mental calm which a Roentgen photograph could now bring to anyone who, having nothing seriously wrong, had been told he was the subject of such a formidable condition of things can be easily imagined.

ON HERNIA: WITH CASES.¹

By J. LLOYD ROBERTS, M.B.,

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I TAKE it that ordinary reducible hernia is much more frequent in general practice than is commonly supposed, and this opinion is founded upon the number of trusses annually supplied through the Denbighshire General Infirmary, which probably provides by far the greater number of trusses worn in this district. About 100 trusses will be annually supplied through the infirmary for first wearings and renewals. It is not possible to compare this number with either population or area or to give it a statistical value; but it may be said for comparison—though all the truss wearers are not charity patients—that this figure is out of some 2,500 patients annually treated by the charity.

By briefly citing illustrative cases a classification of cases and their peculiarities will be followed.

CASE I.—Mrs. L., aged 45 years, wife of a small farmer, had a reducible femoral hernia, which became complicated with, and could not be reduced because of, a large abscess which formed over the site of the hernia. I opened the abscess freely, and about 2 ounces of most offensive faecal-smelling pus escaped, showing the nearness by contact of the pus with the bowel. There was no immediate connection between the bowel and the abscess. The patient made a good recovery.

CASE II.—A child, about 16 months old, was brought to me from St. Asaph with an inguinal hernia, which could not be reduced because of a hydrocele. This hydrocele I tapped. The child, being frightened by this proceeding, struggled so as to prevent reduction of the hernia at this sitting. As there was no urgency the attempt was suspended, and at a subsequent visit the bowel was readily returned.

The next case is one which required no operation, but is an example of what amount of "nipping" a bowel can endure without serious injury.

CASE III.—A man, aged about 20 years, whilst lifting hay on to a load, late on a Saturday afternoon, ruptured himself. He walked home, about one-third of a mile, took an aperient, and bore until the Monday afternoon following, when he came to my out-patient room at the infirmary. I had him placed in a hot bath for about half an hour, and by taxis with difficulty reduced the hernia, about forty-eight hours after the rupture had taken place. After two days in bed, and before the bowel had acted, this man ran away, giving as a reason to others in his ward that "he was not going to stay there to be starved." Nothing further was heard of him, and no truss was subsequently applied for, so that at least no detriment followed the abrupt termination of treatment, nor was there return of the hernia.

Two cases of almost spontaneous reduction of strangulated hernias have occurred to me, both with fatal results.

CASE IV.—An old man, of some 65 years of age, was sent from St. Asaph into the infirmary for operation. The diagnosis of strangulation was accepted and verified without much application of taxis, this having already failed. Just when operation was about to be commenced, on fingering the tumour lightly the bowel returned itself into the abdominal cavity. The patient died in about two days' time, and on *post-mortem* examination was found to have the included parts and their surroundings coated with pus.

CASE V.—An old man, W., aged 73 years, I saw on March 11th, 1895, with a medical friend who had before seen the case during the course of the day, at a house some five miles out of town. He had a large and exceedingly painful irreducible inguinal hernia, formed by an accession of bowel to an old standing reducible hernia. Morphine had been given. As vomiting and the other signs of strangulation were pronounced, the place and every attendant circumstance being most unsuitable for an operation, more morphine was given, and the patient was removed in a brougham to the infirmary. All was immediately got ready for operation. Before administering an anæsthetic a colleague was asked to verify the strangulation, when upon the slightest touch the hernia reduced itself. Trouble was subsequently experienced in keeping this rupture up. About a week after admission a quantity of bowel came down, which threatened to be irreducible. A day or two afterwards this bowel came down a second time, and proved irreducible. On commencing to administer the anæsthetic—A. C. E. mixture—for operation, the patient twice so seriously fainted that operative procedure had to be abandoned. *Post-mortem* examination showed more strangulation (if any) in the sac than in the ring.

OPERATION CASES.

CASE VI.—J. J., aged 43, was admitted into the infirmary on May 18th 1891, and discharged on June 2nd. His was a recent inguinal hernia, and operation was performed a few hours after accident.

CASE VII.—T. R., aged 58, was admitted on May 21st, 1888, and died on May 24th. At least forty-eight hours—with a long journey by road and by rail—intervened between the time of rupture and the operation.

CASE VIII.—J. M., aged 80, treated by expectancy first and operation

afterwards, died. Probably expectancy and taxis had on former occasions proved successful.

CASE IX.—J. H., aged 35, a farmer, was ruptured by lifting a heavy coffin at a funeral. After the funeral he returned home to see his doctor, who sent him to the infirmary. On November 8th, 1889, operation was performed without delay, about six or seven hours after the accident. Uninterrupted recovery took place, and he was discharged on November 30th.

CASE X.—R. J., a farmer's child, aged 1½ year, was brought to me on July 24th, 1894, with a strangulated hernia of some twelve to sixteen hours' standing. Ordinary methods of reduction failing, an operation was advised, but refused. The following day, however, I saw the child at his home (eight miles away), when operation was readily assented to. I sent the child into the infirmary, and at 6 P.M., or about forty-three hours after the rupture was found, operated and reduced the hernia satisfactorily. An uninterrupted recovery followed. The child was discharged on August 7th. In this case I desire it to be noted that no repeated or prolonged applications of taxis were made. As a detail in the operation I may say that in making up the wound I closed the inguinal ring with a suture. A truss was worn for some time, and there has been no return of the hernia.

CASE XI.—G. M., 29, a carter. On Friday, September 28th, 1894, about 7 A.M., whilst at work at Rhyl, an old-standing reducible (congenital) hernia was suddenly increased by the accession of more bowel into the sac. By pain and other signs he recognised his condition, and being far away from his home he started to walk to the St. Asaph Workhouse, a distance of five miles, for the necessary help. Without tasting a bit or a drop of anything sustaining, and after resting and sleeping under hedges and haystacks, he reached St. Asaph on the Monday afternoon following. From there he was sent by train to the Denbighshire Infirmary. Operation was at once decided upon, and performed at 8 P.M., or some eighty-five hours after the accident. No taxis was tried more than was sufficient for diagnostic purposes. On opening the sac a large quantity of fluid escaped, the colour of a port-wine negus. The bowel included in the sac was also of a very deep colour, comparable with that of a fruity port wine, but it had not lost its glistening surface, though this was of much less than ordinary brilliancy. As much fluid as could be got at was drained away, and the bowel returned into the abdomen. The pillars of the congenital sac were stitched together as high up as could be reached, and the wound made up. Opium was given, and though the operation was well borne I had gloomy forebodings as to the result. However, about 1 A.M., or five hours after the operation, the bowels acted spontaneously. In subsequent actions, as in this, no blood was passed, neither was there any intractable diarrhoea. An uninterrupted recovery took place, and when the patient was last seen or heard of there was no return of the hernia.

I desire now to advance some general principles upon the treatment of or surgical interference with strangulated hernia; and I think that though these cases are few and varied the latter cases will sustain by their results the evidences upon which these principles are based. It is not claimed that any of these observations or principles are particularly new, but that these cases are very illustrative.

1. That the earlier herniotomy is performed after strangulation of bowel is made out the better are the patient's chances of recovery. Indeed in serious cases of hernia I would say more than this, that less risk is run to life by an operation early done than by delay, expectant treatment, and taxis periodically applied. The fatal result in Case VII, in which the operation was performed 43 hours after injury, and previous treatment had been tried, is an instance of the latter part of this proposition. And Case VIII is another. On the other side the rapid recoveries of Case VI and of Case IX (St. Asaph) who were both operated upon within a few hours of rupture illustrate the former part.

2. That frequent or severe applications of taxis do more injury to a strangulated bowel than does the mere strangulation at the ring. None of these cases show any direct or visible injury to bowel by the direct application of taxis, but it is too evident that taxis is an additional violence to an already damaged organ or structure. Whilst one regards the deaths after an amount of expectant treatment, there are in contrast Case X, the infant who was operated upon 43 hours after rupture, and Case XI, operated upon 85 hours after rupture. In neither of these two cases was there any expectancy treatment or taxis tried. In these even after the long endurance of strangulation, or at least of rupture, there were no inflammatory or other unfavourable symptoms developed to interrupt a uniform course of recovery.

3. That a strangulated bowel can tolerate a very considerable amount of "nipping" or squeezing, both as to character or degree and as to time, without injury to its vitality. Case XI illustrates this. This bowel, even after all the hours of strangulation, recovered itself of the paresis due to strangulation in five hours, as shown by the spontaneous action of the bowel. And Case III, in which the hernia was reduced by taxis forty-eight hours after injury (and who "levanted" from treatment before any indication of the bowel paresis having been overcome was manifested), also strongly tends to

¹ Read at a meeting of the North Wales Branch of the British Medical Association.

substantiate this proposition. Certainly the earlier cited cases show prolonged taxis to be attended with more serious consequences than prolonged strangulation alone.

By way of deduction again from these I should say that if there is any doubt as to a severe hernia being reducible or not, in treatment give the benefit of the doubt to an early surgical operation. And, in the second place, that if from any cause there may be delay in operating, such as for want of instrument or assistance, suspend all attempts at reduction by taxis after one trial.

ON AN EPIDEMIC OF JAUNDICE IN KING'S LYNN, 1895.

By CHARLES B. PLOWRIGHT, M.D.,
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THE fact that the so-called catarrhal form of jaundice sometimes occurs in an epidemic form has attracted the notice of various medical writers, both in our own country and abroad, as reference to the medical journals plainly shows. Thus, Murchison, in 1863, mentions an outbreak of jaundice in Rotherham, in the February of which year 150 cases were recorded. It is particularly to be noticed that this epidemic was preceded by one of enteric fever. In 1872 Decaisne brought under the notice of the French Académie a similar though smaller outbreak. In Paris during the preceding year 28 cases were observed, 17 of which were males and 11 females. The disease also prevailed amongst the German soldiers then investing the city, especially in the Bavarian regiments. In 1877 Dr. Kohnhorn describes an outbreak in a German regiment, and noted that it was confined to those young soldiers who had joined within the previous twelve months, the older soldiers escaping.

In September, 1895, a case came under my notice in King's Lynn, in the person of a boy, aged 9; within a week two other children in the same family were attacked. On inquiry amongst my professional brethren I have been able to collect some 34 cases, 13 males and 21 females:

	Under 10	Under 20	Under 30	Under 40	Under 50	Under 60	Under 70	Under 80	Total Cases.
Males ...	2	4	2	1	1	2	—	1	13
Females...	5	6	2	1	3	1	3	—	21
	7	10	4	2	4	3	3	1	34

From this it is evident that the majority of the cases were in young persons under 20 years of age, and that the female sex suffered more than the male. Of the 17 adults (above 20), 5 were total abstainers and 1 was a great water drinker. The cases were met with in all parts of the town, nor could any definite meteorological conditions be found to account for their occurrence. Two cases were complicated with left basal pneumonia which followed the jaundice, 1 with diarrhoea, and 1 with tonsillitis. Subjoined are the months in which the cases occurred side by side for comparison with the enteric fever cases reported:

1895.	Jaundice.	Enteric Fever.
January ...	...	...
February ...	...	...
March ...	...	...
April ...	...	...
May ...	...	...
June ...	...	...
July ...	...	...
August ...	...	...
September ...	...	...
October ...	...	...
November ...	...	...
December...	...	...
	34	25

Thus, while it appears that both diseases were prevalent during the last half of the year, yet there is no actual correspondence in their frequency in the various months. It must be remembered, however, that while the enteric cases were notified the jaundice had to be found by personal inquiry.

In a certain number there was a distinct history of *malaise* and anorexia, lasting from four days to three weeks, whereas in a very similar number no premonitory *malaise* could be traced; 21 cases had distinct more or less severe epigastric pain and 24 had vomiting ushering in the jaundice; the majority were well within ten days; no fatal case occurred.

With regard to the etiology—the number of children and young adults, of the females in proportion to the males, of total abstainers, and the fact that during the months of October and November the rainfall was above the average in the district through which the stream at present supplying the town with drinking water flows—all seem to point to this having been a water-spread epidemic, especially as during these two months the mean temperature was above the average.

My thanks are due to Mr. S. M. W. Wilson, the medical officer of health, and to Messrs. Webster and Jackson for their kindness in helping me in this inquiry.

THE PRESENT POSITION OF THE RADICAL OPERATIONS FOR CHRONIC SUPPURATIVE OTITIS.

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IN a memorandum¹ Mr. F. White, F.R.C.S., makes a protest against routine operating in chronic otorrhoea which seems to require an answer. The protest comes late. Radical operations for chronic otorrhoea have got beyond the stage of routine operating, and are well advanced in the third stage in the evolution of an operation—namely, that of classification.

The following is a classification which I attempted two years ago in a paper on the Radical Cure of Otorrhoea.² Since then I have treated a large number of cases of otorrhoea with more or less success with or without operation, and I find no reason for making any material change in my classification. To each group of classes I now append the treatment which I then and now consider sufficient or necessary for a successful termination.

A. (1) Simple chronic purulent inflammation limited to the main cavity of the tympanum with a perforation in the membrana tensa.

(2) The disease limited as in (1), but accompanied by formation of polyp unconnected with bone disease.

(3) In which removal of polypi or granulations from easily accessible parts of the tympanum or meatus reveals small superficial patches of roughened bone.

Cases of Group A, except when due to tubercle, are amenable to treatment by the older methods, including curetting, properly carried out.

B. (4) Attic suppuration, with or without caries of the ossicles.

(5) Cases, originally belonging to one of the above four classes, in which adhesions between the ossicles and between the ossicles and the tympanic walls interfere with drainage or cause subjective symptoms—extreme deafness, tinnitus, or giddiness.

Several cases of Group B might be cited in which recovery took place without radical operation, but in the majority no permanent improvement is got until the ossicles are removed by natural or artificial means; in the meantime the patient is subjected to grave risk or to serious discomfort.

C. (6) Chronic suppuration of the mastoid antrum.

(7) Cholesteatomata.

(8) Caries of mastoid antrum or some part of the tympanic walls which, though inaccessible through the meatus, can be removed by operation without risk to important structures.

No lasting good can be done in cases of this group except by radical operation; the method best adapted to them is, in my opinion, the so-called Stacke-Schwartz operation.

D. (9) Caries or necrosis of the petrous bone which cannot be eradicated without destroying important structures or without risk to life.

It is in this and Group C that tuberculous cases are usually met with.

¹ BRITISH MEDICAL JOURNAL, February 1st, 1896

² Liverpool Med. Chir. Journ., vol. ii 1894.