ON THE CONTROL OF ATONIC HEMORRHAGE IN CESAREAN SECTION

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The problem of the control of atonic hemorrhage in cesarean section has not been so far the subject of special discussion in our periodic medical press. Moreover, in the latest editions of handbooks in obstetrics (domestic and foreign) this problem is not discussed. A tendency toward broadening of indications for cesarean section which is observed in modern obstetrics sets before us the difficult task to control atonic hemorrhage which often arises in this form of delivery.

For the control of atonic hemorrhage, which occurs after birth through vaginal routes, multiple drugs and devices are offered; after whose exhaustion, as a last means for saving the life of the mother a hysterectomy is recommended; in cesarean section however this intervention is of much more primary interest. Here the surgeon, due to the fact that the uterus — the source of atonic hemorrhage — being so to say "in his own hands" is more easily induced to liquidate the atony by means of uterine amputation. Moreover, he is induced toward such a decision because there exists no other possibilities to apply the vaginal methods for control of atonic hemorrhage. There is not a big choice, but a rapid decision may lead to the invalidation of the woman, depriving her forever from the chance to bear once again, causing her a grave psychic trauma. This necessitates the search for means that is sparing more the uterus in the control of atonic hemorrhage in cesarean section.

Recently Soviet authors (Tsirulnikov, Libermann, Serova and particularly Prof. Alexandrov — 1962) recommend for the control of atonic hemorrhage in general and particularly in cesarean section a bilateral ligature of the uterine vessels without extirpation of the uterus, suggested by Waters in 1952. Alexandrov has successfully performed this operation in two, and Libermann in three cases of atonic hemorrhage in cesarean section. Moreover, the authors point out that the method is effective, physiologically justified and leads to the decrease and complete cessation of bleeding with definite contraction of the uterus. Ligature of the uterine vessels has exerted no harmful effect on the uterus and the ovaria in the postnatal period, which seems to be so, because the collateral vessels by means of ligamenta rotunda and sacrouterina are sufficient for the blood supply of the uterus in the puerperium. It is nevertheless, difficult to assume that ligature of uterine vessels may be performed without any circulatory disorders in the uterus, whose remote results, particularly connecting a subsequent pregnancy, being not sufficiently followed up.

Prochorow (1962) recommends for the control of hemorrhage at the time of cesarean section a 3—4 minutes pressing with the hand of the surgeon the lower uterine segment together with the pelvic ligaments. Cessation of the uterine blood supply leads to contraction of the uterus. If hemorrhage recurrs the same method is repeated for 4—5 minutes. If hemorrhage continues after the repeated application of the method this indicates according to the author, that a complete atony of the uterus is present. Hysterectomy is then indicated.

In atonic hemorrhage at the time of cesarean section we attained perfect success by applying a compact gauze tamponade in the uterine cavity performed with a gauze rouleau. The favourable results of its application by vaginal route in atonic hemorrhage after the birth of the placenta are well known. In hemorrhage during cesarean section, when after the administration of drugs, manual or instrumental revision of the uterine cavity and after manual massage of the uterus the hemorrhage does not stop, and indications for amputation of the uterus are available. Uterine tamponade can be successfully applied by two routes — abdominal and vaginal under the direct visual and palpatory control, which rapidly leads to a permanent contraction of the uterus in which the surgeon can make sure at the time of the operation, while the abdomen is still opened. The risk for infection is at minimum and practically creates no hazards for the mother since the gauze rouleau is not introduced in the uterine cavity via the vagina.

Our scanty experience consisting of 4 observations confirmed the efficiency of the described method. We applied uterine tamponade in 4 cesarean sections, accompanied by atonia of the uterus. To illustrate our experience we present 3 of them.

1. S.D., aged 28 years, case history No. 3808/1961. A woman pregnant for the third time. Due to primary and secondary uterine inertia, which was not influenced by drug stimulation, the objective data for the presence of a big fetus with an incompatibility between head presentation and rigid pelvis and a desire for a living infant, delivery was realized by means of a cesarean section with a transversal section in the isthmic part of the uterus. A living infant was born weighing 3900 g. The placenta was extracted manually. Oxystiin and ergotin were locally administered. The uterus remained relaxed and slowly reacted to manual massage. For that reason a manual and instrumental revision was made. The uterine wall was sutured layer by layer but the uterus continued to be relaxed and the hemorrhage threatened the life of the mother — her pulse was rapid and weak, the blood pressure dropped to 90/40. For that reason a tamponade of the uterine cavity was made. Several catguts were removed from the center of the incision of the uterine wall, followed by a dense tamponade of the uterine cavity with gauze rouleau and by means of ovum forceps, under the control of one of the hands embracing the uterus. The end of the rouleau was brought out through the vagina. The uterus remained in a permanent contraction and bleeding stopped. After suturing of the abdominal wall for a better effect a dense tamponade was made in the vagina by means of another rouleau, attached to the first one. The tamponade was removed after the eighth hour. Antibiotic prophylaxis was carried out in the puerperium. The woman was dismissed from the ward on the 12th day in a good general condition.

2. E. D., aged 22 years, case history No. 2644/62. Pregnant for the first time. Admitted on time with parturition started. Objective data for a big fetus. Due to clinical and anatomical data for rigid pelvis and the secondary uterine inertia with impediment of delivery in complete dilatation of the cervical canal, cesarean section was undertaken. A child was extracted weighing 4200 g. After manual extraction of the placenta an atonic hemorrhage occurred, which rapidly threatened the life of the mother. Despite manual and instrumental revision, manual massage and locally administered pitugland and methylergometrin, the uterus remained relaxed. The uterine wall was sutured under

incessant manual massage, but it still remained soft and blood loss increased. Blood pressure dropped to 90/60, the pulse was soft and rapid — up to 120 beats per min. Indications arose for extirpation of the uterus but because the woman was young and primipara uterine tamponade was made. The latter resulted in a permanent contraction of the uterus and bleeding stopped. After reanimation the condition of the mother gradually improved. The post partum period was characterized by fever up to 39°C on the 3rd and 4th day. Discharged on the 12th day in a good general condition.

3. T. L., aged 18 years, case history No. 2081/1963. Admitted before culmination of pregnancy because of rigid pelvis II grade. Primipara. After delivery started, a cesarean section was undertaken because of indications on the part of the pelvis. After the extraction of the placenta a severe atonia occurred, despite all measures including the administration of metergin. Then an uterine tamponade was made. The uterus acquired a good tone and bleeding stopped. On the 4th to the 7th day following operation there was subfebrile temperature, on the 15th day thrombophlebitis developed on the left leg. Discharged on the 35th day in a good general condition.

In conclusion, based on the aforegoing and favourable results obtained by utero-vaginal tamponade in atonic hemorrhage applied through vaginal routes we may recommend this technique in cases of atonic hemorrhage, occurring in cesarean section when the usual measures prove inefficient and data for an amputation of the uterus are indicated. Application of this therapeutic method is easy and accessible, but the tamponade should be sufficiently compact to secure a rapid and efficient result. Here as in its application by way of vaginal routes tamponade is the last but almost in all cases a guaranteed attempt to save the mother from an operation which deprives her of the uterus.

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ПО ПОВОДУ ВОПРОСА О БОРЬБЕ С АТОНИЧЕСКИМИ КРОВОТЕЧЕНИЯМИ ПРИ КЕСАРЕВОМ СЕЧЕНИИ

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РЕЗЮМЕ

Авторы рассматривают вопрос о борьбе с атоническими кровотечениями при кесаревом сечении. На основании собственного опыта они рекомендуют в случаях с атоническими кровотечениями во время кесаревого сечения, прежде чем приступить к удалению матки, попробовать плотную тампонаду полостн матки рулоном из марли. Техника проста и легко выполнима и приводит к быстрому и верному эффекту. Для иллюстрации сказанного приводятся три наблюдения.