Disease activity patterns during the first 5 years after diagnosis in children with ulcerative colitis: a population-based study


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Conflict of interest: none
Background: Real-life data on long-term disease activity of pediatric UC are lacking.

Primary outcome: to define clusters of disease activity of pediatric UC in a population-based inception cohort during the first 5 years after diagnosis.

Secondary outcome: to identify prognostic risk factors based on findings at the diagnosis and in the first 6 months after.
Material and methods

• All UC patients from SIGENP IBD registry and a complete follow-up of at least 5 years were included.

• An **Active disease** was defined for each yearly semester as follows:
  - clinical activity (PUCAI>35); endoscopic activity (Mayo>1); need for hospitalization, surgery or treatment escalation.

• Formula-based clusters were then generated based on previously published questionnaire-based activity patterns in adults* (competed with 1 more).

![Graphs showing different activity patterns](image)

• Clinical, endoscopic and laboratory prognostic factors of disease course were identified at diagnosis and at 6-month follow-up.

Results: clusters of activity

226 pts included:
127 (48%) E4
29 (13%) E3
24 (14%) E2
36 (16%) E1

• CLUSTER A: 2 sem of activity in the first 24 m, <2 sem of activity from 25 to 60 m
• CLUSTER B: <2 sem of activity in the first 24 m, >2 sem of activity from 25 to 60 m
• CLUSTER C: ≥1 sem of activity per year
• CLUSTER D: ≥1 sem of activity every 2 years or an irregular chronic-intermittent, inactive-active-inactive or vice-versa pattern
• CLUSTER E: <2 sem of activity in total
A high CRP (OR 3.79; 95% CI 1.28–11.2) and platelet count (OR 3.41; 95% CI 1.17–9.93) at the diagnosis were positively associated with a chronically active disease at follow-up (Cluster C).

An endoscopic recurrence at 6 months was negatively associated with a quiescent course (Cluster E) (OR 0.37; 95% CI 0.13–0.96).

8% of patients needed surgery at the end of the follow-up, none in the quiescent group (p=0.04).
Conclusions

• More than one third of pediatric patients with UC present a chronically active or chronic intermittent disease course during the first 5 years after the diagnosis.

• About 30% of patients experience a disease flare at the diagnosis followed by a quiescent disease course in the next 5 years of follow-up.

• High inflammatory markers at the diagnosis and a persistent endoscopic activity seem to correlate with a worse disease course.