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Further Evidence for Hypercoagulability in Women With Ovarian Endometriomas.

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Abstract

Our previous studies have shown that platelets play a crucial role in the development of endometriosis, and women with endometriosis appear to be in a state of hypercoagulability. However, a recent study could only replicate part of our previous finding, casting doubts on this notion. We further investigated this question through a cross-sectional study by measuring additional coagulation factors in women with and without endometriosis. To this end, we conducted a cross-sectional study of 100 women with laparoscopically and pathologically diagnosed ovarian endometriomas (OMA) and another 100 women without endometriosis. The platelet count; platelet activation rate; maximum platelet aggregation rate; plasma levels of D-dimer, fibrinogen, fibrin degradation products (FDPs), plasma soluble P-selectin (sP-sel), and prothrombin fragment 1+2 (F1+2); prothrombin time; thrombin time (TT); and activated partial thromboplastin time were measured before surgery and 3 months after surgery, and their clinical data were recorded. These measurements were also performed in control patients. We found that, compared with controls, women with OMA had a significantly higher platelet activation rate and platelet aggregation rate, elevated plasma D-dimer, fibrinogen, FDPs, sP-sel, and F1+2 levels as well as shortened TT. Remarkably, TT was prolonged, and all the other coagulation measurements, except plasma fibrinogen level, were significantly reduced 3 months after surgical removal of endometriotic lesions. Thus, our study provides another piece of evidence that endometriosis is a hypercoagulable disease, and anticoagulation therapy may hold promises in treating endometriosis.

21KEYWORDS:

coagulation; endometriosis; fibrin degradation product; hypercoagulability; platelet; prothrombin fragments