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CASES OF SUCCESSFUL OPERATION FOR STRANGULATED HERNIA IN OLD PEOPLE; WITH REMARKS.

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CASE I. STRANGULATED SCROTAL HERNIA—DIVISION OF THE STRICTURE EXTERNAL TO THE SAC—RECOVERY. Abraham Joshua, aged 81, a stout man, of the Jewish persuasion, who had always enjoyed good health, was admitted into the London Hospital on the 9th of February, 1849, at 8 A.M., on account of an irreducible Oblique Inguinal Hernia. He had been subject to rupture for some years; and, until lately, had worn a truss. The swelling had appeared a few hours previously, but he had been unable to reduce it as usual. His bowels had been relieved the day before. There was a large tumour occupying the left side of the scrotum; it was tense, and received no impulse on coughing. The taxis was applied by the dresser whilst the patient was in bed, and afterwards in a warm bath, without effect. A dose of castor oil was given at noon; and subsequently a bladder of ice was applied to the tumour. In the evening, the old man became sick, and complained of pain in the tumour; and about 9 P.M., in consequence of the increasing urgency of the symptoms, I was sent for. Having failed in my attempts to reduce the Hernia, I determined to operate without further delay. An oblique incision, about three inches in length, commencing an inch and a half above the external abdominal ring, was carried downwards over the neck of the sac. The tense margin of the outer ring, girding the neck of the sac, was divided; and, as this gave but partial and insufficient relief, some bands of fascia were cut through, and the protruded parts were then readily returned, without the hernial sac having been opened. The operation was borne extremely well; and the patient felt so comfortable after removal to a warm bed, that no medicine of any kind was given him. The bowels acted next morning. He was then ordered to take a draught of camphor mixture, with m. xx of aromatic spirits of ammonia, three times a day. He was put upon a nutritious diet, and allowed eight ounces of wine. On the second day after the

operation, the patient being restless in bed, the rupture returned. It was reduced without difficulty by Mr. Holman, the House-Surgeon. This accident did not interfere with the healing of the wound, which united partly by the first intention, and soon entirely closed. A truss was ordered; and he was discharged on the 24th February, the fifteenth day after the operation.

CASE II. STRANGULATED LARGE UMBILICAL HERNIA—OPERATION—SLOUGHING OF THE HERNIAL SAC AND INTEGUMENTS—RECOVERY. Ann Hanson, a large fat woman, æt. 79, married, was admitted on the evening of Sunday, February 18th, 1849. She had been subject to a Rupture at the Umbilicus for thirty-four years, but had worn a truss for it only during the last four. The tumour, however, had been but partly reducible. She had lived very temperately, had enjoyed excellent health, and through a long life had never been confined to her bed except at the birth of her children. The rupture had caused but little inconvenience until the Thursday preceding, when it increased in size, and became rather painful. This did not, however, prevent her getting about on Friday, although she suffered pain in the back and loins. The bowels acted on Thursday, and slightly on Friday morning. On Saturday, the pain in the tumour increased, and nausea came on. She sent for a surgeon, who attempted to reduce the swelling by the taxis, without success, and afterwards applied a bladder of ice, with no better result. He advised her being carried to the hospital; but she refused to go. In the evening she became sick and had hiccough; she continued in this state during the night. She was worse next day; and was at length persuaded to go to the hospital, where she arrived at half past 6 P.M. On examination, a tumour of the size of a large orange, and of an oval form, was found at the umbilicus, hanging downwards. The integuments were of a dark colour. The swelling was very painful, and received no impulse on coughing. It was soft on the surface, but towards the neck felt very hard. The pulse was quick and small, and the countenance anxious. A freezing mixture was applied until my arrival at 8 P.M. After investigating the case, I arrived at the conclusion, that a portion of intestine was strangulated beneath a quantity of omentum, and had been in this state so long, that it was useless to try the taxis. I accordingly determined to operate at once. An incision, three inches long, was made over the centre of the upper part of the neck of the tumour, through a thick mass of fat, and an attempt was made to divide the stricture without opening the sac, or by making a small opening at the neck without exposing the contents. This proved very difficult, owing to the great depth of the stricture (about two inches from the surface), and the small size of the abdominal opening; it was therefore abandoned. The incision was extended to the bottom of the tumour, and then measured about six inches in length. The hernial sac was opened freely, and found to contain a large mass of omentum closely condensed and matted together. On tearing through this mass, a dark knuckle of intestine was exposed. The stricture was divided, the intestine returned into the abdomen, and the omentum, which was adherent to the sac, left *in situ*. The wound was closed by sutures, and the patient sent to bed. No medicine was ordered; but

she was allowed beef-tea, and wine and water, as soon as the stomach would bear food. Shortly after the operation, in consequence of her complaining of much pain in the abdomen, Mr. Holman, the House-Surgeon, ordered her to have immediately the following pill: $\mathfrak{R}$ Calomelanos gr. v; pulv. opii gr. j.

19th, 1 P.M. Bowels had not acted; abdomen tender and painful. In the evening, the tenderness and pain in the abdomen having increased, the following pill was ordered: $\mathfrak{R}$ Calomelanos gr. ij; pulv. opii gr. $\frac{1}{4}$. To be taken every four hours.

20th. The bowels had been freely relieved, and the pain in the abdomen had subsided. The patient was much depressed; the pulse was small and quick; the tongue dry and brown. The calomel and opium were discontinued. Eight ounces of port wine, and a pint of beef-tea, were ordered.

21st. The patient was extremely feeble, and the wound in a sloughy state. She was ordered to take the following draught three times a day: $\mathfrak{R}$ Misturæ camphoræ $\mathfrak{z}$ i; tincturæ cardamomi comp. $\mathfrak{z}$ j; ammoniæ sesquicarbon. gr. v; and, besides the wine, to have two pints of porter, and an additional pint of beef-tea.

22nd. The powers of the system were not so depressed, and the tongue was moister. The whole of the hernial sac and its integuments, and the greater part of the protruded omentum mortified, and, in the course of time, separated in sloughs. The patient was placed on a water bed, and supported with stimulants and a nourishing diet. The immense wound left after the detachment of the dead parts granulated and healed, though very slowly. The skin around became the seat of a troublesome eczema, which resisted various applications, but yielded to the following lotion: $\mathfrak{R}$ Acetatis plumbi., gr. xvj; spiritûs vini rect. $\mathfrak{z}$ ij; acidi hydrocyanici diluti, $\mathfrak{z}$ ij; aquæ $\mathfrak{z}$ xij. She gradually recovered her strength; and, having been fitted with a truss, was discharged cured April 28th.

CASE III. STRANGULATED FEMORAL HERNIA—OPERATION—RECOVERY. Ambrose Goodin, a spare old man, aged 69, was brought to the hospital, on the 24th of March, 1849, suffering from a Strangulated Femoral Hernia, of rather large size, on the right side. He had been subject to the rupture for 20 years, and had long worn a truss for it. It came down on the 20th, since which he had been unable to reduce it, but had kept the truss pressing on the tumour during all that period. The swelling was tense, and received no impulse on coughing; and the general symptoms of strangulation were urgent. He vomited continually, had hiccough, a feeble pulse, and cold extremities. I had visited the patient at his residence, and tried the taxis; and having again failed in a slight attempt made after his admission, the operation was decided on. I cut down on the neck of the hernial sac, and carefully divided all the bands which appeared in any degree to constrict the neck, but without being able to reduce the hernia. The sac was, therefore, opened; and, after the division of a tight stricture formed by its neck, a portion of small intestine, a good deal congested, was returned into the abdomen. As soon as the sac was opened, about four drachms of dark bloody serum escaped. After the operation, the patient was very

low, and continued to suffer from hiccough. He was carried to a warm bed; heat was applied to the extremities; and he was ordered the following draught: $\mathcal{R}$ Mist. camphoræ $\mathfrak{zj}$; spiritus ætheris sulphurici comp. $\mathfrak{zj}$; tincturæ opii m. $\mathfrak{xxx}$. Beef-tea was ordered to be given when the stomach could bear food.

25th. The bowels not having acted twenty-two hours after the operation, he was ordered a drachm of sulphate of magnesia in an ounce of peppermint water every second hour, until the bowels acted; but not to exceed four doses, before he was again seen. The bowels acted in the evening after two doses. He was allowed eight ounces of wine in addition to the beef-tea. Under this treatment, his pulse improved in strength, and he recovered without any unfavourable symptom. The wound was dressed on the 28th. It was found to have united by the first intention throughout, except at one spot, where a sinus opened. This continued to discharge for some time, but closed by the 15th of April, when he was discharged cured.

CASE IV. STRANGULATED FEMORAL HERNIA OF LARGE SIZE—OPERATION—SAC OPENED—Sloughing of the Sac and Omentum—Recovery from the Operation—Epithelial Cancer of the Strangulated portion of Intestine, and Death eight weeks afterwards. Harriet Barnett, a widow, aged 81, residing at Stratford, of lean appearance, but who had always enjoyed excellent health, was admitted into the London Hospital, at 9 P.M., December 2nd, 1849, suffering from a Strangulated Femoral Hernia on the right side. She had been subject to a rupture for twenty years; but had always been able to return it without assistance, excepting upon one occasion, eight years ago, when she was brought to the hospital and got relieved in a warm bath. She had since that time worn a truss. She stated that the rupture came down whilst she was in bed, about three o'clock on the morning of her admission. This was shortly followed by pain and sickness, which continued throughout the day. She sought the assistance of a surgeon in the neighbourhood, and was attended by his assistant, who, according to her account, used considerable force in attempting reduction. A tobacco injection and tobacco smoke having been introduced into the rectum without effect, she was sent to the hospital, a distance of four miles. Upon her admission, she was placed in a warm bath, and the taxis was again tried, but without success. I was summoned; and, on my arrival at 10 P.M., found a large Femoral Hernia, about the size of a cricket ball, which was tense and rather painful. She complained of some uneasiness at the umbilicus: but the abdomen was soft. Her pulse was rather weak. I directed a bladder of ice to be applied to the tumour for a quarter of an hour; and, having made steady but gentle pressure on the part without effect, decided on operating. The stricture was divided chiefly external to the sac; but, in doing so, I made a small opening at the neck, which allowed the escape of a quantity of serum tinged with blood. Being unable to return the protruded parts, I opened the sac, and exposed a large mass of omentum, and about six inches of small intestine, and found the principal obstacle to the reduction to arise from the swollen condition of a portion of the intestine, the coats of which were infiltrated, in a remarkable manner, with extravasated blood. So great was the

effusion, that it was surprising that the serous coat had not given way. With some trouble, the intestine was carefully returned. Being unwilling to replace the large mass of omentum, I excised a considerable portion of it. This was followed by free bleeding from several small arteries, and no fewer than five required tying. During the operation, the pulse was intermittent, and became very feeble. She took some wine, which was rejected. She was removed to a warm bed, warmth was applied to the feet, and I prescribed the following draught to be taken immediately: $\mathfrak{R}$ *Misturæ camphoræ* ʒj; *spiritus ætheris sulphurici comp.* ʒj; *tincturæ opii m.* xxx. Warm brandy and water, and beef-tea, were ordered to be taken when the stomach would bear them.

December 3rd. She had been much relieved by the operation, and felt tolerably comfortable. Her pulse was very quick, and there was considerable tenderness of the abdomen, but no tension. She had taken four ounces of brandy since the operation. This was discontinued; and, at the patient's request, a pint of porter was substituted. A grain of calomel with half a grain of opium was ordered to be taken night and morning, and a castor oil injection to be given at night.

December 4th. The bowels had been freely relieved after the injection; but the stomach continued rather irritable. In consequence of pain at the umbilicus, Mr. Wyatt, the House-Surgeon, ordered four leeches to be applied. The sickness continuing, she was ordered a draught of camphor mixture, with twenty drops of aromatic spirits of ammonia and ten drops of laudanum. Two ounces of brandy were given in place of the porter. The calomel and opium were discontinued.

December 5th. The wound was dressed, and looked healthy. The sac containing the omentum was rather tender, and distended with fluid. She was placed on a water bed. Although the upper part of the wound continued to heal favourably, the appearance and smell of the discharge from the sac below, and the state of the integuments, led me to suspect that mortification was taking place.

December 10th. I laid the part freely open with a bistoury, and found the sac and omentum within in a sloughy state. A few days afterwards, she had an attack of bronchitis, which reduced her strength considerably. The chest symptoms were relieved by suitable remedies; and she was supported by stimulants, being allowed four ounces of brandy, in addition to eight ounces of wine and a pint of porter daily. She rallied a good deal under this treatment. The mortified parts by degrees separated, and the wound made by the operation quite healed up by the 25th. This part bulged a good deal, in consequence of a hernial protrusion at the original seat of rupture. She improved so much, that there appeared a good hope of her final recovery. During, however, the cold month of January, she became very feeble. She also complained of severe pain in the seat of the rupture, attended with considerable uneasiness in the back, which occurred at intervals. The pain was accompanied with extreme languor, faintness, and cold perspirations. The bowels had been at times sharply relaxed, but latterly had been tolerably regular. She was at length able to take scarcely any nourishment besides stimulants, became much emaciated, and depressed in spirits; and, after gradually sinking day by day, expired on January 24th, seven weeks and four days after the operation. At this time,

there was only a small triangular sore remaining at the bottom of the wound, occasioned by laying open the lower part of the sac a few days after the operation.

SECTIO CADAVERIS TWENTY HOURS AFTER DEATH. There were marks of bronchitis in the lungs. The abdominal viscera generally were healthy. On the right side, the omentum was adherent to the femoral ring, and to the bottom of the closed sac; and a small portion of the ascending colon protruded into the cavity. The coats of this part of the great intestine were thickened and indurated, and the peritoneal coat was slightly puckered. On passing the finger through the gut, the passage was found to be slightly contracted; and, on dividing it longitudinally, I found a large raised ulcer of an oval shape, the long diameter of which was in the transverse direction, and nearly two inches in length, and the short diameter an inch and a quarter. The edges of the ulcer were everted, and the base indurated. The surface presented small irregular spongy-looking granulations or excrescences, more or less congested. A section being examined microscopically, the raised granulations were found to consist of epithelial growth, the base of the ulcer being formed chiefly of indurated areolar tissue.

REMARKS. These four cases, three of which occurred within six weeks, are examples of Successful Operation for Strangulated Hernia on persons of advanced age,—a time of life at which the operation does not commonly succeed in saving the patient. I have the reports of fifteen cases (out of a table of two hundred and eight) in which the operation of Hernia was performed in the different hospitals of London, on individuals of the age of seventy and upwards; and of these, only four recovered.

In the first of the cases just related, independently of the great age of the patient, the circumstances were favourable. The Hernia was recent, and the sac was unopened in the operation. In the third case, strangulation had existed for four days, and the great prostration made me apprehend mortification of the protruded parts. This fortunately had not taken place; and, with the aid of stimulants and a nourishing diet, the patient rallied, and recovered rapidly without a bad symptom. The second and fourth cases are by far the most remarkable. In the second, the patient incurred not only the ordinary and serious perils of a Strangulated Umbilical Hernia of large size, requiring an operation for its relief, but also those consequent on mortification of a large mass of omentum, and of the whole of the hernial sac and its integuments. She owed her recovery, under such unfavourable circumstances, in great measure to a sound constitution, carefully preserved by an abstemious life. In the fourth case, in which the patient had attained the age of eighty-one, the operation was also followed by sloughing of a large piece of omentum and of a great part of the hernial sac. She bore up surprisingly under all this, and even rallied from a sharp attack of bronchitis at the coldest season of the year; but she sank at last, chiefly from the effects of a remarkable disease of the intestine, which we may presume was engendered partly through the agency of the stricture, but more especially by the rough attempts to reduce the Hernia by the taxis, made previously to the patient's admission into the hospital.

In the large number of operations for Hernia which I have witnessed, I have never seen a portion of intestine exhibit such striking marks of violence, as existed in this instance. The peculiar ulcerated sore which was found at the part, gives much additional interest to this case. The disease presented the characters of epithelial cancer, resembling, in its microscopical appearances, the growths occasionally developed in various parts of the skin. I do not recollect having seen any description of this rare form of ulcer in the intestine by an English writer; certainly I have met with no account of any such disease occurring in a portion of intestine injured in rupture. The following description given by Rokitsansky, of the characters of certain sores occurring in the large intestines, corresponds exactly with the appearances of the ulcer in the above case. This eminent pathologist does not appear to have fully satisfied himself as to the nature of the disease. "There are certain ulcers which occur only in the large intestine, and especially in the sigmoid flexure and the rectum, and are nearly allied to cancer, and particularly to cutaneous cancer. They are generally solitary, but there may be two, three, or four at a time. They invariably give rise to intense pain, and appear etiologically connected with an abuse of ardent spirits. Although in many respects analogous to the ulcers hitherto considered, they offer distinctive characters. They are invariably zonular, and have a callous base, upon which, occasionally, a discoloured brownish grumous discharge is visible, and they are surrounded by a thick tumid, spongy, carneous, and irregularly sinuous margin of mucous membrane. They generally cause a diminution of the capacity of the intestine, though not to any considerable degree. A further investigation into their nature still remains a desideratum."

It may be a question, whether such extensive disease in the mucous membrane of the colon could have been developed in so short a period as that which intervened between the operation and the patient's death; and her feeble condition, and the slow progress of the affection of the skin, which seems analogous to this, would strengthen the doubt on the point. Nor is our knowledge of this disease of the intestine, sufficient to determine the question satisfactorily. The previous healthy condition, however, of the patient, the bruised appearance of the intestine at the time of the operation, and the severe pain experienced in the part for three weeks before death, lead me to conclude that this large epithelial sore was recent, and owed its origin to the local injury.

After operating for Strangulated Hernia, I very seldom give aperients until sufficient time has passed to enable the intestines to resume their functions naturally, after the interruption caused by the stricture. In many cases, this takes place spontaneously within twenty-four hours after the bowel has been released,—occasionally later; but, by waiting, we may avoid disturbing the injured intestine and irritating the parts, at a time when repose is desirable to promote their recovery from congestion and inflammation. The propriety of this practice, as a general rule, has recently been enforced by several writers.² In old people, the

¹ ROKITANSKY. *Manual of Pathological Anatomy*. Translated for the Sydenham Society, vol. ii, pp. 100-1.

² COCK. *Guy's Hospital Reports*. HANCOCK on Hernia: London: 1849.

disadvantage of exhibiting aperients shortly after the operation is decidedly greater than in persons less advanced in life ; for, besides the reasons just stated, the system often becomes so depressed from the effects of strangulation—from the vomiting and interruption to the alimentary functions, that after the addition of the shock of the operation, anything which lowers still further the powers of life, materially tends to prevent recovery. I have witnessed cases in which the operation for Hernia has been performed on old people, and an aperient given shortly afterwards, where this treatment, by actively disturbing the bowels, has seriously interfered with the chances of recovery. It has either helped to produce a fatal collapse within a few hours, or has contributed to depress the constitutional powers to such an extent, that the repair of the injured bowel has not proceeded, and the patient has gradually sunk in the course of two or three days. The degree of shock to the system, which may be occasioned by a Strangulated Hernia, will be illustrated by the following case :

Strangulated Femoral Hernia—rapidly fatal. Ann Wood, a woman of spare habit, aged 60, was admitted into the London Hospital, in July 1836, labouring under symptoms of Strangulated Hernia. She had been subject to a reducible Femoral Hernia for several years. The Hernia was small, and had been down less than forty-eight hours. She was in a state of great prostration ; so much so, that slight attempts at reduction having failed, it became a question whether she would be able to bear the operation. She was taken into the operating theatre, but after dividing the integuments and a layer or two of fascia without loss of blood, I considered it advisable to desist, being apprehensive that she would die on the table. In a few minutes after being carried back to bed, she expired. On examination of the body, I found slight marks of peritoneal inflammation. The sac contained a knuckle of intestine, strictured and deeply congested.

In this case, the strangulation of a portion of intestine appears to have proved fatal within the short period of forty-eight hours.

Whilst objecting to the early administration of aperients after an operation for Strangulated Hernia, I must observe, that there are evils attending an obstinate and inactive condition of the bowels, which, in old people especially, cannot be disregarded. After the rejection from the stomach of every kind of nourishment for some period previously, evacuations are generally followed by a desire for food ; and the sustenance taken at this time of debility greatly contributes to the patient's revival. Whereas, if the stomach and bowels be suffered to remain torpid, or be kept so by opiates, the indisposition for food, and indolent state of the digestive organs, may prevent a healthy reaction. The best mode of obtaining evacuations at this period, is by enemata ; but mild aperients are not to be altogether set aside ; and those who so strongly advocate the advantage of opiates, must take care that in endeavouring to avoid one source of danger, they do not incur the risk of producing exhaustion, by indisposing the alimentary canal to imbibe nourishment and support.

In February 1847, I operated for Strangulated Femoral Hernia on a lady aged 70 ; the sac was not opened, and she recovered favourably. In November of the same year, I operated for Strangulated Femoral

Hernia at the London Hospital, on a woman aged 73, and on a man aged 77. In the former, strangulation had existed for three days, and the sac was opened. She was much depressed at the time of the operation, and survived it only twenty-one hours. In the latter, the stricture was divided external to the sac, and the patient recovered. In the January following, I operated also for Femoral Hernia on a female aged 78, and opened the sac. She recovered from the immediate effects of the strangulation and operation, but was subsequently attacked with erysipelas, of which she died on the ninth day after the operation. These cases, added to the four I have previously detailed, make eight cases of operation for Strangulated Hernia in advanced age. Of these, five recovered and three died: the case of death from disease of the intestine, at the end of eight weeks, being included in the latter.

Old persons, when affected with Strangulated Hernia, do not suffer so acutely as younger subjects. The injury to the intestine does not so readily lead to inflammation of the peritoneum, and the symptoms of constitutional disturbance are more subdued, so that the active treatment often called for in other cases after the operation, is rarely required, and can seldom be tolerated. Indeed, when called to such cases, I have often been struck with the mildness of the symptoms and the slowness of their progress; the absence, or slightness of pain in the abdomen; the little tenderness in the swelling; the small degree in which the pulse is disturbed, and the comparatively tolerant condition of the stomach. But the evil to which I have adverted, the threatening failure in the powers of life, though not so forcibly presented to the notice of the surgeon, is no less dangerous, and requires his skilful and judicious management. The remedies which are obviously indicated, are external warmth, opium, ammonia, beef-tea, and often wine, or even brandy. The patient requires, in fact, to be supported under the depressing influence of his complaint.¹ These remarks are not intended to apply to cases of mortified intestine; for the necessity of support in such cases is too urgent, to need any recommendation of the treatment. But my object has been to strengthen the objections which have been offered to the use of aperients shortly after the operation for Hernia, by shewing their peculiar inappropriateness for persons in advanced age; to point out, that when Hernia occurs at this period of life, greater danger is to be apprehended from a failure in the powers of the constitution, than from inflammation of the bowels, or of the peritoneum; that treatment, which would be improper or hazardous soon after an operation performed in early or middle life, is sometimes absolutely required to prevent the aged patient from sinking; and that depletive remedies can seldom be resorted to without risk.

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¹ The greatest age at which a successful operation for Strangulated Hernia has been performed, that I know of, is the case of a man aged 107, who was operated on for Inguinal Hernia, by Mr. Caesar Hawkins, in St. George's Hospital. The symptoms were not severe: the wound united by the first intention, and the patient recovered. It is stated that "nourishment was given him from the first." *London Medical Gazette*, vol. xxxi, p. 376.