Consumptive coagulopathy that developed in a pregnant woman with degenerated uterine leiomyoma: case report

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Summary

A case of consumptive coagulopathy in a 30-year-old pregnant woman with degenerated uterine leiomyoma is described. She developed lower abdominal pain at 21 weeks of gestation. Physical examination demonstrated a tender mass on the right anterior wall of the uterus. Pelvic ultrasonography demonstrated a 5.6 × 4.9 cm hypoechogenic mass with a cystic appearance. Laboratory coagulation profiles were as follows: platelet count 62 × 10³/mm³ (normal range: 130×10³ - 300×10³/mm³), prothrombin time 22.1% (normal range: 70%-130%), activated partial thromboplastin time 60.3 s (normal range: 25-40 s), fibrinogen < 50 mg/dl (normal range: 170-350 mg/dl), fibrin degradation products 27.2 µg/ml (normal range: 0-5 µg/ml), D-dimer 16.3 µg/ml (normal range: 0-1 µg/ml), and antithrombin III 88% (normal range: 80%-120%). The patient was diagnosed as having consumptive coagulopathy, but there were no causes of consumptive coagulopathy, including preeclampsia, HELLP syndrome, thrombotic thrombocytopenic purpura/hemolytic uremic syndrome, or placental abruption. She was given fresh frozen plasma of 9 units and platelets of 20 units, resulting in rapid improvement in hematologic parameters. Magnetic resonance imaging displayed uterine leiomyoma with shading on the fat-suppressed T2-weighted images, suggesting red degeneration of uterine leiomyoma. At 34 weeks of gestation, she underwent an emergency cesarean section due to uncontrolled uterine contractions. Myomectomy was performed to examine a causal association between uterine leiomyoma and consumptive coagulopathy. She delivered a female baby weighing 2,383 g with Apgar scores eight at one minute and nine at five minutes, respectively. Pathological examination disclosed a uterine leiomyoma with cystic and myxoid degeneration and the presence of several organized thrombi. Organized thrombi were suggested to have been formed two or three months earlier. She was discharged home on the eighth postoperative day with normal coagulation profiles.

Key words: Consumptive coagulopathy; Leiomyoma; Pregnancy.

Case report

The patient was a 30-year-old nulliparous woman with a past history of uterine leiomyoma. She presented with acute right lower abdominal pain at 21 weeks of gestation. Physical examination demonstrated a tender mass on the right anterior wall of the uterus. Pelvic ultrasonography demonstrated a 5.6 × 4.9 cm hypoechogenic mass with a cystic appearance. Laboratory coagulation abnormalities developed concomitantly with an onset of the degeneration of uterine leiomyoma. This implies a close association between degenerated uterine leiomyoma and consumptive coagulopathy. Pathologic examination demonstrated the presence of several old thrombi in the vessels of leiomyoma. The consumption of platelets and coagulation factors in degenerated uterine leiomyoma may result in consumptive coagulopathy.

Discussion

Consumptive coagulopathy associated with uterine leiomyomas remains infrequent [1, 2]. In the present case, coagulation abnormalities developed concomitantly with an onset of the degeneration of uterine leiomyoma. This implies a close association between degenerated uterine leiomyoma and consumptive coagulopathy. Pathologic examination demonstrated the presence of several old thrombi in the vessels of uterine leiomyoma with cystic and myxoid degeneration. Our findings are consistent with previous reports showing the degeneration of uterine leiomyomas and vessels filled with thrombi in two non-pregnant women that developed consumptive coagulopathy [1, 2]. The mechanism by which uterine leiomyomas cause consumptive coagulopathy remains to be elucidated. Nonetheless it has been postulated that the stagnation of blood and formation of thrombi in the vascular spaces of uterine leiomyomas may result in the consumption of platelets and coagulation factors, as well as the release of fibrinolytic substances by the damaged tissues [1, 2]. In our patient, acute development of the degeneration of the uterine leiomyoma may have compressed tumoral vessels, leading to damage of the endothelial cells, the formation of thrombi, and consumption of platelets and coagulation factors. Finally, thrombin and plasmin may have been generated and released into the circulation. This process may contribute to the activation of fibrinolysis.

References


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