

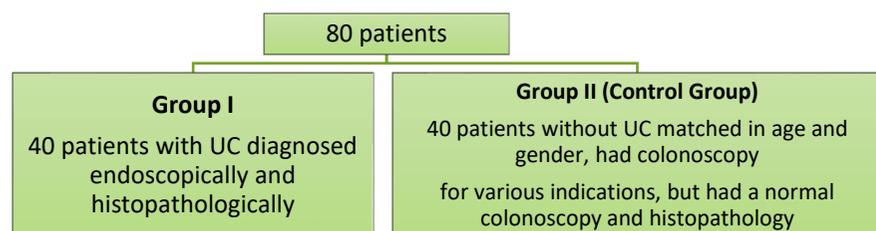
Interleukin 23 as a Non-Invasive Test of Disease Severity in Patients with Ulcerative Colitis

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Introduction: This study was done to evaluate serum interleukin-23 as a non-invasive test for ulcerative colitis disease and assessed its correlation with the disease severity.

Methods: This prospective case-control study included 80 patients, allocated into two groups:



In patients with UC, disease severity was assessed using the Mayo Scoring System for assessing UC activity. Serum IL-23 level was quantified using Quantikine[®] Human IL-23 Immunoassay by R&D Systems Europe, Ltd. ELISA kit. IL-23 levels were compared in the 2 groups, also correlation with severity was obtained. Analysis of the data was done using SPSS (Statistical System for Social Science version 16). Kruskal Wallis test was used to compare the 2 groups regarding quantitative nonparametric variables. Spearman correlation was used to rank variables positively or inversely. Receiver operating curve (ROC) was used to find the best cut off and validity of IL-23. The one way ANOVA test was used to assess the relationship between the severity of UC and IL-23 levels.

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Disclosure of interest: None declared

Results: Patients with UC had higher level of interleukin 23 (234.5+161 pg/mL) compared to controls (54.2+15 pg/mL). A positive correlation was found between the level of IL-23 and disease severity. A cut off value of IL-23 = 68 pg/mL was the best to differentiate between cases and controls.

Performing the receiver operating characteristic curve (ROC) revealed that the best cut off values of IL-23 to identify the severity of ulcerative colitis were 105 pg/mL for mild cases (80% sensitivity), 200 pg/mL for moderate cases (60% sensitivity), and 270 pg/mL for severe cases (81% sensitivity).

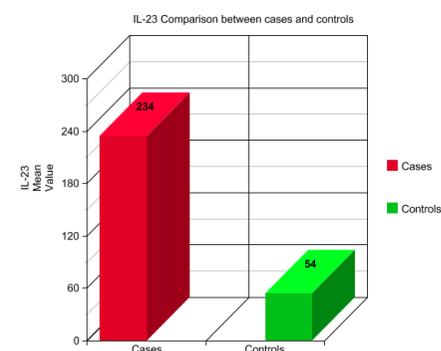


Figure 1. Comparison between IL-23 levels in UC patients and controls

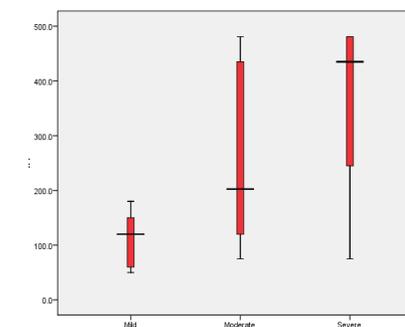


Figure 2. Plot for comparison between IL-23 levels in mild, moderate and severe UC

Conclusion: Our findings reinforce the suggestion that IL-23 level measurement may be of value as a non-invasive test in the diagnosis and disease severity assessment in patients with UC. Further studies on a larger scale would be needed to evaluate whether this could be used for monitoring of response to treatment. In view of IL-23 antagonists currently being studied in UC patients, the predictability of response to IL-23 antagonists guided by IL-23 levels is an area that could be explored.