CHAPTER VIII.

PORRO'S OPERATION.

THE unfavorable results from the Cæsarean section necessarily led to modifications of the operation, and according to Müller, of Berne, Cavallini, in 1769, removed the gravid uterus from animals, and seeing them survive, deemed a similar operation possible in case of woman. Geser, in 1862, Fogliata, in 1874, Rein, in 1876, performed operations similar to those of Cavallini, and reached the same conclusion. Michaelis, and the younger Stein, were also advocates of the operation, whilst Kilian, in 1850, and other operators, were opposed to it.

In 1868, Storer, of Boston, performed the first utero-ovarian amputation in woman. He was doing gastrotromy for the removal of a fibroid tumor from a gravida. At the outset of the operation, the hemorrhage being considerable, he determined on opening the uterus, and extracting the fœtus. The hemorrhage still persisting, he pulled the uterus and its annexa outside of the abdominal cavity, threw a ligature around the cervix at the supra-vaginal junction, and amputated the uterus, the ovaries, and the tubes. Three days thereafter the woman died, and this was for a time fatal to the method. Storer's operation, however, was a matter of necessity, and it is really Porro, who, in face of the difficulties and complications of the classic Cæsarean section, concluded in favor of the utero-ovarian amputation under the carbolic spray, and performed it the twenty-first of May, 1876. The mother and child were saved, and this too at the maternity in Pavia, where, at the time, puerperal septicæmia was raging. This success encouraged others, and the operation was performed in Italy, Germany, Austria, Russia, etc. In France, Fochier, of Lyons, first performed it in 1879, he was followed by Lucas-Championnière and by Tarnier, and since, especially in Italy, this operation tends towards displacing the classic section. Thus:

Imbert de la Touche, . .	in 1878	mentions	6 cases
Castro-Soffia, . . .	" 1879	"	32 "
Pinard, ...	" 1880	"	38 "
Harris (Philadelphia), . .	" 1880	"	50 "
Levis (Copenhagen), . .	" "	"	51 "
Maygrier, ...	" "	"	51 "
Zweifel, ...	" 1881	"	74 "
H. Simpson, . . .	" "	"	76 "
Petit, ...	" 1882	"	78 "
Charpentier, . . .	" "	"	99 "

In the 99 cases which we have collected are included cases of cancer, of tubo-ovarian pregnancy, of uterine rupture, etc., for in all of these the operation was the utero-ovarian amputation, or that of Porro. We have left out cases of Freünd's operation, because they do not belong in this category.

These 99 cases occurred in the following countries:

Italy, . . .	38	England, . . .	4
Austria, . . .	21	Russia, . . .	2
Germany, . .	11	Switzerland, . .	1
France, . . .	10	Holland . . .	1
America, . .	5	Sweden, . . .	1
Belgium, . .	4	Turkey, . . .	1

The following were the results: Mothers living 43; dead 56. Infants living 70; dead 26. In the infantile deaths are included four where the result has not been stated.

The mortality figures differ a little from that obtained by other authors:

	Mortality.		Mortality.
Pinard, 1880, .	45.4 %	Zweifel, 1881, .	59.4 %
Petit, 1882, .	55.10%	Championnière, 1882,	67. %
Maygrier, 1880, .	58.49%	Charpentier, 1882,	56.56%
Simpson, 1881 .	58.3 %		

To the above cases must be added 5 additional, where both the mother and child were saved, performed since 1880.

The total percentage of recoveries and deaths, therefore, is:

Maternal mortality, 56 out of 105, 53.33 per cent.; recovery, 40 in 105, 46.66 per cent. Fœtal mortality, 25 out of 105, 23.80 per cent.; recovery 76 in 105, 76.20 per cent.

As for the indications in these 99 operations:

Rickets, . .	54 cases	Osteosarcoma, . .	1 case.
Osteomalacia, .	12 "	Infantile pelvis, .	1 "
Fibromata, . .	5 "	Kyphosis, . .	1 "
Uterus septus, .	4 "	Generally cont. pelvis,	1 "
Uterine rupture, .	3 "	Dyspnœa, . .	1 "
Cancer, . .	2 "	Not noted . .	14 cases.

Comparing now the mortality rate from Porro's operation with that from the Cæsarean section we obtain:

Porro's operation 53.33 per cent. to 56.56 per cent. Cæsarean operation 54 per cent. to 60 per cent.

We see, hence, that the results obtained from Porro's operation are scarcely better than those from the Cæsarean section. We are not now speaking of the children, since, in theory, they should always be saved by either.

Among the causes of death, peritonitis heads the list with 22 cases; shock 3 cases; septicæmia 2 cases; hemorrhage 3 cases; embolism 1 case. In a certain number of cases, the condition of the women was such that only death could be expected.

If now we compare the results from Porro's operation, and from others:

		Mortality.
Induced premature labor, .	Pinard, . . .	32.35%
Cæsarean section, . .	Mayer, . . .	54. %
" . . .	Harris, . . .	70 to 88%
" . . .	Zweifel, . . .	54 to 60%
Porro operation, . . .	Pinard, . . .	45.4 %
"	Petit, . . .	55.10%
"	Charpentier,	56.56 or 53.53%
"	Simpson, . . .	58.2 %
"	Zweifel, . . .	59.4 %
"	Maygrier, . .	58.49%
"	L. Championnière, .	67. %
Cephalotripsy and embryotomy,	Maygrier, . .	41.79%
" "	Charpentier, . .	28.68%

It is not possible to form an exact opinion from these figures, for if all the cases of Porro's operation have been published, such is not the case with the Cæsarean section, and the other operations. What is clearly evident, however, is that, like the Cæsarean section, Porro's operation should be, not one of choice, but of absolute necessity, and that the

chances of success are the greater if done within twenty-four hours of the onset of contractions.

Pinard thus lays down the indications for the Porro operation:

1. The pelvis does not allow of embryotomy. Here the indication is absolute, and we agree perfectly with our colleague. Preference should be given to the Porro over the Cæsarean section.

2. The pelvis allows embryotomy, but measures less than 2.7 inches. If the fœtus is dead, then perform embryotomy, except in case of osteomalacia. If the infant is alive, the proper operation is a subject for discussion. We would not agree with Pinard, but would say that, the fœtus alive or dead, embryotomy should be the choice.

3. The pelvis measures over 2.7 inches. Porro's operation should be absolutely rejected.

4. Finally, with Alessandrini, of Milan, Pinard advocates the Porro operation in case of rupture of the uterus. The cases cited by Halbertsma, and the results given by Jolly in his thesis, seem to justify this opinion.

As for the indication from the presence of fibrous and cancerous tumors, we have discussed it elsewhere.

To resume, then: Porro's operation, like the Cæsarean, should be one of absolute necessity, and whenever we have the choice between it and another, it is to the other that the preference should be given.

[The results obtained of late years through the improved Cæsarean section, have led most authorities to practically reject the Porro operation, except in case of rupture of the uterus, which makes the Porro an operation of necessity, where it is not possible to use the uterine suture.

We are again indebted to the labors of Dr. Robert P. Harris for the more recent statistics of this operation, and its modifications, which we append below.

	Maternal Mortality.	Maternal Recoveries.	Children Saved.	Children Still-born.	Children Dying during Extraction.
Pure Porro, 90 Cases....	49	41	71	17	3
Porro-Müller, 36 Cases....	17	19	28	7	2
Porro-Veit, 13 Cases....	10	3	10	3	0

In many of the cases in this table the maternal death was due to the fact that the operation was deferred too long, and since the compilation

of the table the total number of operations has been increased to 164. "Deducting from this number 3 moribund cases, and 14 in which the stump was dropped and proved fatal in 10, we have remaining 147 cases with 44 per cent. maternal recoveries." (Harris.)

In regard to the various methods in vogue for the delivery of the child *per abdominem*, Harris sums up the question so tersely and justly, that we append his remarks: "The Cæsarean section and the Porro are largely dependent for success upon the condition of the patient at the time it is performed. If then a timely, elective, and pre-arranged Cæsarean operation must have an unfavorable prognosis because of the physical condition and poverty of the subject, can much more be anticipated from the Porro improvement under the same disadvantages? Laparo-elytrotomy may prove less fatal than either, because it neither wounds the uterus nor opens the peritoneal cavity."

To sum up this question in the light of to-day's knowledge, we would say: Perform laparo-elytrotomy if the conditions essential to its performance are present; if not, perform the modified Cæsarean section with deep muscular and sero-serous superficial sutures; reject the Porro or its modifications except in the presence of rupture of the uterus where the uterine suture cannot be used; above all, operate in time, before exhaustion has set in, and pay strict attention to scrupulous cleanliness.—Ed.]

Description of the Operation.

Preliminary Precautions.—These are identical with those applicable to ovariotomy or the Cæsarean section.

The operation is divided into four stages:

1. Incision of the abdominal wall.
2. Incision of the uterus, and extraction of the fœtus.
3. Amputation of the uterus and ovaries, and formation of the pedicle.
4. Dressing of the abdomen.

Incision of the Abdomen.—The incision should extend from 1½ to two inches above the pubes to one to two inches above the umbilicus, to one side of which it passes. The peritoneum is divided on a director.

Incision of the Uterus and Extraction of the Fœtus.—The uterus is brought close to the abdominal wall, and is incised layer by layer. The membranes are ruptured, and the fœtus extracted.

Müller brings the uterus externally, and applies an elastic ligature

around the cervix at the level of the internal os, and then only does he open the uterus and extract the fœtus. This is the method which Rein followed in his experiments on animals.

Instead of the ligature, Litzmann and Fehling use Esmarch's bandage.

Resorted to by Litzmann, Breisky, G. Braün, Tarnier, Tibone, C. Braün, Chiara, and others, Müller's modification has given good results only in the hands of Breisky. It can be only used in easy cases, for it may result in tears or injury of the peritoneum, and hence in peritonitis.

Amputation of the Uterus and Ovaries, Formation of the Pedicle.—Porro incises the uterus in position, and it is only after extraction of the fœtus that he draws it out by means of long ovarian forceps. He then passes a trocar through the uterus, at the junction of the body and the cervix, and through this two metallic wires, which are twisted the one to the right and the other to the left. He then amputates.

Tarnier and Championnière pass a steel needle through the uterus at the same junction, and a second, at a slightly higher level, perpendicularly to the first. A wire loop is passed around the cervix, underneath these needles and including the ovaries and tubes, and this is twisted, and the uterus is amputated about ½ inch above the wire. The peritoneal cavity is then cleansed, and the pedicle is fixed in the lower angle of the incision in the abdominal wall. The abdominal incision is united by metallic sutures. The dressing is the same as after ovariotomy.

Schlemmer (Stuttgart, 1881) objects to the Porro operation, on the ground that it is immoral, since it removes all possibility of further conception, and therefore might be abused.

Müller, whose thesis is simply an eloquent plea in favor of the Porro operation, is compelled to admit the bad results of this operation, and that they are not much more satisfactory than those from the classic section. He ends his conclusions in the following words: "The day when a large number of cases prove to me that, by means of modifications of the classic section, we have obtained as sure a guarantee against hemorrhage and sepsis as is offered by the utero-ovarian amputation, then I will be the first to declare against the Porro operation. Until then I will remain a partisan in its favor, seeing that I have personally tested its advantages."

Notwithstanding these words of Müller, the tendency to-day is to return to the classic section, and the search is always in the direction of improving the technique of this operation.