abandoned, and the breasts were supported and rubbed.

February 12th, the day following the birth, an attempt was made to give the child some little nourishment. Breast milk and goat's were both tried, and rejected, nothing was retained. Later in the day, as no urine or meconium had been passed, an examination was made, and the child was found to have an imperforate rectum. The orifice of the anus was present, and through this the probe passed into a cul-de-sac, the depth of three-quarters of an inch.

Examining still farther, the urethra was not to be found. Dr. Porter was called in consultation, and verified my diagnosis; he advised deferring any operative measures until the next day, and quoted a case in his own practice similar to this, where the urethra could not be found, and subsequently showed itself.

On the next day, February 13th, during my visit, the child passed water from the vaginal orifice. The operation was performed by Dr. Porter in the afternoon, the details of which were kindly given by him, and will appear later on. Three large dejections of meconium immediately followed, and three more during the next twelve hours. All food was retained after the operation, and no farther difficulty presented itself. The bowel was dilated occasionally, and for this purpose the ordinary glove-stretcher proved to be a most useful instrument.

TABLE SHOWING THE FOOD.

Date.	Notes.	Teaspoonfuls.	
		Milk.	Water.
Feb. 12	Breast Milk and Goats tried. Will retain no Food.	....	....
13	Operation.	....	....
14	Goats Milk given. All Food Retained.	2	2
15	Food given every one and one-half hours. Few drops of Brandy added.	2	2
16	....	2	2
17	Brandy Omitted. Food every two hours.	2	4
18	All Food Retained.	2	4
19	....	2	4
20	....	2	4
21	....	3	5
22	Food given every two hours.	4	6
23	....	4	6
24	....	4	6
25	....	4	6
26	....	4	6
27	New Goats Milk given.	3	5
28	....	4	6
Mar. 1	....	3	5
2	....	3	5

TABLE SHOWING WEIGHT OF CHILD.

Notes.	Date.	Weight. lb. oz.	Notes.	Date.	Weight. lb. oz.
....	Feb. 11	4 7	....	26	5 4
....	12	....	....	27	5 5
Operation Performed.	13	....	Bowel Dilated.	28	5 6
Bowel Dilated.	14	4 2	....	Mar. 1	5 7
....	15	4 2	Bowel Dilated.	2	5 6
Bowel Dilated.	16	4 4	....	3	5 6
....	17	4 6	....	4	5 6
....	18	4 8	....	5	5 7
Bowel Dilated.	19	4 9	Bowel Dilated.	6	5 10
....	20	4 12	....	7	5 13
....	21	4 13	....	8	5 13
Bowel Dilated.	22	4 15	....	9	5 14
....	23	5	....	10	5 15
....	24	5 1	....	11	6 1
....	25	5 2	....	12	6 1

Taking into consideration the development of the rectum in the fetus, it seemed to me more proper to

term this variety imperforate rectum, rather than imperforate anus. This view is supported by Holmes² and others.

"Cases of imperforate rectum may be divided into two classes, namely, those in which no anus exists, (imperforate anus, properly so-called), and those in which there is an anus leading into a cul-de-sac (imperforate rectum in the narrower sense of the term).

"The former class, (imperforate anus), may be again subdivided into (1) Membranous obstruction of the anus. (2) Complete or partial absence of the rectum. (3) Communication of the rectum with the vagina in the female. (4) Communications with the urinary tract in the male. (5) External communication, or fistula.

"The latter class (imperforate rectum) may be subdivided into (1) Membranous obstruction. (2) Deficiency of the upper portion of the rectum.

"We have now to consider the cases of imperforate rectum in the narrower sense of the term, that is, cases in which the external parts are normal, but the anus leads into a small cul-de-sac, the rectum being totally obstructed above.

"The obstruction of the rectum may be due to a simple membrane stretched across the tube of the intestine, which in other respects is natural; or the upper tube (the rectal cul-de-sac, as it is called), may lay by the side of the lower (the anal cul-de-sac), or behind it; or the rectum may be impervious for a greater or less distance, so that the colon may terminate by a dilated extremity above the pelvis. In rare cases the sigmoid flexure itself, and more or less of the rest of the large intestine, may be absent; but as such infants are usually not viable, the cases present little practical interest. Practically, cases of imperforate rectum may be divided, as above, into two classes, that is, (1) Where the upper cul-de-sac is accessible from the lower. (2) Where it is not.

INJURIES TO THE BACK IN RAILROAD ACCIDENTS.¹

BY E. P. GERRY, M.D., JAMAICA PLAIN, MASS.

In calling attention to this subject I am well aware that I can only give it an imperfect glance at this time. I shall divide my subject into topics; (1) The liability, in railroad accidents, of injury to the back. (2) The different ways a passenger may be injured. (3) Ways in which a passenger may perhaps prevent such injuries. (4) Some suggestions on transporting the injured. (5) Some of the injuries to the back received at the recent Roslindale accident. (6) Method of handling such patients in bed. (7) Difficulty of giving a correct prognosis as relates to damages.

(1) The liability and almost probability that a person will receive some injury to his back. To those who know and realize the conditions existing in any railroad accident, and especially that at Roslindale, the wonder is that more well-marked cases of injuries to the back have not presented themselves. The probability of such injuries is well known to the community at large, as are also the serious and sometimes permanent injuries received. The laity have become so impressed with this knowledge that the very heavy

¹ Read before the Norfolk District Medical Society, April 26, 1887.

² Holmes's Surgery, pp. 810 and 815.

damages awarded by juries for such injuries have made the expression "railroad spine" almost classical in our language as well as the *bête noir* of the companies themselves. To the injured, any injuries about back, hips or sides, render them fearful that something serious may develop even after years have elapsed. This possibility also opens a large field for the unscrupulous. From my knowledge of the persons injured near Roslindale, I should say that a large proportion received some injuries about the back, most of them probably temporary.

(2) That there are many ways in which a person may be injured, one may well imagine, when he thinks of what takes place, and in how many directions a person may be thrown, and with how many things he may come in contact. He may be thrown the length of the car, perhaps violently upon the floor or against the sides or the top, striking his back against the seats, or perhaps be pinned down by the *débris*. Two of my patients were sitting four seats from the front door, of course facing it. They think they jumped up when the alarm was given. When they came to themselves they found that they were up against the door facing the rear. Another, who was sitting next the rear door, on feeling the jar, rushed out upon the platform. He found his car tipping and saw that the smoking-car, which was behind, was coming upon him. He jumped and luckily escaped the smoker which came down near where he had fallen. His injuries were a comminuted fracture of the tibia and fibula, and a fracture of the astragalus, also a severe injury to the muscles of the lower back causing them to bunch up, resembling a Bologna sausage. The tendency is to jump up, as did another patient, who quickly crouched down in the aisle when he saw the top of the car sailing toward his head.

(3) It is very difficult to instruct a person what he had better do in case of a railroad accident. It is, however, highly important that some proper suggestions be given. It might be well to have an emergency lecture prepared in the most careful manner, and brought to the notice of the travelling public, so that the injuries received shall be reduced to a minimum. One cannot guard against missiles in the shape of flying beams, stoves and seats, but there should be certain simple rules impressed upon the minds of all, which they will act upon almost instinctively. It appears reasonable that if one can keep his place by clinging to his seat, he has the best chance, if nothing strikes him. I know of a case where a passenger was riding in the front part of a smoker. He was seated with his back square against the seat. He received no injury whatever from a rear collision that shook the passengers up and sprained one's back so that the patient laid abed two weeks. It is evident a square seat with the feet upon the rail is the best position to be in for an ordinary accident. One of my patients clung to her seat and although her car was carried into the street, she escaped with very little jarring and shock. The train hands usually have a better chance to see what is coming and may jump, but this is not considered good policy since the use of the Miller Patent platform and Westinghouse air-brake. An old rule among railroad men runs, "Don't jump till you can see the size of the gravel."

Perhaps it might be well to suggest to railroad authorities that the ordinary passenger coach should be provided with poles overhead similar to those seen in

some horse-cars, and such as are, or have been, in use in fast mail-trains, to which the clerks jump and catch hold, thus clearing themselves from the floor in case of derailment, as it is claimed that the trucks usually break up the floor; and then the passenger's attention should be called to the manner of using such poles. The clothing-racks should also be made strong enough to sustain a passenger's weight in case he wishes to use them for a similar purpose. The Roslindale disaster seems to demonstrate that the passengers fared best in the newer and stronger cars, as they usually do in the well-built Pullman. If this is true, railroad authorities should be constantly urged to build their cars as strong as possible consistent with other requirements.

(4) Next, regarding the transportation of the wounded, especially those with injured backs; I wish the good people in the vicinity of an accident, who grab their brandy bottles and rush to the scene, would also bring with them their strongest sheets. A patient could be carried on a sheet by men at the four corners or folded lengthwise and carried by two. It would be well to have the little seat at the end of the car fitted with a locker, containing among other things, narrow sheets, which in that case had better be of drilling or some strong material, and furnished with loops along the sides into which the poles before suggested could be run and thus an excellent stretcher made. Lay the wounded with their heads the highest, and keep them in that position all the time. When two men lift a wounded one, let the taller man be at the head, likewise when using a stretcher. Break step in marching with a wounded person on a stretcher. The cushions make temporary beds for the wounded, and the hair from the seat backs will do to pad up under injured parts.

(5) In speaking of some of the injuries to the back received, I shall include injuries to shoulders and those parts of the sides that are closely connected with the large muscles of the back. Although six of my eight patients received some injury to back or sides, it is confidently expected that all but two, and perhaps all but one, will completely recover. That there was considerable injury to the muscles in all the cases may be seen in the fact that although six weeks have elapsed, they all, with one or two exceptions, still are lame, some of them quite so, notwithstanding that the greatest care has been taken to keep them quiet. Luckily only one received injuries that resulted in serious and characteristic symptoms. Most of them were strains and contusions, somewhat severe, the result of being thrown violently several feet. They were in some cases not appreciated at first; one patient walked home, and then started for the doctor to visit his sisters, before he noticed any trouble himself. Some while they were in bed hardly realized that their back and sides were lame. Sitting up and walking about under careful supervision has in some cases made them much lamer. Some of them for the first ten days complained of chilliness and faintness, which did not appear to result from shock, but seemed to come from the injury to the back, not an unusual occurrence apparently in such cases. It was early ascertained in the patient who has undoubted serious injury that such was the case, although when first seen he was suffering from concussion of the brain, with snoring respiration, unconsciousness, etc. Some five or six of the vertebræ were injured, some of them

probably fractured about the cervico-dorsal portion, which is mentioned as one of the regions most frequently the seat of injury, there being two other portions equally liable, namely, the dorso-lumbar and the atlo-axial. The ribs attached to these vertebrae appeared dislocated, there was swelling and tenderness at this spot. Other symptoms were retention of urine, constipation and involuntary priapism when bed-clothes were raised. There was paraplegia, with loss of feeling in both legs, which has since continued, although there appears to be a slight return of feeling in one leg within a few days. In addition, there was a cystitis which was so active that the bladder had to be washed out twice a day for over a week. After the cystitis became better, the retention was followed by incontinence, which still persists. At the very first, there were bright-colored spots on both nates and lower back, which it was difficult to account for. It was thought they were bruises or burns, and they became dark-colored in a week or two, since then there have appeared on both legs similar spots with well-defined edges, whose centres are filled with red streaks. They are supposed to come from some defect of nervous influence due to some lesion of the spinal cord. There has been considerable pain in the back, a sensation of twitching of the muscles, and a feeling as if scissors were opening and shutting.

(6) One of the most important matters in the care of such a patient, is the careful handling which he requires and which in this case he has received from his nurse; who gives the following directions for lifting a person with an injured back: "Place a pillow under the shoulders and a draw or folded sheet under the back and hips, and if there is need a piece of rubber sheeting pinned by safety pins to the bed under the draw-sheet. To move patient to his right side cross the left foot over the right and the left arm across the chest; stand on the right side of the bed and pull the opposite ends of the draw-sheet and pillow slowly toward you, prop the back with pillows. To move him up on the pillows have assistance and lift with the draw-sheet and pillow; if alone, with the hands clasped under the shoulders. To move from one bed to another, place the empty bed lengthwise of the one occupied, and have four persons to lift at the four corners of the sheet, and the draw-sheet. Carry back in the same manner, and remove the soiled sheets which have been used in carrying him by turning him on his side and rolling the sheet lengthwise close to the body and remove by turning him on his back again. To make a good bed, place a comforter on the mattress, then a rubber sheet, then a bolster. Keep in place by pinning the under sheet on all sides to the mattress; over the middle of the bottom sheet place a piece of rubber sheeting, five feet long by three feet wide and over that the draw-sheet, as this is more easily changed than the under-sheet. By pinning securely to the bed with safety-pins wrinkles may be avoided."

(7) In speaking of damages, and the difficult position in which a physician is often placed in his endeavor to do his duty to all concerned, I am well aware of how perplexing a question I am bringing forward. Such questions have troubled many an honest surgeon, and there is little doubt but many a one's judgment in such matters has been questioned by some of his brethren in the profession. It would have been amusing, if it had not been fatiguing, to have answered the multitude of questions which have been asked by the friends

of patients relating to this point: many of them were of such a nature that in order not to be compromising to a physician's judgment, great deliberation would be necessary. In such an accident as that of the Buzzey bridge, it was especially difficult to give answers on account of the large varieties of injuries received. We would call especial attention, however, in this connection, to injuries of the back, for they are the ones that are particularly puzzling. The results of other injuries can usually be correctly prognosticated, but those of the back often render it almost impossible to form a correct judgment. This is often due to the fact that a physician cannot tell just what certain symptoms will lead to, and because he knows that what appears to be the most simple injury may in time develop into the most disastrous condition, in some cases many years after the original injury. It is this that makes railroad companies so fearful of what may develop from accidents, and the community as well is on the *qui vive*, for they feel that an appeal to the courts is often their surest way of gaining the largest damages. It is just here that the value of an honest and educated physician is clearly seen. There is a tendency among many to extract all they can from corporations who have injured them, and we believe that they should be paid every dollar that it is worth, as far as this is possible. It is known that they are often very successful in this, not only in this country but in England, for Mr. Bryant, of Guy's Hospital, told the writer that heavy damages were almost a foregone conclusion after railroad accidents, even if medical men almost demonstrated malingering. I will mention two kinds of malingerers, those who carry it on with consummate skill for the purpose of getting as heavy damages as possible, and those who from nervous shock, and especially where the menstrual function is disturbed, or from the uncertainty attending settlement which permeates the homes of such patients even where they do not mean to allow it to influence them. There has been malingering, it is said, in persons who claimed damages for accidents which never happened in connection with the corporations from which such damages are claimed. It often requires the greatest wisdom to detect such imposters. Injuries to the back offer a wide field from the known uncertainty of their results. "Holmes' Surgery" says "that a broken back is known generally to be one of the gravest of accidents. The location of the injury must be considered, remembering that if it be below the level of the second lumbar vertebra, it may be expected that the patient, although the displacement is great, will retain motor power and sensation in his lower extremities and will recover. Should the fracture be through either of the vertebrae in which the terminal portion of the cord, surrounded by the roots of the nerves, is situated, the paraplegia may be partial; although complete the patient may have some hope of recovery. Fractures in the dorsal region are always unfavorable, but more so the higher the fracture to correspond with increased number of intercostal muscles thrown out of action in breathing; in fracture of cervical vertebrae, the surgeon counts only by days how long a patient will live." Such being the result of fractures to the vertebrae the surgeon will be called upon to determine if certain injuries will produce such symptoms as may be expected from hidden fracture or some injury which will not reveal itself for years. All must remember that the honest surgeon may be called

upon to act as a referee between the injured and the corporation at fault; that he will decide according to his best judgment what opinion he will give; that he belongs to neither party, but will see to it as far as his opinion is asked that the injured shall be paid according to their injuries; that he will not be a party to anything but the strictest honesty, and will conduct the business as he would his own, according to the strictest business principles.

REPORT ON DISEASES OF CHILDREN.

BY T. M. ROTCH, M.D.

PRIMARY NEPHRITIS IN INFANCY.¹

THE importance of examining the urine in the early months of life in cases where, although the exact diagnosis of the organ affected is somewhat obscure, yet the group of symptoms representing the disease point elsewhere, rather than to the kidney, and the fact that very little is known about the clinical aspect of renal diseases in infants, in comparison with diseases of other organs, makes the investigations on this subject, by Dr. L. E. Holt, of more than ordinary interest.

Dr. Holt reports twenty-three cases of primary nephritis under the age of two years, and most of them under ten months. Of these, the diagnosis in nineteen cases was without much doubt correct, and in the remaining four probable. In all of these nineteen cases there seemed to be satisfactory evidence that they were independent of infectious diseases, and this opinion takes into consideration, also, the fact that scarlatinal nephritis not infrequently shows itself when the primary disease has been overlooked. Diphtheria, as a primary cause, was also carefully considered in each case. Eleven cases out of the nineteen died, and eight recovered. Autopsies were held in ten of the eleven fatal cases. In the single fatal case without an autopsy, the diagnosis rested principally on scanty urine, with an abundance of casts, a large amount of albumen, dropsy, and death in a comatose condition. In the eight cases of recovery, the diagnosis was made chiefly from the examination of the urine.

It is not to be supposed that the mortality here given of eleven cases out of nineteen represents the real death-rate from these forms of nephritis: the truth, no doubt, is that a great proportion of the milder cases escape notice altogether; and it is a significant fact, also, that in six of the fatal cases the diagnosis was not made until after the autopsy, and that, in most of these cases, the nervous symptoms had been the engrossing ones during life. This fact alone shows how easy it is for even careful diagnosticians to overlook cases of this class, and, no doubt, a large number of them pass under other names, even when fatal, unless autopsies are made.

The symptoms of acute primary nephritis, as a rule, are misleading, and tend to attract the attention to the brain or digestive system, rather than to the kidneys, the diagnosis only being made possible by repeated examinations of the urine, it being fair to say that the urine is seldom examined in infants under ten months of age, on account of the difficulty of obtaining a sufficient amount for analysis, and the possibility, also, of one specimen being comparatively free from abnormal constituents, while a second might show them to be in such abundance as to make the diagnosis quite clearly.

The catheter is, of course, the most reliable means for obtaining the urine for diagnostic purposes, and importance should not be attached to the presence of a few blood-globules, as these will almost always be found.

A study of the cases reported by different writers brings out the fact that acute nephritis in infancy may declare itself by unusual symptoms, and by an absence of symptoms which are usually considered to point towards renal disease. Thus, according to Dr. Holt, dropsy was not found to be a prominent symptom: it was noted in only five cases, and in one of these was not present till late in the disease. The quantity of urine passed is a symptom of which much is made in adult cases, and, when taken in connection with the specific gravity, it is very valuable for diagnosis. In infants, the difficulty in collecting the entire amount for the twenty-four hours' urine are very great, and it is especially significant that in only seven cases is it stated that the urine was so scanty as to attract attention. In five cases, the disease was ushered in by gastro-intestinal symptoms. Vomiting was present with more or less frequency throughout the disease in four cases. In six cases, some looseness of the bowels existed. Fever is mentioned in ten cases: in two cases the pyrexia was remarkably great, and in five cases it was high for a period varying from three days to four weeks. The pulse presented nothing of special interest. It was usually rapid with the high temperature, and weak only towards the close. The respiration was peculiar in five cases: in one there was very marked irregularity; in two it was very rapid, independently of high fever or pulmonary symptoms; in two more there was decided dyspnoea: these symptoms were probably uræmic. Nervous symptoms were prominent in almost every case; in several they engrossed the attention of the attendants. Convulsions were present in five cases, usually at the onset, or, more correctly, this was the first symptom noticed. This emphasizes the importance of the examination of the urine in every case of convulsions in children. An extreme degree of restlessness and irritability was seen in several other cases where convulsions seemed imminent, but did not occur. In some, high fever accompanied these symptoms, but in others they were independent of this influence. In three cases marked drowsiness existed, but in only one case was there complete coma.

The other nervous symptoms present were delirium, rigidity of the muscles of the neck, and irregular and contracted pupils. In two cases there was, from the very beginning, marked prostration, without variation in temperature or other striking symptoms; and, in one case, this, with the very rapid respiration, were the really only positive symptoms, and yet the case proved fatal in three days. The quantity of urine obtained for examination was nearly always so small, that but few observations upon the specific gravity could be made. Casts in abundance were present in nine cases. In three of these cases the urine was taken from the bladder *post-mortem*, a fact, which however, does not invalidate the significance of the casts. Casts were found in every instance, except one, in which a microscopical examination was stated to have been made, and in this case it was examined but once; but so small a quantity of urine was obtained, that the result could hardly be considered conclusive that they were not present. Albumen was present in large amount in thirteen cases: in four of these the urine was taken from the bladder *post-mortem*.

¹ Archiv. of Pediatrics, January, 1887.