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Performance of CXC Chemokine Ligand 12 and Micro Ribonucleic Acid-31 in Assessing Endometrial Receptivity of Patients with Polycystic Ovary Syndrome-Induced Infertility

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ABSTRACT This study aimed to evaluate the potential of CXC chemokine ligand 12 (CXCL12) and microRNA-31 (miR-31) as biomarkers for assessing endometrial receptivity in patients with polycystic ovary syndrome (PCOS)-induced infertility. A total of 80 patients with PCOS-related infertility and 80 healthy controls were included. Serum levels of miR-31 and CXCL12 were measured using enzyme-linked immunosorbent assay and qPCR. The study found significantly lower serum levels of both biomarkers in the PCOS group ($P<0.05$). Logistic regression analysis revealed that decreased miR-31 and CXCL12 levels were risk factors for impaired endometrial receptivity [*odds ratio (OR)*>1, $P<0.05$]. The combination of these biomarkers showed a high diagnostic performance area under curve [(AUC)=0.920]. These results suggest that miR-31 and CXCL12 are promising biomarkers for evaluating endometrial receptivity in PCOS-induced infertility.