regard must be had, not only to the original constitution of the patient, but to his present condition. Both plethora and anæmia are conditions highly unfavourable to the advantageous exhibition of mercury. In the former case, depletion must precede the mercurial course : in the latter, the preparations of iron may be combined with mercury, or otherwise administered.

26, Bedford Square, January 1851.

ON INTERNAL STRANGULATION OF THE INTESTINES.

By HENRY HANCOCK, Esq., Fellow of the Royal College of Surgeons of England : Surgeon to Charing Cross Hospital.

(Read before the Medical Society of London, January 4, 1851.)

CASES of Internal Strangulation of the Intestines are so obscure, so difficult of diagnosis, and so fatal ; their *post-mortem* examination so frequently develops the probability of relief from early operation, whilst our knowledge upon the subject is so very defective, that great benefit would ensue if all cases occurring in the practice of individuals were recorded, and therefore I am induced to submit the following cases to the attention of the Society ; for although they terminated fatally, they may, as collateral evidence, strengthen the hands of the surgeon, and justify him in proceeding to operation earlier than has hitherto obtained.

CASE I. I was, on Sunday the 3rd of November last, requested by my friends, Messrs. Brown of Lewisham, to see the gardener of a gentleman residing at that place. I am indebted to them for the following particulars.

E. P., married, æt. 51, an under-gardener, who had resided in his situation for twenty-three years, about five feet six inches in height, of stout proportions, of active and temperate habits and healthy, except having had inguinal hernia on the right side, for which he had constantly worn a truss for ten years ; was on the 17th October, 1850, assisting in raising a tree which had been blown down, and using great exertion, suddenly felt a sharp pain across his abdomen, which almost caused him to faint. He went home, and took some hot brandy and water ; the pain subsided in about two hours, and he resumed his usual employment, and thought nothing more of the pain or the circumstance of straining himself. On Wednesday, October 30, thirteen days after the strain, he complained of a slight pain in the stomach, which he attributed to his bowels not having been sufficiently opened for two days, for although on the day previously he had had several evacuations after taking some pills, he felt unrelieved, and complained of pain across the umbilicus. He was ordered eight grains of Dover's powder, with three

grains of calomel, and a strong purgative mixture. On the 31st, the pain in his abdomen was gone, but his bowels had not been acted upon. Calomel grs. iij, scammon. gr. x; to continue the purgative mixture.

Nov. 1. Being considered better, was not seen, but at night sent for more medicine, as his bowels had not been opened. Cal. gr. v, scammon. gr. x, in castor oil, mist. sennæ c. ʒij, 4tis hor.

Nov. 2. Has passed a very bad night and vomited many times. He for the first time mentioned the pain he suffered when replacing the tree, but thought that had nothing to do with his present illness. His abdomen distended, and in great general pain. No tenderness or increase of pain on pressure; no hernia on the right or left side to be seen, felt, or detected; distressing pain about the umbilicus; vomiting almost constant, apparently pure bile; countenance dejected; skin yellow; pulse 126; tongue clean and red; in a profuse perspiration; respiration 21. Introduced a long tube into the rectum and injected about a pint and a half of gruel, with castor oil and salt; it came away immediately with considerable force, and accompanied with a few bits of hardened fæces; two more injections were given at intervals with the same results; to take cal. gr. v, pulv. opii gr. ʒ, every two hours, castor oil, with two drops of croton oil, and the compound senna mixture; the bowels to be kept constantly fomented with the poppy fomentation and flannel, and the abdomen to be carefully rubbed. 1 P.M. Remedies continued; vomiting urgent; countenance very distressed; eye sunken; complains of great pain all over the abdomen, but could not make him point out any particular spot; sickness very distressing; skin jaundiced; pulse 130; tongue clean; urine of good colour, passes freely. 5 P.M. Symptoms aggravated; tongue dry; administered another enema, with the same result; ordered brandy and soda-water. 10 P.M. Continues in the same fearful state; has passed a few pieces of hardened fæces, but no wind; the distension of the abdomen has increased, but not the pain.

Nov. 3, 9 A.M. Has passed a most wretched night, until early this morning, when the vomiting ceased for six hours, during which interval he had some sleep; the vomiting, however, returned occasionally. His abdomen much distended, but not in pain; countenance collapsed; thirst great; pulse 136; very feeble; tongue clean; extremities cold; appears sinking fast. 1½ P.M. Continues to get worse. He was seen and examined by Mr. Hancock.

I found the patient in the condition which has been so ably described by Mr. Brown, and after a careful examination could not detect any signs of hernia, either on the right or left side. The patient told me he had worn a truss on the right side for the last ten or fifteen years; but said he was sure the hernia had nothing to do with his present sufferings, as it had not been down, and he experienced no pain in that situation, either during my examination or at other times, whilst he complained greatly of the pain above the umbilicus; indeed he appears to have suffered so little inconvenience from the rupture, that his wife, to whom he had been married twelve months, was not aware of its existence, as she told me that, although she saw the truss, she did not know why he wore it, and that he never complained of anything being the matter with him.

It was evident that the poor fellow was dying, whilst the symptoms and previous history led us to the conclusion that an internal strangulation existed, of some kind or other; but what its precise nature was, whether intussusception, band, or otherwise, or its exact situation, we could not decide with any degree of certainty. However, it was agreed, as presenting the only chance of saving him, that an exploring operation should be performed, and his consent having been freely given, it was proceeded with, with as little delay as possible; but before selecting the spot for operation, a very careful examination of the whole abdomen was made. Not the least external appearance of hernia was to be discovered; the whole abdomen was distended, but not very painful to the touch in any part; but about three inches above Poupart's ligament, on the right side, Mr. Brown directed my attention to a spot at which an elastic and firm feeling was communicated to the finger, and on consultation it was decided to operate at that point. I therefore carried an incision, beginning rather more than an inch above the anterior superior spinous process of the ilium, continuing it towards the linea alba. The abdominal layers were carefully divided in the same direction; and upon coming down to the fascia transversalis, it appeared to bulge at the spot mentioned, and when this was divided, a bulging of the peritoneum the size of a walnut was discovered; this was laid open, and a knuckle of congested intestine disclosed. I sought the seat of stricture, but it was so high up I could not reach it until I drew the intestine gently down for about two inches, when Mr. Brown detained it in that situation, and I was enabled to divide the stricture, which was so firm that we could all distinctly hear its division by the knife. The wound was then brought together, and same brandy and water and opium given to the patient, who, however, died very shortly after the operation.

I was not present at the post-mortem examination, which took place twenty-four hours after death; but I am indebted to Mr. Brown for the following particulars. The intestines contained a considerable quantity of fluid, and were so distended that it was thought necessary to puncture them, and more than three quarts of fluid poured out. The intestines were neither inflamed nor congested, excepting for about four inches, which had been constricted, and which was congested. The constricting band had been completely divided, and no other adhesion or band could be discovered in the course of the intestines, which were perfectly free.

CASE II. The next case was that of a gardener to a gentleman residing at Hampstead, to whom I was called by Mr. Willin. He had been wheeling some heavy barrows of turf, and whilst warm drank a pint of ale rather quickly, immediately upon which he was seized with severe cramping pains in the abdomen. He subsequently presented the same symptoms as in the last case. Obstinate constipation, continued vomiting, swelling of the abdomen, and pain referred principally to the umbilicus. The abdomen, though swollen, was not very hard, neither was the pain much increased upon pressure, excepting in one spot over the right iliac fossa. When I saw him, the symptoms were for the time alleviated by calomel and opium; his pulse were better; abdomen softer, and free from pain; countenance

less anxious; and the patient expressed his opinion that he would get well: it was agreed, therefore, to continue the same treatment, unless he became worse, when an operation was to be proposed to him. In accordance with this, on the following day, his symptoms being much aggravated, Mr. Willing suggested an operation, and sent for me to see the patient again; but, in the meantime, he found that the man resolutely refused to submit, whilst the friends locked the garden-gate, and declared they would not admit either of his doctors within the premises. Under these circumstances, nothing could be done; the man lived three days, and then died exhausted. We obtained permission to examine the body, and found the cause of mischief to exist in the right iliac fossa. The appendix vermiformis was turned up, and through the ring thus formed a portion of the ilium had protruded; and I was enabled to withdraw it without the slightest difficulty, as, although the constriction had been sufficient to prevent the passage of the contents of the intestine, it had not been sufficient to produce strangulation, or even inflammation, of which there was no trace.

The anxiety connected with cases of this description is greatly enhanced by the uncertainty attending the exact seat of obstruction, from whatever cause it may ensue; the symptoms are frequently so deceitful, the history so meagre, and unsatisfactory, that we have but little to guide us in the selection of locality. It has been stated that a pretty correct opinion may be formed as to the point of mischief, by the constant pain referred to that spot; but this theory is opposed by the first case related, as here the pain was confined to the umbilicus and pit of the stomach, whilst the patient denied its existence over or near to the actual seat of constriction, over which he could bear considerable pressure without suffering; and, indeed, it was only the particular feeling referred to the touch, upon pretty full pressure, that led us to perform the operation where we did. It might fairly be asked, did not the previous existence of hernia give you some clue to the nature of the mischief, and would not that serve as a guide? It might in some instances; but attention was paid particularly to this point. Not the slightest external swelling or projection at the rings could be detected; whilst the man denied that it had been down, and actually scouted the idea of his sufferings being in any way connected with it: and what still more strongly marks the slight dependence to be placed upon the pre-existence of hernia as a guide is, that I was once present at an operation for the relief of internal strangulation; the patient, a woman, had suffered from femoral rupture of the right side for some years, and it was thought that the then existing symptoms might in some measure be connected with it. However, the evidence was so unsatisfactory, that the surgeon determined upon opening the abdomen at the linea alba; it was then discovered that the hernia had nothing at all to do with the matter, but that the obstruction existed on the other side of the abdomen.

Again, the symptoms are so undecided as often to mislead, or, at all events, to increase doubts as to the nature of the mischief. It is an interesting and important fact, that in these cases the constriction shall be sufficient so to interfere with the functions of the part, as sooner or later to destroy life, without at the same time producing any appreciable degree of inflammation; this was the case in both the

examples here related, and this accounts for the fact that, although in both instances the abdomen was distended, it was not hard; it could bear pressure; and in both the patients could lie with their legs straight down in bed. Again, the first case proves that we have not always the entire and complete arrest of the passage of the fæces to guide us in our diagnosis, as we find the bowels acted more or less for thirteen days from the occurrence of the strain; and I may here observe, that the passage of fæces must not always be looked upon as an unerring sign of complete freedom from constriction, even in strangulated hernia. A woman was brought into Charing Cross Hospital, having had strangulated femoral hernia of the right side, which had been returned after long-continued pressure by a very intelligent practitioner in the neighbourhood; the constitutional symptoms, however, were unrelieved. I saw her the next morning, and determined that should she not be better in the evening, I would perform an exploring operation, as, upon careful examination, the hernia appeared to have been completely returned; upon visiting her at eight o'clock in the evening, for that purpose, I found her improved, and was told that her bowels had been twice moved, and therefore I concluded all would go on satisfactorily; her bowels were again slightly moved on the following day, but, as she complained of some little uneasiness, a dose of castor oil was ordered. She became rapidly worse, and died from general symptoms of peritonitis in the course of a few hours. The post mortem shewed that the hernia, which was very small, had been returned "en masse", but that the sac did not contain the whole calibre of the intestine, but only a portion of its side.

REMARKS. Notwithstanding the fatal termination of these cases, I have ventured to bring them before the notice of the Society, in the hope that they may be of service in directing attention to the propriety of interfering surgically at a more early period than what usually obtains, and of abstaining from the indiscriminate employment of purgative medicines, which had better be discontinued when sickness sets in, as they materially increase the patient's sufferings, diminish his strength, and lessen the probability of the operation proving successful. And I would again venture to advert to the fact, that patients in these internal constrictions are frequently destroyed by irritation and impeded function, and not by inflammation; that consequently the symptoms are more negative than positive: positive, for the most part, as regards sickness, constipation, and prostration; but negative as regards the swelling, and character of swelling, of the abdomen; the pain; and condition of the pulse, until at an advanced period. And, indeed, from the various cases which I have seen, but which the limits of this paper will not permit me to enter fully upon, I am inclined to believe that, in cases of constriction within the abdomen, the symptoms are seldom so acute and decided as either in strangulated hernia, enteritis peritonitis, or tumphlo-enteritis.

In conclusion, I would remark that I have here merely intended to submit the account of two cases, with a few remarks; but that I by no means offer this paper to the Society as an essay upon the subject of Internal Strangulation.

59, Harley-street, 31st Jan. 1851.