An evidence-based cesarean section for universal use

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As most abdominal operations have today endoscopic alternatives, caesarean section will certainly remain the only abdominal operation in the future. Therefore, it is of utmost importance to constantly evaluate its different steps for their necessity and optimal way of performance in order to achieve a unified evidence-based method. The modified Joel-Cohen method results in a shorter incision to delivery time, lower rate of febrile morbidity compared to the traditional Pfannenstiel or longitudinal incisions. Opening peritoneum using bi-digital repeated stretching instead of sharp instruments proved to be safer. The uterus should be opened in the lower segment where less muscle tissue and more fibrous tissue is present. Exteriorization of the uterus makes the uterine wall closing easier and reduce bleedings. Suturing the uterus with one-layer results in stronger scar and reduced pain. Leaving both peritoneum layers open proved in standardized studies to reduce adhesions and result in less need of painkillers and closure should be avoided in any other surgical disciplines as well, including endoscopy. The fascia being sutured continuously with first knot underneath the fascia prevents irritation in the sub-cutis and only few sutures should be used to close the abdomen. Since the introduction of this modified and simplified method 30 years ago, it has been evaluated by scores of peer-reviewed studies. With no single exception all showed various advantages of this method: shorter operation time, shorter hospitalization, quicker mobilization, less blood loss, lower rate of febrile morbidity, lower costs, and less need for painkillers. In order to standardize this operation, it is important to use constantly the same suture materials, needles and instruments. A big needle is necessary for the uterus, as fewer steps are done which results in less foreign body reaction. The risk of overuse of the cesarean section and possible influences on human evolution will be addressed.

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