irregular epithelial cells arranged in a loose stroma in quite solid heaps and columns, which have grown diffusely throughout the coats of the stomach, following apparently the lymph vessels, the infiltration being most pronounced in the submucous and subserous coats, but invading the muscular coat also, in the form of a branching small-alveolated carcinomatous network.

CECAL HERNIA WITH A CLASSIFICATION OF SIXTY-THREE CASES.

BY JOHN H. GIBBON, M.D.

SURGEON OUT-PATIENT DEPARTMENT OF THE PENNSYLVANIA HOSPITAL;
INSTRUCTOR IN SURGERY, PHILADELPHIA POLYCLINIC; SURGICAL
REGISTRAR, PHILADELPHIA HOSPITAL.
PHILADELPHIA, PA.

My attention was turned to the subject of cecal hernia by a case which occurred in the service of Dr. T. S. K. Morton at the Polyclinic Hospital about two years ago and later by another upon which I saw Dr. Richard H. Harte operate at the Pennsylvania Hospital, and it is due to the kindness of these gentlemen and of others who have allowed me the use of their unreported cases, that I am enabled to make the following report. By looking up the literature of this variety of hernia and by making inquiries among operators largely experienced in herniotomy, I have been able to collect and classify sixty-three cases, and from them draw certain conclusions which I trust may prove of interest. In the appended table of cases I have only included the inguinal and femoral varieties of hernia, and of these only such as have been proved clearly to contain some portion of the cecum or appendix, or both.

The history of cecal hernia dates back to the sixteenth century, since when at frequent intervals it has been the subject of much discussion. As to its frequency of occurrence it is rather difficult to speak definitely, but, judging from the number of cases recently reported and the number met with in the experience of single operators, one is led to conclude that the condition is more frequent than is generally supposed. Coley of New York, for instance, reports sixteen cases of hernia of appendix or cecum in 351 operations for femoral and inguinal hernia, and says he has frequently been able to diagnose the presence of the appendix in the sac of herniæ where no operation was done. Another surgeon whose experience is limited to twenty-five or thirty herniotomies has met with the condition four times, but this is unusual, as many men who have had a much larger experience have never had a case. The five cases of Wright of Manchester, which were operated upon and are found in this list, occurred in a series of twenty-four herniotomies done in children.

As to the age at which this form of hernia is most likely to be found, authorities have differed, but it certainly seems that it is in early childhood. Treves has said that it "is practically limited to adults," but Wright, Shepard and others regard it as most frequent in children. It is interesting to observe in this connection that Coley, whose work has largely been among children, has reported sixteen cases of cecal hernia, only one of which was in a patient over fifteen years of age, in 351 operations for femoral and inguinal hernia, while Halsted, in 291 operations for inguinal hernia, had only five cases, and in only two of these was the patient over 15 years of age. Combining these statistics we find that in 642 hernioto-

mies there were twenty-one cases in which cecum or appendix was found in the sac, and of these twenty-one only three occurred in patients over 15 years of age. Of the present sixty-three cases, thirty-three were in patients under 15 years of age, five between 15 and 40 years, seven between 40 and 50 years, and fifteen in patients past 50 years. The oldest patient in this series is that of Dr. W. O. Roberts, a man of 80 years. The frequency of this condition in old age or rather after middle life, as shown in these cases, is probably due to the laxity of the tissues at this time of life.

Sex bears an important interest in consideration of this subject, the condition rarely occurring in women, and particularly is this true of the congenital variety. Only eight of the sixty-three are found in women and these patients are all over 40 years of age, and all are femoral with one exception. The anatomic differences, the infrequency of inguinal hernia in women, and the descent of the testicle in the male accounts for the relative frequency in the two sexes.

The right inguinal is the variety of hernia in which the cecum is most likely to be found, next, the right femoral, then the left inguinal and finally the left femoral. Of the present series forty-four are right inguinal, six right femoral, six left inguinal and one left femoral.

When occurring in adults the condition is most likely to be acquired, while in children it is usually congenital; of the thirty-six acquired cases in the present list only eleven are in children; and of the thirty-three congenital cases all are in children. Of the seven left sided herniæ, three were in children and congenital, and four in adults over 58 years of age and acquired. A great deal has been written regarding the cause of this variety of hernia; in children, the condition, being nearly always congenital, or coming on soon after birth, is more easily explained than in adults where it is acquired. During the process of fetal development the cecum is anchored more or less loosely to the front of the spine by its mesentery, and makes a pretty general circuit of the abdominal cavity before it at last settles down in the right iliac region; and it would seem that during this period it would be most likely to find its way outside the abdominal cavity. Wrisberg has accounted for congenital hernia of the cecum by showing how this portion of the bowel may follow the descent of the testicle in the processus vaginalis. Others contend that in fetal life there is a connecting band between the appendix and cecum and the testicle, and in several of the cases here reported the operator found a band attaching the appendix to the testicle so firmly that division with scissors was necessary before reduction could be made. Macready, who has given this subject a great deal of attention, writes that, "in congenital cecal hernia the peritoneal fold (plica vascularis) is generally still present, together with an unusual amount of unstriped muscle, distributed on the posterior wall of the sac and extending from the testis upward to the cecum." Occasionally the cecum does not become firmly fixed in its normal position and in such instances it has been shown to be of much smaller size than is ordinarily the case; a fact which would render hernia of this gut more likely and would probably account for some of the cases of the acquired variety. Still hernia of the cecum coming on in middle life is not easily explained. I am inclined to think, from several of the histories of patients here reported, that the

Surgeon.	Reference.	Age	Variety.	Acquired or congenital.	Contents.	Condition of contents.	Results.	Remarks.
1 Austin, J. E.	N. Y. Med. Rec., 1891, 30, p. 622.	M., 25	Right inguinal, strangulated.	Acquired, duration 3 days.	Cecum, appendix and 3 in. of ascending colon.	No sac could be found, cecum adherent to serosal tissues, pale, appendix free, contents inflamed.	Recovery.	Appendix 3½ in. removed. Thinks concretions may have escaped with pus without being detected.
2 Annandale, Thos.	London Lancet, 1889, 1, p. 627.	F., 60	Right femoral, irreducible.	Acquired, duration 20 years.	Appendix alone.	Pus and blood in and around neck of sac, occluding it, appendix perforated, but no gas escaped.	Recovery.	Hernia was never altogether reducible and on day before admission became suddenly larger. Cecum was unintentionally opened. Condition found postmortem; no operation.
3 Bennett, W. H.	Med-Chir. Trans., London, 1890, lxxvii, 129.	M., 52	Right inguinal, strangulated.	Acquired, duration 18 years.	Cecum, containing invaginated ileum without sac.	Below cecum was found a sac containing omentum which was adherent to testicle.	Death.	
4 Black, R. S.	Brit. Med. Jour., 1890, ii, p. 1177.	M., 60	Left inguinal, partially reducible.	Acquired, duration 5 years.	Cecum and appendix.	Appendix adherent to cecum, but not to sac.	Recovery.	
5 Coley, W. B. (1).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 22	Right inguinal, irreducible.	Not given.	"Cecal."	Not given.	Recovery.	Hernia was large.
6 Coley, W. B. (2).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 4	Left inguinal, irreducible.	Congenital.	"Cecal."	Not given.	Recovery.	Left inguinal hernia also present.
7 Coley, W. B. (3).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 4	Right inguinal, irreducible.	Congenital.	"Cecal."	Very much congested.	Recovery.	
8 Coley, W. B. (4).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 1	Left inguinal, strangulated.	Congenital.	Cecum and appendix.	Appendix 4 in. long, and adherent to sac throughout.	Recovery.	Appendix was outlined by palpation before operation.
9 Coley, W. B. (5).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 10	Right inguinal, partially reducible.	Congenital.	"Cecal."	Appendix gangrenous and was removed.	Recovery.	Died later from marasmus.
10 Coley, W. B. (6).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 7½	Right inguinal, strangulated.	Congenital.	Cecum and appendix.	Not given.	Recovery.	Large.
11 Coley, W. B. (7).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 8	Right inguinal, reducible.	Not given.	"Cecal."	Not given.	Recovery.	
12 Coley, W. B. (8).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 4½	Right inguinal, reducible.	Congenital.	Cecum.	Not given.	Recovery.	
13 Coley, W. B. (9).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 4½	Right inguinal, reducible.	Congenital.	"Cecal."	Not given.	Recovery.	Hernia also present on left side.
14 Coley, W. B. (10).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 8½	Right inguinal, reducible.	Congenital.	Appendix alone.	Adherent to sac.	Recovery.	Appendix 5½ in.
15 Coley, W. B. (11).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 4	Right inguinal, irreducible.	Relapsed after operation by another surgeon.	Cecum.	Cecum adherent everywhere, no sac found.	Recovery.	At first operation cecum was found adherent to testicle, which organ was removed.
16 Coley, W. B. (12).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 6	Right inguinal.	Acquired, duration 2 years.	Appendix alone.	Adherent by mesentery to sac.	Recovery.	Appendix 5 in. long.
17 Coley, W. B. (13).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 7	Left inguinal.	Congenital.	Appendix.	Not adherent.	Recovery.	Appendix 4½ in.
18 Coley, W. B. (14).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 14	Right inguinal, reducible.	Congenital.	Cecum.	Not covered by peritoneum posteriorly.	Recovery.	Hernia was large.
19 Coley, W. B. (15).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 8	Right inguinal, reducible.	Acquired, duration 4 years.	Appendix.	Adherent, removed.	Recovery.	
20 Coley, W. B. (16).	Annals of Surgery, Apr. 1895, Mar. 1897.	M., 9	Right inguinal.	Congenital.	Appendix alone.	Adherent, removed.	Recovery.	
21 Collier, Mayo.	London Lancet, 1896, ii, p. 1601.	M., 39	Right inguinal, strangulated.	Acquired, duration 36 years.	Cecum with appendix and portion of ileum.	Cecum adherent posteriorly.	Recovery.	Very large.
22 Corson, E. S.	Personal communication from Yunggo, Burman.	M., 10	Left inguinal, irreducible.	Congenital.	Cecum, appendix and portion of ileum.	Cecum adherent and separated with difficulty.	Death.	Appendix was removed; hernia became suddenly larger and strangulated on day of admission.
23 Harte, R. H. (1).	Personal communication.	M., 52	Right inguinal, strangulated.	Acquired, 36 years.	Cecum, appendix and portion of ileum.	Cecum adherent and separated with difficulty.	Recovery.	
24 Harte, R. H. (2).	Personal communication.	M., 16	Right inguinal.	Acquired.	Cecum and appendix.	Cecum adherent to sac.	Recovery.	
25 Halsted, W. S.	Personal communication (1).	M., 8	Inguinal, reducible.	Acquired shortly after birth.	Cecum and appendix.	Appendix adherent to sac.	Recovery.	Hernia very loose; appendix not removed.
26 Halsted, W. S.	Personal communication (2).	M., 3	Inguinal, in direct, strangulated.	Congenital.	Cecum, appendix and ileum.	Ileum adherent to sac.	Recovery.	Large hernia.
27 Halsted, W. S.	Personal communication (3).	M., 1¾	Inguinal, reducible.	Congenital.	Cecum and appendix.	No adhesions to sac.	Recovery.	Large hernia; appendix removed.
28 Halsted, W. S.	Personal communication (4).	M., 48	Inguinal.	Acquired; duration since childhood.	Cecum and appendix.	No adhesions, part of sac formed by meso-ecum.	Recovery.	Very large hernia.
29 Halsted, W. S.	Personal communication (5).	M., 35	Inguinal, strangulated.	Acquired; duration 6 hours.	Cecum, appendix and 3 feet of ileum.	Appendix injured by trauma, which produced hernia.	Recovery.	Appendix removed.
30 Keetley, C. B.	Met. Press and Circ., 1890, i, p. 58.	F., 53	Right femoral, irreducible.	Acquired; duration 6 months.	Appendix alone, somewhat swollen.	No distinct peritoneal sac.	Recovery.	Appendix removed; a portion of hernia reduced before operation.
31 Knowles, J. H.	Boston M. & S. Jour., 1896, cxxxiv, p. 215.	M., 49	Right inguinal, strangulated.	Congenital.	Cecum, appendix and small gut.	Contents congested; "stinking pus" in sac.	Recovery.	No perforation of appendix, not removed.
32 Le Conte, R. G.	Personal communication (1).	M., 41	Right inguinal, strangulated.	Acquired; duration 32 years.	Large portion of small intestine and appendix.	Appendix adherent at internal ring.	Death.	Adhesions very dense. Dr. Le Conte thinks portion of bladder was present in sac.
33 Le Conte, R. G.	Personal communication (2).	M., 41	Right inguinal, strangulated.	Acquired; duration 22 years ago.	Cecum, appendix and small intestine.	Appendix adherent at internal ring.	Recovery.	
34 Le Conte, R. G.	Personal communication (3).	M., 54	Right inguinal, partially reducible.	Acquired; duration 35 years.	Cecum, appendix and small intestine.	Almost universally adherent to sac.	Death.	

35	Le Conte, R. G.	Personal communication (4).	Right inguinal, reducible.	Acquired; duration 1 1/2 years.	Cecum, appendix and small intestine.	Recovery.	Hernia also on left side, but right was much larger.
36	Morton, T. S. K.	Personal communication.	Right inguinal, strangulated.	Acquired; duration 5 years.	Cecum, appendix and ileum.	Recovery.	
37	Paget, Stephen (1)	London Lancet, 1891, i, p. 928.	Right inguinal, strangulated.	Congenital.	Lower part of sac contained ileum, upper part cecum.	Recovery.	
38	Paget, Stephen (2)	London Lancet, 1891, i, p. 928.	Right inguinal, strangulated.	Congenital.	Cecum and a very large appendix.	Recovery.	
39	Paget, Stephen (3)	London Lancet, 1891, i, p. 928.	Right inguinal, strangulated.	Congenital.	Cecum, appendix and small intestine.	Death.	Perforation of peritonaeum, sac filled with feces; artificial anus made.
40	Rand, H. W.	Brooklyn Med. Jour., 1893, vii, p. 751.	Right femoral, strangulated.	Acquired.	Cecum, 6 inches of colon and small intestine.	Death.	No concretions.
41	Roberts, W. O. (1)	Med. Age, Detroit, 1896, vol. xiv.	Left inguinal, strangulated.	Acquired; duration many years.	Cecum and appendix.	Recovery.	
42	Roberts, W. O. (2)	Med. Age, Detroit, 1896, vol. xiv.	Right inguinal, strangulated.	Acquired.	Cecum and large part of ileum.	Recovery.	
43	Roberts, W. O. (3)	Medical Age, Detroit, 1896, Vol. xiv.	Right inguinal, strangulated.	Congenital.	Cecum and appendix, with pin protruding from appendix.	Recovery.	Pin protruded from posterior wall of appendix which was removed.
44	Roberts, W. O.	Medical Age, Detroit, 1896, Vol. xiv.	Right inguinal, strangulated.	Acquired.	Cecum and appendix.	Recovery.	
45	Roberts, John B.	Annals of Surgery, 1895, 23, p. 611.	Right inguinal, strangulated.	Acquired, duration many years.	Cecum with absence of appendix.	Recovery.	Very large hernia, two operations previously.
46	Shepard, F. J. (1)	Annals of Surgery, 1892, 12, p. 122.	Right inguinal, strangulated.	Acquired, duration 11 years.	At upper part of sac a mass of omentum and cecum, latter covered only in front with peritonaeum.		Thinks this was a double hernia, became suddenly larger 2 years ago, before which time was reducible.
47	Shepard, F. J. (2)	Annals of Surgery, 1892, 12, p. 122.	Right inguinal, irreducible.	Acquired, duration 3 1/2 years.	Cecum.	Recovery.	
48	Silcock, A. Q.	British Medical Journal, 1888, i, p. 294.	Right inguinal, strangulated.	Congenital.	Cecum and appendix.	Recovery.	Large hernia.
49	Stevens, W. H.	Alabama Medical and Surgical Age, 1898, 4, vi, p. 521.	Right inguinal, strangulated.	Acquired.	Appendix alone, gangrenous, sac filled with pus.	Recovery.	Hernia on left side also.
50	Treves, Frederick	British Medical Journal, 1887, i, p. 382.	Right inguinal.	Acquired, duration 6 years.	Two sacs with common neck; outer contained cecum, appendix and portion of colon and ileum; inner contained ileum.		Hernia large.
51	Treves, Frederick	British Medical Journal, 1887, i, p. 382.	Right femoral, reducible.	Acquired, duration 2 years.	Cecum and appendix.		Cecum and appendix easily palpated.
52	Van Hook, W.	Medical and Surgical Reporter, 1896, 74, p. 813.	Right inguinal, strangulated.	Acquired, duration 1 1/2 years.	Sac contained large amount of jelly-like amber colored fluid.		Proved to be a cyst of appendix, which was ruptured in reduction.
53	Walker, John B.	Medical Record, 1897, ii, p. 227.	Right femoral, strangulated.	Acquired, duration 29 years.	Cecum, appendix and ileum.	Recovery.	Constriction divided but yet not reduced for several days on account of its congested condition.
54	Wright, G. A. (1)	British Medical Journal, 1887, i, p. 506.	Right inguinal, strangulated.	Acquired, duration 2 months.	Cecum, appendix and ileum.	Recovery.	Operated upon twice previously, same contents.
55	Wright, G. A. (2)	British Medical Journal, 1887, i, p. 506.	Right inguinal, reducible.	Congenital.	Cecum, appendix and ileum.	Recovery.	Also has umbilical hernia.
56	Wright, G. A. (3)	British Medical Journal, 1887, i, p. 506.	Right inguinal.	Acquired, duration 11-12 weeks.	Cecum, appendix and ileum.	Recovery.	Large hernia.
57	Wright, G. A. (4)	British Medical Journal, 1887, i, p. 506.	Right inguinal, reducible.	Acquired, when months old.	Cecum, appendix and ileum.	Recovery.	Also has umbilical hernia.
58	Wright, G. A. (5)	British Medical Journal, 1887, i, p. 506.	Right inguinal, reducible.	Acquired, duration 2 weeks.	Appendix plainly palpated.	Recovery.	Hernia on left side also; contents reducible except appendix, which could be plainly palpated.
59	Wright, G. A. (6)	British Medical Journal, 1887, i, p. 506.	Right inguinal.	Congenital.	Cecum, appendix and omentum.	Recovery.	All symptoms of obstruction were here present.
60	Wright, G. A. (7)	British Medical Journal, 1887, i, p. 506.	Right inguinal.	Congenital.	Appendix plainly felt before operation.	Recovery.	Patient's two brothers were ruptured.
61	Waring, H. J. (1)	St. Barth. Hos. Rep., 1891, xxvii, p. 180.	Right femoral, strangulated.	Acquired, duration 12 years.	Appendix alone.	Recovery.	Dr. DaCosta thinks this hernia was congenital.
62	Waring, H. J. (2)	St. Barth. Hos. Rep., 1891, xxvii, p. 180.	Left femoral, incarcerated.	Acquired, duration 24 years.	Cecum, appendix and portion of ileum.	Recovery.	Contents greatly congested Large bowel was to the outside and behind and was not entirely covered with a very large mass of omentum.
63	DaCosta, J. Chal- mers	Personal Communication.	Right inguinal, incarcerated.	Acquired (?) when 15 years old.	Cecum, appendix, portion of colon and ileum with a very large mass of omentum.	Recovery.	

cecum has been dragged down by a pre-existing hernia of the ileum. Given a small cecum, and perhaps one freely movable, and a hernia of the ileum it would seem plausible that some additional muscular effort might produce a hernia of the large gut. Dr. Harte's second case would rather show the reverse of this argument, however, as here the hernia of the cecum undoubtedly ante-dated that of the small bowel, which lay near the internal ring and was easily reduced while the cecum was below and firmly adherent. In several instances the appendix has been found just within the internal ring while the rest of the sac was filled with coils of the ileum; one of Dr. Le Conte's cases illustrates this condition.

Regarding the mobility of the cecum, Treves, by an examination of 100 bodies, has shown it to be very great; in many instances he could make it touch the liver and frequently was able to carry it to any part of the left pelvis. The various positions in which the appendix has been found would tend to confirm this opinion. The question regarding the sac of cecal hernia is interesting; Mr. Treves has done much to convince the profession that the old teaching of absence of sac in these cases is wrong. The idea of complete or partial absence of peritoneal covering in cecal hernia has been traced to Scarpa and it was until recently the prevalent belief. In his examination of 100 bodies Treves found the average distance from the tip of the cecum to the reflection of the peritoneum from the posterior wall of the colon to be four inches. In a very few of the cases here tabulated the sac was deficient posteriorly, but in nearly all there was a complete sac.

Probably the most interesting part of this subject is the condition in which the contents of a cecal hernia are found. In the present list twenty-eight were strangulated, twelve reducible, eleven irreducible, ten not stated, and two incarcerated. It will be observed in looking over these cases that beside the tendency to strangulation the adhesions between the contents and to the sac are more frequent in this variety of hernia than in other kinds. I was surprised not to find a greater proportion of diseased appendices in this condition. Bajardi found the appendix diseased in 30 per cent, which is much larger than is here presented although there will be found in this list several cases of very far advanced disease of the appendix. One of the most interesting cases is that of Dr. Stevens of Cardiff, Ala., in which the sac was filled with pus and the sole occupant a broken-down appendix, which was adherent all round its base to the neck of the sac, thus protecting the peritoneal cavity. Dr. Rand of Brooklyn, reports another case of perforated appendix and pus in the sac. A unique case is the one of Dr. W. O. Roberts of Louisville, in which he found the cecum and appendix in the sac and a pin protruding from the posterior wall of the appendix. A specimen in Guy's Hospital Museum also shows a pin protruding from an appendix which was present in the sac of a hernia. Dr. Van Hook reports the very unusual condition of a cyst of the appendix, ruptured in reduction and the sac filled with cyst contents. Annandale's case is very much like that of Dr. Stevens. He found pus and blood in and around the sac, the appendix being adherent within the neck. It will be observed that inflammation of the appendix has occurred in those instances in which it was alone in the sac, Dr. Rand's case being the only exception. There are several instances in this

series where hernia was present on both sides, but, probably the most interesting case of this kind is reported by Broca, who found in the right sac, a loop of the colon, and in the left, the sigmoid flexure, cecum and several inches of ascending colon, and ileum. The presence of concretions and foreign bodies in the appendix are rare in this list of cases, again making a contrast with Bajardi's series. He studied ninety-eight cases and found the appendix inflamed in thirty, containing foreign bodies in eleven, perforated in sixteen, and gangrenous in four. In comparatively few of the present cases was the appendix diseased; its condition is frequently not stated and the supposition is that in these instances it was healthy. Foreign bodies were present in two cases and perforation occurred in five. Before leaving the pathology of cecal hernia two of the cases in this series should be mentioned. One is that of Dr. Bennett of London, who found the cecum to contain a portion of invaginated ileum. The other is one of congenital absence of appendix, reported by Dr. John B. Roberts.

The diagnosis of cecal hernia is very seldom made before the sac is opened, except, perhaps, in children and in old people, where the wall is very thin and permits of palpation of the appendix. Coley has been able to make the diagnosis on several occasions in children, and he and others have been able to reduce all the contents of a hernia except the appendix, which was adherent and could be easily outlined. Several of the cases here tabulated were diagnosed before operation. In nearly all the cases where the cecum was in the sac, the hernia is described as large, and when the appendix alone was present there was usually pain and tenderness.

The treatment of this variety of hernia varies little from that applied to hernia generally, unless in cases where a diagnosis is made, and then I think an early operation should be the rule, because of the tendency to strangulation and disease of the appendix. Particularly is this true where the appendix alone can be felt in the sac and is painful and tender on palpation, because here suppuration is more likely to occur than where other portions of intestine accompany it. The removal of the appendix will depend upon its condition and the attitude of the individual operator toward the general question of its removal.

Of the sixty-three cases here appended thirteen have never before been reported and of the others I have endeavored to avoid any that might be included in other classifications.

324 South 19th Street.

CONSERVATIVE SURGERY.

Presented in the Fourth Annual Meeting of the American Academy of Railway Surgeons at Chicago, Ill., Oct. 6-8, 1897.

BY RICARDO ORTEGA, M.D.

CHIEF SURGEON MEXICAN INTERNATIONAL RAILWAY.
DIAZ, MEXICO.

The large number of maimed persons I have seen among railway employes, prompts me to make a few remarks with a view to enlisting co-operation in preventing the unnecessary mutilation of the injured.

It is true that we frequently encounter ungrateful patients who blame us because the member we have saved, after toiling with it more than we would have been obliged to do had we resorted to amputation, is not in as good condition as it was before the acci-