is added to the paper illustrating the macroscopic appearances of the brain in the first case.

Mr. SHARKEY reports a *Case of Asymmetry of the Brain, presenting Peculiarities which Bear upon the Question of the Connection between the Optic Nerves and Certain Definite Areas of the Cerebral Cortex*. The patient was a female, aged 25, and the condition was "evidently a congenital abnormality, and was accompanied by a certain diminution in size of the right arm and leg, and by rigidity of the former." Death was due to traumatic causes. The following were the most striking characteristics of the specimen: (1) A general arrest of development of the left hemisphere. (2) The small size of the corresponding crus cerebri and anterior pyramid. (3) The absence of the angular gyrus and superior temporo-sphenoidal convolution, together with the fusion of some of the other convolutions of the left temporo-sphenoidal lobe. (4) The small size of the optic tract, optic thalamus, and corpora geniculata on the same side. Two excellent plates accompany Mr. Sharkey's paper.

Dr. THIN contributes a short paper *On the Bacillus of Leprosy*, in which he gives the results of microscopic examination of leprous tissue from three cases, and adds to his paper two good plates of the microscopic appearances.

Mr. FOX presents a short article *On Urticaria Pigmentosa, or Xanthelasmaidea*, with a tabular summary of nineteen cases of the disease, drawn from all sources.

It is somewhat unusual to find a volume of transactions in which the papers are so uniformly instructive and readable as are those in the one before us. The subjects are varied, and are carefully and thoroughly treated, with full references to their literature, and, when desirable, illustrated by admirable plates. Taking it all in all, this volume forms a very valuable contribution to medical literature.

R. P. R.

ART. XXII.—*Le Piu Recenti Modificazioni del Taglio Cesareo, studio storico-critico* del Dottor LUIGI MANGIAGALLI, Professore di Ostetricia nella Regia Università di Sassari.

The More Recent Modifications of the Cæsarean Section. A Critical-Historical Study. By Dr. LUIGI MANGIAGALLI, Professor of Obstetrics in the Royal University of Sassari, Island of Sardinia, Italy. 8vo. pp. 210. Milan: Pietro Agnelli, 1884. (From *Annali di Ostetricia*, Anno vi. and vii. 1882-4.)

OF the younger gynaecologists of Italy, perhaps no one has been more devoted to literary work in the last decade than the author of the monograph under view. Being a good linguist; having visited many of the most celebrated hospitals of Europe, with a view to improving the construction of those in Italy; an earnest statistical investigator in obstetrical and gynaecological questions; and a former member of the staff of Santa Caterina Obstetrical Hospital and School of Milan, where in 1879 and 1880 he twice performed the Porro operation, with success to mother and child, Prof. Mangiagalli is eminently fitted for preparing the historical paper above named. We only regret that the post assigned him after

running the *concorso* in 1882 has for a time confined him to the narrow limits of an island, and thus diminished his facilities for literary work. But, notwithstanding this obstacle, he has twice prepared extensive papers upon the Porro operation since he obtained his professorship, and this second one before us has not only abstract reports of 140 operations, but gives a history of the experiments, which step by step after 107 years bore fruit in its entire success in the case of a parturient woman. To this portion of the volume he has added a record of the cases of laparotomy, with the early history of this form of delivery and its modifications, and an account of the many changes which have been made, with a view to greater safety, in the manner of performing the old Cæsarean operation, by Lebas, Polin, Barnes, Spencer Wells, Cohnstein, Frank, Kehrer, and Sänger, as well as minor modifications by others.

In the early days of the Cæsarean operation, which, as far as can be ascertained, was first performed upon the living woman less than four hundred years ago, unless it may have been earlier self-inflicted, which to judge from more recent cases is quite probable, operators confined their attention to the location and direction of the abdominal incision, the proper way and place of opening the uterus, and the method of closing the abdominal wound. No one appears to have thought it requisite to sew up that of the uterus, until Lebas did so in 1769, and again with success upon the same woman in 1771. This improvement appears to have been for a long period lost sight of until repeated in 1828 and 1852 in the United States, the latter operation having been successful. This operation, by the late Dr. Frank E. Polin, of Kentucky, was the first in which silver wire was used, and the fact that he performed it was known to but few physicians, until the record of the case was obtained from his notes in October, 1880. The value of silver wire was, however, demonstrated and made known in 1867, when Dr. Brickell of New Orleans, La., operated upon and saved a patient after a prolonged labour. This operator did not know of the Polin case, nor was he aware of the fact that Dr. Townsend of New Haven, Conn., had sutured a uterus with success thirty-six days earlier, using fine hemp as the material. With these two cases reported in 1868, we may date the revival and establishment of the use of the uterine suture. With this revival came experiments in material; and silk, thread, horsehair, animal fibre from skins, tendons, peritoneal membrane, etc., were made use of. Caoutchouc was also employed because of its elasticity; and finally pure silk, which it is claimed disappears in time by absorption, became, and is perhaps now the favourite. The antiseptic method of Lister has in a measure revolutionized the minor details of the operation, and carbolyzed ligatures, washings, and dressings are undergoing a trial. Finally, the failure in Germany of the Porro-Cæsarean improvement, in materially diminishing the mortality of the old method, has directed the attention of gynecologists to the latter, who are endeavouring to devise some means by which the uterine wound may be kept from gaping, made impervious to fluids, and its early healing secured.

It may be of interest here to state that silver-wire has been used in the United States in suturing the uterus in 12 Cæsarean cases, with 6 recoveries; silk in 10, with 3 recoveries; fine hemp in one, case saved; carbolyzed catgut in one, case lost; and some material not named (one suture), case lost. Of these 25 operations, 6 were early and 19 late; 3 early and 12 late operations were fatal. The statistics of the United States

show that but two cases out of nine were operated upon in good season, or 28 out of 126. Of these 28, there were no sutures used in closing the uterus in 22, and of these, 18 recovered. We may possibly diminish our mortality in *early elective cases* by some improved uterine suture, but the observations of the reviewer lead him to believe that *reform in the period of operating will accomplish much more than changes in the detail.*

As all the forms of operation comprised by the term *gastro-elytrotomy*, as well as the improved method of Prof. T. Gaillard Thomas, entitled by him *Laparo-elytrotomy*, have a chronological precedence over the Porro operation, the reviewer takes the liberty of considering the latter in its proper chronological order.

Gastro- or Laparo-elytrotomy.—The author gives 18 pages to the consideration of this substitute for the old Cæsarean section, and presents short abstracts of the cases of Ritgen, Baudelocque, Thomas, Skene, Hime, Edis, and Gillette. Claims for originating the method have been made in favour of Jærg (1806), Ritgen (1820), Baudelocque (1823), Physick (1824), Sir Charles Bell (1837), and Thomas (1870). Jærg never operated, and probably would have failed if he had. By his plan the abdomen was to be opened; and the vagina; and possibly the cervix split up: all of which was to avoid opening the body of the uterus. The method of Ritgen was a true laparo-elytrotomy, devised by him after having heard of the extra-peritoneal method of ligating the external iliac artery. He operated in 1821, but was forced by hemorrhage from the vaginal incision to deliver by the old Cæsarean operation. The child was alive, but the woman died of vaginal and uterine hemorrhage. To Ritgen is generally given the credit of originating the operation, although he failed in its performance. Baudelocque proposed no less than six ways of operating, and tried his skill upon two patients, both of whom died. In case one, the vaginal hemorrhage forced him to abandon his scheme and deliver by gastro-hysterotomy. The patient died as in the Ritgen case. In case two, Baudelocque determined to avoid the risk of hemorrhage, and to accomplish this, prepared to tie the internal iliac artery, but, pricking it accidentally, was forced to tie the primitive iliac. He then delivered the woman of a dead fœtus. She died in 76 hours, probably of septic peritonitis. Physick's operation did him no credit as an anatomist, as his plan was a central one, and he proposed to reach the vagina over the top of the bladder; fortunately it was never attempted. The originality of Sir Charles Bell's proposition is very much doubted, as he had the means of learning about the work of his predecessors. The plan of digital laceration of the vagina was, however, original with him.

To T. G. Thomas is due the credit of having originated *de novo*, after an interval of twenty-seven years (from his anatomical knowledge and trials upon the cadaver), the method of Rigen, adding Bell's all-important change of opening the vagina by laceration instead of incision, except in the incipency of the elytrotomy, which was by puncture. As this method of starting the vaginal opening is sometimes quite dangerous, Dr. Garrigues proposes to open the vagina by the thermo-cautery, or other form of cautery, so as to avoid all hemorrhage, and then enlarge the opening by forced laceration of the vagina. Since the revival of this operation by Thomas, there have been 8 women subjected to it by five operators, with 4 women and 5 children saved. The last operation was in November, 1879, since which time the Porro operation has been performed more than a hundred times.

The Porro-Cæsarean Section.—Dr. Mangiagalli has arranged in chronological order, with a few exceptions, a set of abstract records of 140 Porro, and so-called Porro cases, covering 84 pages of his monograph. These cases require to be classified, so as to show the mortality of the operations properly called Porro, as compared with those improperly called by his name. In the paper of Dr. Godson, of London, reviewed in the last number of this Journal, he excludes from the true Porro list, cases 45, 57, 64, and 81 of Mangiagalli, and adds two by Kehrer and Fehling, not in his record, making 138 cases. Nos. 45 and 57 were cases of uterus bicornis, from which one cornu and one ovary were removed. No. 64 was operated upon at a non-viable period of foetal life; and No. 81 was a removal of a uterus under an error in diagnosis. Case 57 recovered, and the other three died. Prof. Mangiagalli also gives a list, on page 119, of the operations in his record, in which the cervix uteri was dropped in after amputation, in all 15, with 4 saved. From this we exclude his cases 15, 57, and 81, and add the third operation of Heusner No. 54, which he has overlooked. In Case 15, the pedicle was not dropped in, as the operator has stated to Dr. Godson. The reviewer well remembers this case, as he and several writers fell into the same error, from an ambiguity in the original report. Therefore Veit, and not Litzmann, was the first to try this unfortunate experiment. In Case 57, the cervix was not amputated, but the one-half of a *uterus duplex*, five months after full term; hence the recovery of the woman. In Litzmann's similar case the pedicle was secured by pins in the abdominal wound. Correctly, then, the cervical stump has been dropped in 13 times, in *quasi* Porro cases, with 10 deaths.

The question having been asked the reviewer within a few days, "What is the present status of the Porro operation?" we will answer it as far as is possible from the reports of cases collected up to last November.

True Porro cases 122. This excludes operations on 3 moribund cases, performed in the interest of the foetus, and 13 Veit experiments in dropping in the pedicle. Of the 122 cases, 82 are recorded as "*favourable*," "*fair*," or "*not very unfavourable*." Of these, 47 recovered and 35 died. Forty cases are recorded as "*unfavourable*," "*very unfavourable*," "*deplorable*," "*exhausted by previous disease*," "*exhausted by previous attempts at delivery*," etc. Of these, 12 recovered and 28 died. This gives $57\frac{1}{4}\frac{3}{4}$ per cent. of recoveries out of the favourable class of cases, and 30 per cent. of the unfavourable. Of all the cases properly to be named Porro or Porro-Müller operations, *i. e.*, 122, there have been 59 recoveries, or $48\frac{1}{3}\frac{1}{3}$ per cent. Under the old Cæsarean operation in the United States, including moribund cases and all, the percentage saved has been $41\frac{1}{3}\frac{7}{8}$. No less than 153 operations of different kinds, many of them far removed from the original of Prof. Porro, have been called by his name. Of these, 65 ended in recovery, and 88 in death. It is only by contrasting the results of the Porro operation with those of the old Cæsarean section in the same European maternity that we can learn to appreciate the very decided advantages of the former in saving life.

Revival of the Old Cæsarean Operation.—The Porro operation having only saved a fraction over thirty per cent. of women in Germany, there has been an effort made to return to the old method, and to devise improved plans of operating, so as to lower the rate of mortality. Attention has been drawn to the proposed processes by the author, who reports several cases in abstract, and gives the special peculiarities of each method. These are known as the Cohnstein, Frank, Kehrer, and Säger processes.

Cohnstein's Process.—Open the abdomen by long vertical incision; turn out the uterus entire; make pressure on the aorta to check the loss of blood during the opening, evacuating and contracting of the uterus; open the posterior wall of the uterus vertically; remove the fœtus and secundines; replace the organ, and, when contracted, pass a drainage-tube through the Douglas *cul-de-sac* and vagina, and close the abdominal wound. Cohnstein proposes the posterior uterine incision, because the posterior wall is thicker and more muscular, and he anticipates a better and more permanent closure of the wound, a more direct drainage from position and a support to the opened portion by the weight of the uterus resting on it. The operation, as far as known to the reviewer, is still one of the theory only.

Frank's Process.—Wash the abdomen with ether and with a five per cent. solution of carbolic acid; disinfect the vagina by irrigating with the latter fluid. Turn out the uterus entire, and incise it vertically, commencing low down in the vesico-uterine excavation; extract the fœtus and secundines; wash the front of the uterus, its interior, and the vagina with a five per cent. carbolic-acid solution. Pass a large drainage-tube through the abdominal and uterine wounds and out through the vagina. Suture the uterus above the tube with strong catgut. Draw the round ligaments together above the uterine wound, and secure them with sutures of Czerny silk, so as to close over and separate from the abdominal cavity the vesico-uterine pouch, which is to be drained by three tubes—"one utero-vaginal, one pre-uterine, and a third applied along the uterine wound to the top of the pavilion." This operation has been once performed in the interest of the fœtus, the woman having been so badly burned that she died in ten hours. The child was saved, although it had a pulse of 150 before the operation.

Process of Kehrer.—Open the abdomen through the linea alba. Incise the uterus transversely between the insertions of the round ligaments. Extract the fœtus and secundines. Close the muscular layer of the uterus by from six to ten deep-seated stitches of carbolized silk, and the peritoneal portion by from twelve to twenty-five. Use Listerism in the operation and dressings, abdominal drainage, and vaginal irrigation. Two operations have been performed after this method, both in cases of 4-parous malacosteon subjects, aged respectively 26 and 30—the first on September 15th, and the second on November 13th, 1881. In the first patient six and twelve points of suture were used, and in the second, ten and twenty-five. The first recovered in thirty-five days; and the second died in twenty-eight and one-half hours. At the autopsy of the second, the margins of the wound in the uterus were found adherent, except at one point, where a triangular space was left uncovered by the peritoneum; over half a pint of sero-sanguinolent fluid was found in the abdominal cavity.

Process of Säger.—In an octavo monograph of 200 pages, published in Leipzig in 1882, and kindly sent to the reviewer, we find an illustrated description by Dr. Säger of his proposed method of improving the uterine suture. This paper was completed in December, 1881, since which time the process has been tried in two cases, viz., by Dr. Leopold, on May 25th, 1882, case saved; and by Dr. Beumer, on September 11th, 1882, case lost. The plan of operation is as follows: Abdominal incision to be made as usual; two strong ligatures are to be inserted through the margins of the wound near its upper angle, to be drawn upon after turning

out the uterus. Membranes to be ruptured through the vagina. If practicable, the uterus is to be lifted out and held vertically. A sheet of caoutchouc, moistened with a 5 per. cent. solution of carholic acid, is to be made to inclose the cervix and cover the abdomen, to protect its cavity against the entrance of fluid. The ligatures are to be drawn upon to close the abdominal wound, while the uterus is incised vertically in front, and the fœtus removed. If the organ is incised *in situ*, manual compression is to be made as a hæmostatic upon its lower segment; if opened after being turned out, manual compression; the application of clamps to the broad ligaments, or of an elastic tube to the cervico-uterine cone. After evacuating the uterus, any hemorrhage from the wound is to be checked by hæmostatic pincettes. When the uterus has well contracted, pass a utero-vaginal drainage tube, and introduce a carbolized sponge into the uterine cavity. Dissect the peritoneum free from the muscular edges of the uterine wound, and pare from the latter on each side a long slice of tissue of a wedge-shape, the thick edge being next to the peritoneal side, and the thin edge to the uterine cavity. The free edges of the peritoneum are now to be turned in over the muscular layer, and deep-seated stitches of silver wire or silk inserted, so as to penetrate the peritoneum and pass nearly through the muscular coat. Then superficial stitches at short intervals are to be passed, so as to secure the turned-in peritoneum and keep its serous surfaces in contact, making a secure welt.

1. *Leopold's Säger operation* was performed upon a 2-para deformed by rickets, 29 years old; and commenced as soon as the bag of waters had well descended. The operation lasted an hour. Woman and child saved; the former well in three weeks.

2. *Beumer's operation* was performed upon a 6-para of 41 years of age, having a fibromyoma of the posterior parietes of the cervix, and affected with cystitis and suppurative pyelo-nephritis. She was in labour a few hours, some eight or ten. Symptoms of collapse shown before conclusion of operation; died in forty hours. The autopsy revealed "hypostatic pneumonia of lower and middle lobes of right lung; œdema of both lungs; excessive pyelo-nephritis, with destruction of a great part of both kidneys; incipient peritonitis, and an intramural fibroma, as large as a child's head, of the posterior cervical parietes, fixed in the Douglas space by old adhesions." The sutures had held the parts securely. It is evident that the fatality of the case was due to the previous bad health of the subject. The child was living.

Although for many years, after numerous experimental trials, Cæsarean operators appeared to have settled in the belief that the abdominal and uterine incisions should be in the median line, vertical and superimposed, this question of preference in the point of incision, at least as far as the uterus is concerned, has been recently reopened, as shown in the accounts of new methods just given. A careful study of the venous anatomy of the impregnated uterus, and the lines of direction of its muscular fibres, will show why it is usual, in operating, to select the body of the uterus and to incise it vertically in front. Primary hemorrhage is rarely a direct cause of death in Cæsarean operations, but may be indirectly fatal, by adding to the shock and exhaustion, and favouring the absorption of septic matters. The chief factor in severe primary hemorrhage is cutting down upon the placenta. This, it has been claimed, may be avoided by the diagnostic test of Prof. T. Halbertsma, of Utrecht, who punctures the

uterus in the locality of the incision with a hypodermic needle, to find whether amniotic fluid or blood will be drawn off by it. Should the placenta be found beneath the line to be incised, it has been proposed to cut the uterus transversely beneath its edge, so as to avoid it, or to turn out the organ and cut it open behind. In Godson's Porro operation, which was in a case bearing the placenta in front, the uterus was torn across, to prevent hemorrhage and to avoid the placenta; but this form of opening might not heal rapidly in a case of gastro-hysterotomy.¹ Manual constriction of the cervix has been successful in preventing loss of blood, as in the Broomall Cæsarean section; and the wire constrictor, after uterine avulsion in the Müller's operation, has resulted in the same prevention.

Although so many Porro operations have been reported since May, 1876, when the first one was performed, it is remarkable that so many women have been delivered by the old method in the time given. Dr. Mangiagalli gives a record of 30, to which I add 13, who were delivered by the old operation, with a saving of 18 out of 43. As laparotomy requires five assistants, and the Porro-Müller eight, it is evident that the old operation must continue to be performed on account of its simplicity, and especially in country practice, where help is often unobtainable.

As dropping in the pedicle after the Porro section has been so fatal, it has been proposed to open the vagina and turn the stump into it, or to turn the cervix inside out. This would certainly not guard against septic infection, as the vagina is often the medium of its entrance. After the fatal experience of Dr. Rutter, of Philadelphia, and later of Chicago, who poisoned so many women by the vaginal touch, transferring purulent matter from his own nose to this conduit, being affected with ozæna, it would certainly be unsafe to give up the plan of Porro for this extra-peritoneal substitute, in dressing the cervical stump. R. P. H.

ART. XXIII.—*St. Bartholomew's Hospital Reports*. Edited by W. S. CHURCH, M.D., and JOHN LANGTON, F.R.C.S. Vol. XIX. 8vo. pp. xxx., 425, 93. London: Smith, Elder & Co., 1883.

A SHORT paper *On the Criminal Responsibility of the Insane*, by T. CLAYE SHAW, M.D., opens with a regret, which we regret to see so authoritatively expressed, that the time seems yet as far off as ever "when the fact of a person's insanity declared emphatically by experts in mental science shall be deemed of itself, without being criticized and analyzed, sufficient to save him from the extreme penalty of the law." The present opinion of some of the highest judicial authorities, both in this country and in England, is that to establish a defence on the ground of insanity, it must be clearly proved that disease of the mind incapacitated a murderer from knowing the nature and quality of his murderous act, or from knowing that that particular act was wrong. Unless this eminently just view is sustained, instead of being

¹ The transverse incision at the internal os uteri was first proposed by Dr. Robert Wallace Johnson, in the second edition of his *Midwifery*, 1786, p. 308.