

Correlation Between Clinical and Biological Signs of Severe Acute Colitis and the Presence of Endoscopic Signs of Severity

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Abstract

Severe acute colitis may reveal or complicate a known chronic inflammatory bowel disease and its diagnosis is based on clinical and biologic criteria.

This is a retrospective descriptive and analytical study spread over 3 years from January 2018 to June 2021 in our department regarding 62 patients with severe acute colitis.

The aim of our work is to evaluate the correlation between severe lesions in endoscopy and clinical and biological data.

Endoscopy within patients with severe acute colitis remains an invasive and risky procedure.

Therefore, it is sometimes necessary to avoid as much as possible any invasive explorations with these types of patients.

Our study mainly shows statically significant results of endoscopic lesions and biological data's.

However clinical signs do not correlate much with endoscopic lesions.

Keywords: *Severe Acute Colitis; Endoscopic Signs; Endoscopic Lesions*

Introduction

Severe acute colitis may reveal or complicate a known chronic inflammatory bowel disease and its diagnosis is based on clinical and biologic criteria. Although this definition does not include endoscopy, it is proposed to use endoscopy, especially rectosigmoidoscopy, to identify severe lesions.

Aim of the Study

The aim of our work is to evaluate the correlation between severe lesions in endoscopy and clinical and biological data.

Patients and Methods

This is a retrospective descriptive and analytical study spread over 3 years from January 2018 to June 2021 in our department.

We collected all the patients admitted for a severe acute colitis diagnosed with clinical criteria on the basis of the Lichtiger score and we collected, recorded and processed the biological data and the endoscopic severity criteria on the SPSS software to look for the correlation between the clinical and biological signs of severe acute colitis and the presence of endoscopic severity criteria.

Results

Among the 62 patients collected. The mean age was 37.5 ± 16.5 [20 - 65] years. The sex ratio was F/H was 2.4 (44 women and 18 men). The etiologies were dominated by ulcerative colitis in 43(69.4%) of the patients and Crohn's disease was represented 19(30.6%) of the patients. All the patients recorded a mean Lichtiger score of 13 ± 1 . A biological assessment to evaluate the severity of the cases was performed urgently revealing anemia in all patients with a mean hemoglobin of 10.6 ± 1.075 g/dl, a mean CRP of 134 ± 73 mg/l and a mean albumin level of 26 ± 5 g/l.

An emergency rectosigmoidoscopy was performed in all the patients, showing severe lesions (visible muscularis, deep ulcerations > 1/3 of the surface of a colonic segment) in 20 (32.3%) of the cases.

The analytical study showed in multivariate analysis and adjusting on the parameters studied, namely the number of stools, the presence of rectal syndrome, CRP, albumin level and hemoglobin only between albumin level ($p < 0.001$), CRP and hemoglobin influence on the presence of endoscopic lesions of gravity ($p < 0.05$).

A low hemoglobin level and a high CRP level increase the risk of endoscopic lesions, whereas a high albumin level decreases this risk.

On the other hand, clinical signs such as rectal syndrome and stool count were not significantly correlated with the presence of endoscopic lesions.

Discussion

Rectosigmoidoscopy remains an invasive and risky procedure especially in patients with severe acute colitis. It is therefore important to find a criterion that can be used to assess patient severity, disorder activity with relatively low-cost while being non-invasive.

The objective of this study was to investigate the relationship between clinical symptoms and laboratory tests with the endoscopic severity score in patients with acute severe colitis to assess whether they can be used in emergency as an alternative to predict endoscopic outcome in these patients.

The present study carries two messages that we believe are important.

First, albumin is shown to be a protective factor against the development of severe endoscopic lesions.

Second, the clinical Lichtiger activity index was not significantly correlated with the development of severe lesions endoscopically.

To date, few studies have evaluated the correlation between endoscopic severity of lesions in severe acute colitis and clinical activity. The study done in Switzerland by Alain M. Schoepfer [1] was the first study to compare and unlike our study the Lichtiger index showed a good correlation with endoscopic disease activity.

Abdominal pain, bowel frequency (> 3 per 24 hr) occurred more frequently with patients with severe lesions in J. Powell-tuck study [2].

However, several studies agree with our study and confirm the significant correlation of biological markers (albumin, CRP and Hb) and endoscopic signs of severity.

This study done in india by Sanaz Soleymani., *et al.* [3] showed that just like in our study elevated CRP has a positive correlation with the severity of the disease.

Another study done in the United States by Craig A. Solem., *et al.* [4] shows similar results.

Conclusion

In our study, the biological signs (CRP, albumin, Hb) were correlated with the presence of endoscopic signs of severity. However, the clinical signs were not correlated with the presence of endoscopic lesions.

The data and studies involving the correlation between clinical signs and endoscopic lesions in acute severe colitis are not yet validated on an international level.

However, the correlation between biological signs and endoscopic lesions in severe acute colitis is proven.

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