New Castle Variceal Risk in PBC Score Calculator

The Newcastle Risk Score:

\[
\frac{1}{2.71} \times e^{-0.031 \times (\text{serum albumin in g/L) + 1000 \times (\text{platelet count in 10^9/L}) + 2.53 \times (\text{alkaline phosphatase level in U/L})}}
\]

After entering serum albumin in g/L, platelet count (10^9/L) and alkaline phosphatase in U/L click the Calculate button. Your Risk Score will then be computed and displayed in the "Predicted risk of Varices %" text box.

Enter Your Serum Albumin: 
(\text{g/L})
Enter Your Platelets : 
(\times 10^9/L)
Enter Your Alkaline Phosphatase : 
(U/L)
Your reference Alkaline phosphatase range: 
to 
(U/L)
Calculate 

Output: Predicted risk of Varices %

Abstract PWE-146 Figure 1

with primary biliary cirrhosis based on serum albumin levels, platelet count and serum alkaline phosphatase level. A easy accessible online tool is available where values can be entered and score greater than 50% is considered to predict the presence of varices, thereby warranting oesophago-gastro-duodenoscopy (OGD). The aim of this study was to validate this score in an external validation cohort from Liverpool.

Methods Retrospective study involving 80 PBC patients under follow up at a university hospital. Of them, patients who had undergone a OGD for any clinical reason were identified and findings of the OGD noted. Results of blood tests to allow calculation of the NVP score were recorded. An NVP probability of 0.5 was used as the cut-off to analyse the performance of the score.

Results Patients involved in the study had mean albumin levels of 36, platelets of 260 with an ALP ranging between 58 and 811. 97% were female and median age of patients was 67 years. 30 PBC patients who had an OGD were identified. 10 of the 30 patients had varices on endoscopy. The NVP Score performed well in identifying those in whom varices were absent in this cohort (sensitivity of 100%, specificity 69%, Negative Predictive Value 100% and Positive Predictive Value 10%; overall accuracy 84.5%) and had a good discriminating power with AUROC 0.89.

Conclusion The NVP Score proved to be a highly sensitive tool to discriminate patients with PBC who do not have varices and in whom OGD is unnecessary in our cohort. The study therefore strongly supports the view that prospectively applying the score in patients with PBC will help to direct endoscopic evaluation in the right category of patients thereby ensuring effective use of resources.

REFERENCE

Disclosure of Interest None Declared.