Extraperitoneal Cesarean Section: Review and Prospect

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Abstract: In recent years, the rate of cesarean section increased gradually, with the modern medical mode putting forward and patients requirements on the postoperative quality of life continues improving, the extraperitoneal cesarean section has turned back. With extraperitoneal cesareannot opening the peritoneum, avoiding the operation of abdominal organ injury, infection and postoperative adhesion, and reducing abdominal pain, timely nursing, so as to improve the life quality of the patients. In improving the technical level of the doctor, improved operation, master the basic anatomical knowledge, can be gradually extended extraperitoneal cesarean section in the clinical application.

Keywords: Extraperitoneal Cesarean Section; Uterus; Pregnancy

1. Introduction

Extraperitoneal cesarean section refers to not open the peritoneum, will focus on bladder peritoneum to be free, and open uterine fetus removed and affixed to the operation after revealing the lower uterine segment,which is not open the peritoneum .In recent years, because of cesarean section indications of relaxation, social factors, malposition and other reasons, so that the rate of cesarean section is increasing, abdominal after cesarean section is not only caused by inadequate abdominal distension, intestinal paralysis, absorption heat and infection, more can not be ignored is prone to intestinal adhesion, intestinal obstruction the complications such as abdominal operation again later, or pregnancy had certain influence. Extraperitoneal cesarean section in extraperitoneal operation avoids the operation of abdominal organs injury, infection and postoperative adhesion and other advantages in extraperitoneal operation, which has been the subject of many obstetricians favored [1] .

2. Background

Because of pregnancy or childbirth met mother with heart disease, pregnancy, fetal distress, cephalopelvic disproportion, birth canal abnormalities, cesarean section is an important hand processing of dystocia and high risk pregnancy. Cesarean section mainly abdominal uterine lower segment cesarean section, extraperitoneal cesarean section and semi extraperitoneal cesarean section of 3 kinds of surgical [1]. In 1907, Frank completed the first extraperitoneal cesarean section, to 1908 Razco designing approach from the bladder fossa into the lower uterine segment, after Nortonet al. Improvement and description, is currently used lateral extraperitoneal cesarean section. To 1940, Waters was first found their way into the lower uterine segment from the top of the bladder, thus producing top extraperitoneal cesarean section. In twentieth Century 90 ,extraperitoneal cesarean section of the popular in domestic, due to the difficulty of separating bladder technology is high, the longer time required for delivery of the fetus, easy occurrence of fetal head delivery difficulties and transient hematuria or bladder injury is not widely used. While the extraperitoneal caesarean section to prevent abdominal infection, adhesion, postoperative recovery advantages of fast, abdominal small interference has been obstetricians consensus, in recent years, due to the improvement of surgical anesthesia methods and technology continuing improving, a new modified extraperitoneal cesarean section are put forward and studied, the success rate of operation improving and shorten the operation time, can improve the quality of life of patients with very good, and is worthy of popularization in clinical.

3. Anatomy

Because the most prominent problemextraperitoneal cesarean section is the separation of bladder technology more difficult, applied anatomy of bladder do a summary of this. During pregnancy, uterine body increases gradually and becomes soft, from non pregnant uterus when (7~8) cm x (4~5) cm x (2~3) cm increases to a full-term pregnancy when 35cm * 25cm * 22cm. With the prolong pregnancy, uterine isthmus increases and gradually become longer, non pregnancy by original 1 when cm increases to a full-term pregnancy 7 ~ 10 cm. Prolonged uterine cheek, not only makes the position of the uterus changes, the formation of uterine rise, and natural influence increased bladder uterine peritoneal fold edge position. Bladder uterine reflexed changes of peritoneal mar-

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gin increases and the uterus rises, naturally emptying the bladder top position rising. The bladder and uterus of pregnant women anti surface projection fold of peritoneum in umbilical edge and the upper edge of pubic symphysis full-term pregnancy on 3 / 4 and 1 / 4 at the junction, and bladder top is located in umbilical and the upper edge of pubic symphysis connection [2]. But from a vesicouterine peritoneum, formed two peritoneal reflection, before and after the anti fold to the bladder top distance length ratio 1:3, the intersection before reflexed and bladder lateral margin arc, it is also the intersection reflexed before and after reflexed, namely three arcs in the bladder on both sides of the intersection point, the intersection angle is formed outside angle, also be equivalent to bilateral lateral triangle area of bladder. Once the top reflexed central started to fold the bends back with a diameter of approximately 3- 4 cm region (attachment, which contains the median umbilical ligament and the bladder wall or bladder peritoneum bridge). Bilateral lateral umbilical ligament wider spacing (mean 11.6 cm), and tissue relaxation, stretching degree is bigger, so here is enough to meet the operation area of the expulsion of the fetus requirements. From the top of the bilateral angle of bladder midpoint distance is approximately 4 cm, so you can along the side edge from the bladder, bladder top about 4 cm was separated and it is easy to find the intersection angle, which simplifies the operation. Bladder top height, with longer time in labor, palace mouth gradually too, the lower uterine segment extended bladder top height also increased gradually, parturient time > 4 hours, palace mouth open > 2 cm, then the bladder top height greater than 4 cm [3].

4. Peritoneal significance of cesarean section

In 1990, the biological - psychological - social medical model has become a health leaders and the majority of medical personnel consensus in this consensus, how to treat and handle the modern medicine pattern formation and treatment of disease, which is the majority of medical workers have to consider. Previous understanding of treatment is to eliminate diseases with medicine or surgery, medical treatment mode of modern biological psychological society is to improve people's quality of life oriented [4]. At present, minimally invasive operation to the continuous development of extraperitoneal cesarean section, small trauma, quick recovery characteristics, superior in improving quality of life through the abdominal cesarean section. Extraperitoneal cesarean section because there is no incision and suture of peritoneum, which can prevent the existing infection spread, especially suitable for premature rupture of membranes have infections, premature rupture of membranes, postoperative disease rate have obvious difference in [5]. To avoid abdominal wall pain induced by stimulation of peritoneal infection of abdominal cavity after operation, postpartum pain relief, the spirit is happy. Postoperative intestinal flatulence, abdominal pain, fever and other abnormal conditions occur rate is low, the maternal gastrointestinal function is not affected, postoperative eating early, fewer complications, is conducive to breast feeding [6]. Also preventing endometriosis of cesarean section caused by operation, operation in extraperitoneal, not interfering with the abdominal organs, greatly reducing the chance of injury of abdominal visceral, effectively preventing peritoneal adhesion of abdominal operation, decrease again or re before pregnancy effect, improved the quality of life of patients with postpartum from these a square face.

5. Extraperitoneal cesarean section method

Extraperitoneal cesarean section of commonly used domestic top entry type, side entering type, top - side entering type and a variety of modified operation, evolution based on these operation such as: on the side of people type two refers to the method for rapid separation of extraperitoneal cesarean section, the top side of two combined fingering extraperitoneal cesarean operation, the top side joint level separation extraperitoneal cesarean section, the top edge of the hydraulic separation extraperitoneal cesarean, level separation extraperitoneal cesarean section etc.. Nearly 10 years of domestic research is the largest side person type two refers to the method for rapid separation of extraperitoneal cesarean section and a top side joint two fingering extraperitoneal cesarean. The side entering type two refers to the method for rapid separation of extraperitoneal cesarean section: the selection of incision pubic symphysis 3 cm do Pfannenstiel incision, two refers to the depth in the top left of the fat layer of bladder, bladder fossa yellow fat gently pushing outward, revealed bladder lateral triangle, careful separation of the left medial trigone of lateral umbilical ligament open preperitoneal fat layer, exposing the vesicouterine peritoneum after folded edge folding back, in the lower cervical anterior fascia with curved hemostat carefully separated a small mouth, refers to the two entry, along the port isolation of cervical front fascia, exposing the lower uterine segment, two finger along the mouth from left to right insert behind the bladder, and forward by layer separation bladder front fascia, two refers to the uniform expansion of space, fully exposed the lower uterine segment transverse incision of lower uterine segment, childbirth, fetal and placental, caul [7]. The top side of two combined fingering extraperitoneal cesarean: using abdominal transverse incision, transverse play bladder front fascia to both sides of blunt separation of 2 ~ 3 layer, at the top of the bladder and peritoneal adhesion exposure, surgeon and assistant to the index finger pulp wrapped in single-layer gauze, and since the bladder top side two push down bladder to fold back peritoneum below 2 cm. In the 1 cm below the fold back peritoneum

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incision of lower uterine segment front fascia layer 2 cm, forefinger people to expand the incision, the incision and under the guidance of the further separation of bladder peritoneal clearance to the right, so that the folding back below the lower uterine segment revealed to the expulsion of the fetus is degree. Transverse incision of lower uterine segment, the birth of the fetus and placenta, fetal membranes, uterine incision using whole layer suture lock.[8]

6. Prospect

In the long-term clinical practice experience, the most prominent problems existed in all kinds of extraperitoneal cesarean section is the separation of bladder high technical difficulty, fetal childbirth required longer, easy occurrence of fetal head delivery difficulties and transient hematuria or bladder injury. In recent years, through a large number of clinical practice of modified extraperitoneal cesarean section, and achieved good effect of [7, 9, 10]. The modified extraperitoneal cesarean section has the advantages of short operation time, fast delivery of the fetus, the operative field is fully exposed, less invasive, faster postoperative recovery, wide indication and other advantages, is a safe and feasible method of cesarean section. The postoperative infection diffusion, flatulence, abdominal pain, fever and other abnormal rate is low, effectively preventing peritoneal adhesion, can timely lactation, improve the life quality of the patients. But the extraperitoneal cesarean section has some limitations, can not apply to all situations, such as the prohibition for threatened rupture of uterus, placental abruption, fetal macrosomia in horizontal position, etc., and can't check during operation in pelvic organs, injury of bladder, not tubal ligation surgery skilled implementation requirements and rich experience, need further exploration research in these aspects.

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