Gastrointestinal bleeding and acute kidney injury - Analysis of 100 gastrointestinal bleeding cases from a prospective cohort

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GI VÉRZÉSEK MUNKACSOPORT

Introduction

Gastrointestinal bleeding (GIB) is a life-threatening disease, potentially causing acute kidney injury. Data on the association of the two is lacking.

Aims

To describe the characteristics and markers of renal dysfunction of patients presenting with GIB.

Methods

From 07/10/2019 to 07/02/2020, 100 patients consented to participate in the Hungarian Gastrointestinal Bleeding Registry. Participants were divided into subgroups by etiology and by severity of their anemia on admission. Serum creatinine levels on admission were used in conjunction with previous kidney function test results (that were maximum one-year-old, and not connected to hospitalization) to assess renal dysfunction on admission. The CDK-EPI formula was used to estimate glomerular flow rate (eGFR) values.

Results

The variceal upper GIB (VUGIB) group consisted of 15 cases, the non-variceal upper GIB (NVUGIB) 45, the lower GIB (LGIB) 22, the iatrogenic 13 and 8 patients had a bleeding of unknown origin (BUO; ***Fig.1***). 17 patients presented with no anemia, 14 with mild, 30 with moderate, and 39 with severe anemia (***Fig.2***). The mean eGFR decrease on presentation was 9.12±3.02%. It was 2.55±1,80% in the VUGIB, 4.32±3.93% in the NVUGIB, 19.1±5.23% in the LGIB, 2.80±16,3% in the Iatrogenic, and 29.5±19.4% in the BUO subgroup (***Fig.3***). Mean eGFR was decreased by 0.854±10.5%, 7.24±8.42%, 18.0±4.79% and 4.50±4.13% in the non-, mildly, moderately and severely anemic groups, respectively (***Fig.4***).

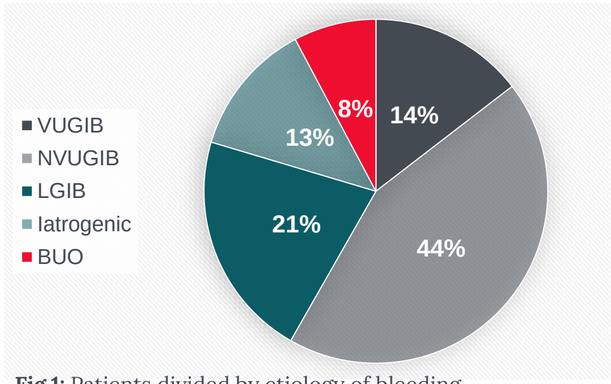

Fig.1: Patients divided by etiology of bleeding

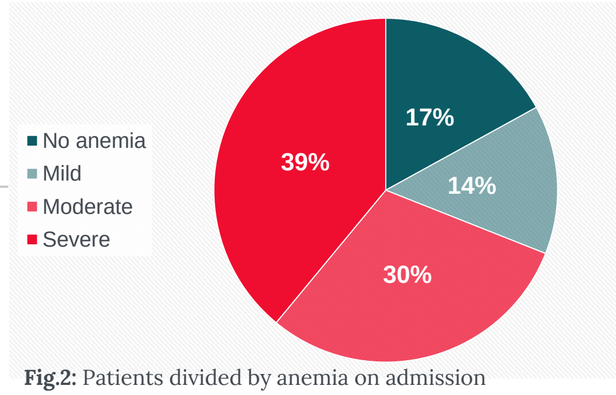

Fig.2: Patients divided by anemia on admission

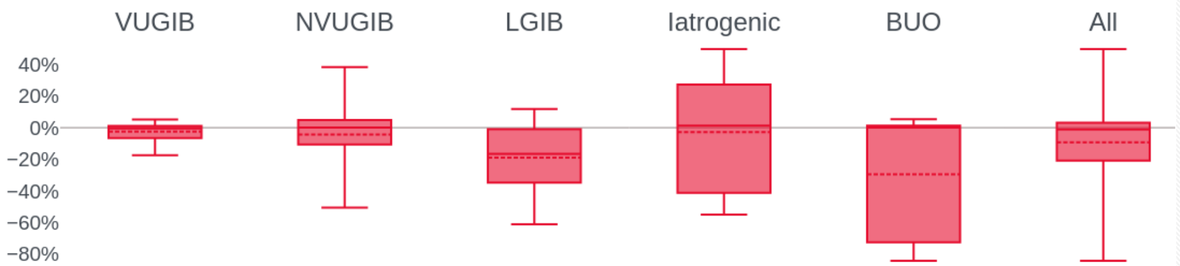

Fig.3: Box plot of eGFR changes by etiological subgroups

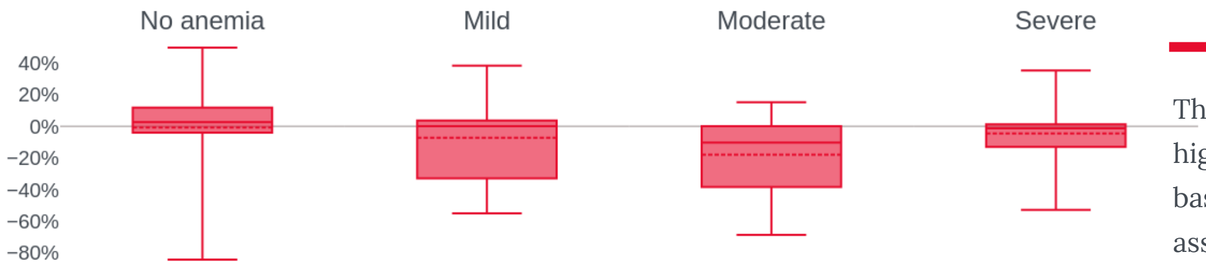

Fig.4: Box plot of eGFR changes by anemia on admission

Conclusion

This registry should continue to produce high-quality data, which will provide a basis for further clinical research on the association between kidney injury and the outcomes of GIB.