

Prevalence and risk factors of puerperal endometritis in a prospective cohort study in Modena, Northern Italy

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Objective. The purpose was to investigate the prevalence of puerperal endometritis, diagnosed by cultural exams on endometrial tissue according to a diagnostic protocol. The secondary outcome was to evaluate the correlations of endometritis with obstetric outcomes.

Materials and Methods. This was a prospective cohort study including women who delivered at the Policlinic Hospital of Modena from January 2019 to July 2022. Tests were performed on mothers with puerperal pyrexia (> 38.4 °C in two measurements, at least 4h apart), endometrial, urine, and blood cultures. Moreover, thorax Rx, abdominal and gynecological US were routinely done. Obstetric outcomes and other cultural results were collected in clinical informatics charts.

Results. 155 women were included from 10,202 deliveries. Of these, 116 (75%) endometrial biopsies resulted positive, with a prevalence of puerperal endometritis of 1.14%. Women

with puerperal endometritis significantly delivered with caesarean section rather than vaginally (39.6% vs 11.38%, P-value = 0.000). Regarding the diagnostic protocol, 36.5% of the 104 women who underwent urine culture resulted positive, while 20% of the 95 cases of blood cultures performed tested positive. Radiological examinations included: abdomen ultrasound (n = 76) and chest X-Ray (n = 76), which resulted completely negative in only 35.5% and 46.0% of the cases respectively. Finally, endometritis was clearly suspected after gynaecological US in only 18.9% of cases,

Conclusions. The prevalence of puerperal endometritis among women who delivered in our centre was 1.4%, similar to the rate in literature. In more than one-thirds of the cases, urine culture samples were also positive. Women who underwent caesarean section had a higher risk of endometritis compared with vaginal delivery.