

Accuracy of ICD-10 Diagnosis Codes for Placenta Accreta Spectrum Disorders

Stephanie Leonard¹, Anjali Jotwani¹, Deirdre Lyell¹, Alexander Butwick², and Wanjiru Rwigi¹

¹Stanford University Department of Obstetrics and Gynecology

²Stanford University Department of Anesthesiology Perioperative and Pain Medicine

October 9, 2023

Abstract

Objective: To evaluate the accuracy of ICD-10 codes for placenta accreta spectrum (PAS). **Design:** Validation study. **Setting:** Quaternary obstetric center in the U.S. **Population:** Patients who had a delivery or dilation and evacuation between October 2015 and March 2020. **Methods:** We reviewed medical records of patients who were (1) assigned an ICD-10 code for PAS (O43.21-O43.23), (2) had a histopathologic diagnosis of PAS, and/or (3) underwent a cesarean delivery with subsequent review of placental pathology. **Main Outcome Measures:** Sensitivity, specificity, positive predictive value, and negative predictive value of the ICD-10 PAS code assignments. **Results:** Among 22,345 patients, 104 (0.46%) had an ICD-10 code for PAS and 51 (0.23%) had a histopathologic diagnosis of PAS. ICD-10 codes for PAS had a sensitivity of 88% (95% CI: 76-96%), specificity of 97% (95% CI: 91-99%), positive predictive value of 43% (95% CI: 34-53%), and negative predictive value of 100% (95% CI: 96-100%). The sensitivities of the individual ICD-10 codes for placenta accreta, increta, and percreta were 72% (95% CI: 47-90%), 47% (95% CI: 21-73%), and 67% (95% CI: 41-87%), respectively. Based on chart review, primary reasons for code misassignment included code assigned at referral for PAS ultrasound evaluation (28%) and code assigned based on antenatal imaging alone (27%). **Conclusion:** The sensitivity, specificity, and negative predictive value of ICD-10 codes for PAS were overall high, but the positive predictive value was moderate. These findings suggest that ICD-10 codes may be useful for research and surveillance of PAS, but opportunities may exist to improve accuracy.

Hosted file

PAS_ICD_Validation_100623.docx available at <https://authorea.com/users/672836/articles/671750-accuracy-of-icd-10-diagnosis-codes-for-placenta-accreta-spectrum-disorders>