

THE COURSE OF PUERPERIUM AFTER TWIN LABOR

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Seventy-six cases of puerperium following twin pregnancy were studied. The most frequent complication occurring during puerperium was represented by febrile states, the etiology of which was difficult to explain and which required administration of antibiotics. They were observed on 28% of cases. The most important causes of frequent infections in puerperium seem to be a high frequency of obstetric procedures during twin delivery and much slower involution of the uterus after labor. This was reported for fetuses delivered at term as well as for premature labors.

Complication in the form of puerperal anemia requiring blood transfusions were observed in 10% of cases. Puerperal eclampsia, bleedings, thrombophlebitis, mastitis, accounted jointly for 7% of puerperal complications. The total percentage of puerperal complications following twin delivery was 45%. This fact indicates the need for careful observation of women in puerperium, broad prophylactic measures, and effective management of possible complications of puerperium in women for whom twin pregnancy and twin delivery per se are a considerable biological stress.

In the postlabor rehabilitation of women the course of puerperium is one of the main factors determining the ultimate effect of pregnancy on the biological condition of the organism of the mother. The investigations carried out so far (Sternadel 1968, 1971) have demonstrated that pregnancy and labor significantly affect the course of puerperium even in cases regarded as physiological. In multiple pregnancy the stress placed on the maternal organism is much greater than normally, owing to the presence of multiple fetuses; similarly, in puerperium following a twin labor the probability of complications is much higher than after delivery of a single fetus (Sternadel 1968).

The purpose of the present work was to clinically evaluate the course of puerperium after delivery of twins conducted in accordance with the modern principles of active management of labor.

MATERIAL AND METHODS

The investigations were carried out on 76 cases of puerperium following delivery of twins at the Department of Obstetrics and Gynecology, Warsaw Medical Academy, in the years 1964-1972. The analysis included (a) early stage of puerperium (immediately after labor), and (b) late stage of puerperium (when the patient was staying in an obstetric ward).

In the clinical evaluation the following elements were taken into account:

1. Postlabor bleeding and resulting anemia
2. Inflammatory processes
3. The dynamics of uterine involution
4. Appearance and course of lactation
5. Toxemia of pregnancy

The dynamics of uterine involution was studied on the basis of measurements of the position of uterine fundus in relation to the symphysis pubis on the days following labor. The results were compared using statistical tests with a control group of 200 single labors.

RESULTS AND DISCUSSION

The results are shown in the Table. It may be seen that the complications observed in the early stage of puerperium are in the first place connected with disturbances of uterine contractility after labor, which occurred in 11.5% of cases examined, despite the administration of oxytocic drugs after delivery of the second fetus. In the pathogenesis of this complication the excessive distension of the uterus resulting from multiple pregnancy seems to play a considerable role. Another factor is the strain on the uterus related to the expulsion of two fetuses instead of one. These factors disturb the normal contraction activity of the uterus during the puerperium resulting into excessive bleeding after labor. Blood transfusion was required in 19% of the cases. In one case eclampsia was observed after delivery of twins.

Table. *Complications of Puerperium after Multiple Pregnancy*

<i>Early puerperal complications</i>		N	%
1. Puerperal bleedings			
1.1. Atonia of puerperal uterus (after labor)		9	11.5
1.2. Placental residues requiring curettage		3	4
1.3. Total bleedings			15.5
2. Blood transfusion requirements after labor		14	19
3. Puerperal eclampsia		1	1.5
 <i>Late puerperal complications</i>			
1. Inflammatory-febrile conditions		17	28
1.1. Puerperal mastitis		4	5
1.2. Thrombophlebitis		3	3
1.3. Complications of perineal wound healing		3	4
2. Anemia requiring blood transfusion		8	10
3. Late puerperal bleedings		1	1.5

Involution of puerperal uterus

Mean position of uterus on successive days after labor in relation to symphysis pubis

Day of puerperium	2	3	5	7	9
Tested group	8.0 ± 0.0	7.3 ± 1.1	5.9 ± 1.2	5.3 ± 0.9	3.7 ± 1.3
Control group	7.5 ± 0.7	6.7 ± 0.8	4.9 ± 0.8	3.9 ± 0.7	2.6 ± 0.7
Significant difference	<i>P</i> < 0.05	<i>P</i> < 0.05	<i>P</i> < 0.05	<i>P</i> < 0.05	<i>P</i> < 0.05

Among late complications of puerperium inflammatory-febrile conditions were reported most frequently, accounting for 28% of cases. The high incidence of such complications may be explained with the high frequency of intrauterine procedures carried out during twin labors, amounting to 50% of labors. Another factor which may be involved in the high proportion of inflammatory complications, is delayed involution of uterus during puerperium in twin labors. The development of infection is facilitated by the presence of posthemorrhagic anemia requiring blood transfusions in 10% of cases.

The dynamics of uterine involution was studied by measuring the distance of the uterine fundus from the symphysis pubis determining the mean position of the fundus on each successive day after labor. After calculating them in appropriate units these data could be statistically analysed. A significantly lower rate of contraction of uterus in puerperium was observed in women after delivery of twins as compared to the control group. This seems to be due to the above-mentioned decreased contractility of the uterine wall.

The course of lactation observed in the present material also shows a high proportion of inflammatory complications with conditions diagnosed as puerperal mastitis in 5% of cases.

In the series of 76 women observed during puerperium, puerperal complications were found in 35 cases, accounting for 46% of all patients.

The following conclusions may be drawn:

CONCLUSIONS

1. A high proportion of puerperal complications was observed after deliveries of twins. This seems to be due to frequent complications in the course of twin pregnancy and labor with subsequent puerperal complications.
2. The complications observed varied in relation to the stage of puerperium. At an early stage bleedings were most frequent, while at a late stage inflammatory-febrile conditions prevailed.
3. The frequency of puerperal complications and their type indicate the need for an active management of labor and puerperium after twin pregnancy, extensive prophylactic procedures, and early treatment.