Comparison Between Placenta Accreta Index and Tovbin Score as A Predictor of Placenta Accreta Spectrum Disorders (PASD)

Perbandingan Antara Placenta Accreta Index Dan Skoring Tovbin Sebagai Prediktor Kejadian Placenta Accreta Spectrum Disorder (Pasd) Di Rsup Dr.Kariadi Semarang

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Abstract

Background : The incidence of Placenta Accreta Spectrum Disorders (PASD) in developed countries has reportedly increased 10-fold in the last 50 years. The significant increase was followed by an increase in the number of sectio caesarea from 12.5% to 23.5% in the last 10 years. Maternal morbidity related to PASD events reaches 7% in intraoperative and postoperative actions, while the morbidity reaches 60%. In cases of late diagnosis, maternal mortality with placenta accreta reaches 30%. Efforts to prevent maternal morbidity and mortality can be carried out by early detection at antenatal care visits. The Placenta Accreta Index (PAI) and Tovbin scoring systems based on the results of ultrasound examination can be used to screening for placenta accreta.

Objective: To analyze the comparison of the accuracy of the PAI and Tovbin scoring systems in predicting the incidence of Placenta Accreta Spectrum Disorder (PASD).

Method: The study used an analytic observational with a cross sectional design. Sampling was done by consecutive sampling method. There were 35 subjects who met the inclusion and exclusion criteria. PAI and Tovbin scoring were performed on each selected subject. The accuracy of the PAI and Tovbin scoring systems was confirmed by establishing a diagnosis based on PASD histopathology.

Results: The PAI scoring system in predicting PASD has a sensitivity value of 79.31%, a specificity of 83.33%, a positive predictive value (NDP) of 95.83%, a negative predictive value (NDN) of 45.45%, an accuracy of 80.00%. While the Tovbin scoring system obtained a sensitivity value of 86.21%, specificity of 83.33%, NDP of 96.15%, NDN of 55.56%, accuracy of 85.71 %.

Conclusion: In the comparison of scoring systems, it was found that the Tovbin scoring system has almost the same sensitivity and accuracy and the same specificity in predicting Placenta Accreta Spectrum Disorder (PASD).

Keywords: PAI, Tovbin Score, PASD, Placenta Accreta

Abstrak

Latar Belakang: Insiden Placenta Accreta Spectrum Disorders (PASD) di negara maju dilaporkan meningkat 10 kali lipat dalam 50 tahun terakhir. Peningkatan yang signifikan tersebut diikuti dengan peningkatan jumlah sectio caesarea dari 12,5% menjadi 23,5% dalam 10 tahun terakhir. Morbiditas maternal yang berhubungan dengan kejadian PASD mencapai 7% pada tindakan intraoperatif dan postoperatif, sedangkan morbiditasnya mencapai 60%. Pada kasus keterlambatan diagnosis, kematian ibu dengan plasenta akreta mencapai 30%. Upaya pencegahan kesakitan dan kematian ibu dapat dilakukan dengan deteksi dini pada kunjungan antenatal care. Sistem penilaian Placenta Accreta Index (PAI) dan Tovbin berdasarkan hasil pemeriksaan USG dapat digunakan untuk skrining plasenta akreta.

Tujuan: Menganalisis perbandingan akurasi sistem penilaian PAI dan Tovbin dalam memprediksi kejadian Placenta Accreta Spectrum Disorder (PASD).

Metode: Penelitian ini menggunakan observasional analitik dengan rancangan cross sectional. Pengambilan sampel dilakukan dengan metode consecutive sampling. Terdapat 35 subjek yang memenuhi kriteria inklusi dan eksklusi. Penilaian PAI dan Tovbin dilakukan pada setiap mata pelajaran yang dipilih. Keakuratan sistem penilaian PAI dan Tovbin dikonfirmasi dengan menegakkan diagnosis berdasarkan histopatologi PASD.

Hasil: Sistem skoring PAI dalam memprediksi PASD memiliki nilai sensitivitas 79,31%, spesifisitas 83,33%, nilai prediksi positif (NDP) 95,83%, nilai prediksi negatif (NDN) 45,45%, akurasi 80,00% . Sedangkan sistem Tovbin scoring diperoleh nilai sensitivitas 86,21%, spesifisitas 83,33%, NDP 96,15%, NDN 55,56%, akurasi 85,71%.

Kesimpulan: Pada perbandingan sistem skoring didapatkan bahwa sistem skoring Tovbin memiliki sensitivitas dan akurasi serta spesifisitas yang hampir sama dalam memprediksi Placenta Accreta Spectrum Disorder (PASD).

Kata Kunci: PAI, Skor Tovbin, PASD, Plasenta Akreta