Prediksi varises esofagus *high risk* menggunakan parameter klinis: Evendo Score, APRI score dan FIB-4 Score

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Intisari

Latar Belakang

Untuk kepentingan praktis varises esofagus dibedakan menjadi *high risk* dan *low risk*. Belum ada metode deteksi non-invasif yang menyamai superioritas endoskopi sebagai referensi standar diagnosis varises esofagus. Penelitian ini bertujuan untuk melihat apakah Evendo score, APRI score dan FIB-4 score dapat memprediksi keberadaan varises esofagus *high risk* pada sirosis hati.

Metode

Penelitian observational, disain potong lintang dengan pendekatan uji diagnostik dengan subjek penderita sirosis hati yang telah menjalani esofagogastroduodenoskopi Data berasal dari database pusat endoskopi dan rekam medis RSUP dr. Sardjito periode Juni 2022 sampai Juni 2024. Rekam medik ditelusuri selanjutnya dihitung nilai APRI score, FIB-4 dan Evendo setiap subjek. Varises esofagus diklasifikasikan sebagai varises esofagus *high risk* atau *low risk*. Nilai *Cut off* APRI score, FIB-4 score dan Evendo score ditentukan dengan metode titik potong sensitivitas-spesifisitas. Analisis meliputi kurva ROC, nilai AUC, sensitivitas, spesifisitas, nilai prediksi positif dan negatif serta akurasi diagnostik.

Hasil

Sebanyak 121 subjek dimasukkan ke dalam analisis, Sebagian besar adalah pria (73,6%). Proporsi varises esofagus high risk sebesar 68,6% (83 subjek). Nilai cut off Evendo score, APRI score dan FIB 4 score untuk memprediksi varises esofagus high risk secara berturut-turut adalah 5,27 (OR = 28,7; $p < 0,01$; 95% CI10,0 – 82,3), 0,95 (OR = 4,4; $p < 0,01$; 95%CI 1,9 – 10,2), 4,3 (OR = 2,8; $p < 0,01$; 95%CI 2,8 – 6,3). Nilai diagnostik Evendo score antara lain adalah AUC 0,94; sensitivitas 84,3%, spesifisitas 84,2%, nilai duga positif 92,1%, nilai duga negatif 71,1%. Nilai diagnostik APRI score antara lain adalah AUC 0,75; sensitivitas 67,5%, spesifisitas 68,4%, nilai duga positif 82,4%, nilai duga negatif 49,1%. Nilai diagnostik FIB-4 score antara lain adalah AUC 0,73; sensitivitas 62,7%, spesifisitas 63,2%, nilai duga positif 78,8%, nilai duga negatif 43,6%.

Kesimpulan

Evendo score, APRI score dan FIB-4 score dapat memprediksi keberadaan varises esofagus pada subjek sirosis hati. Secara berturut-turut yang memiliki kemampuan prediksi paling baik adalah Evendo score, diikuti oleh APRI score dan dan FIB-4 score.

Kata kunci

Sirosis hati, varises esofagus high risk, Evendo score, APRI score, FIB-4 score

Prediction of high-risk esophageal varices in liver cirrhosis subjects using clinical parameter: Evendo Score, APRI score dan FIB-4 Score

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Abstract

Background

Practically, esophageal varices is simply divided into high-risk and low-risk in term of bleeding tendency. Since none of non-invasive methods could argue the superiority of upper GI endoscopt to proof esophageal varices, we try to conduct wether Evendo score, APRI score and FIB-4 score can be used to identify presence of high-risk esophageal varices in liver cirrhosis subjects.

Method

Observational study, cross sectional, using diagnostic test approach was conducted. Data was collected from endoscopy unit and medical record unit Sardjito hospital from June 2022 till June 2024. Subjects were liver cirrhosis which have been underwent upper GI endoscopy. Each subject got Evendo score, APRI score and FIB-4 score calculation. Endoscopic finding was reviewed and esophageal varices was classified as high-risk or low-risk. Cut off best value of Evendo score, APRI score and FIB-4 score was determined by cross-section method of sensitivity-specificity. Analysis included ROC curve, sensitivity, specificity, positive predictive value, negative predictive value and diagnostic accuracy as well.

Result

Analysis included 121 subjects, 73,6% are male. High risk esophageal varices is 68,6% (83 subject). The best cut off value of Evendo score, APRI score and FIB-4 score respectively are 5,27 (OR = 28,7; $p < 0,01$; 95% CI 10,0 – 82,3), 0,95 (OR = 4,4; $p < 0,01$; 95% CI 1,9 – 10,2), 4,3 (OR = 2,8; $p < 0,01$; 95% CI 2,8 – 6,3). Evendo score has the best diagnostic performance, 0,94 AUC; 84,3% sensitivity, 84,2% spesifisity, 92,1% positive predictive value, 71,1% negative predictive value. Diagnostic performances of APRI score are 0,75 AUC, 67,5% sensitivity, 68,4% specificity, 82,4% positive predictive value, and 49,1% negative predictive value. The last FIB-4 score have lowest diagnostic performance, 0,73 AUC; 62,7% sensitivity, 63,2% specificity, 78,8% positive predictive value, and 43,6% negative predictive value.

Conclusion

Evendo score can be used to predict high risk esophageal varices in liver cirrhosis subject as well as APRI score and FIB-4 score. Tools which have best diagnostic performance in rank respectively are Evendo score the highest, APRI score and FIB-4 score the lowest.

Keyword

Liver cirrhosis, high risk esophageal varices, Evendo score, APRI score, FIB score