Low microbial translocation despite gastrointestinal involvement in Henoch-Schönlein purpura

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Background Henoch-Schönlein purpura

- First cause of systemic vasculitis in childhood (Trnka, 2013)
- Pathophysiology: Immunoglobulin A deposits in the small vessels (Ozen et al, 2010)
- 2/3 of children: abdominal involvement with at least abdominal pain due to sub-mucosal hemorrhage and edema of the intestinal walls (Ozen et al, 2010 ; Louie et al, 2018)

Objective

To report data on microbial translocation in pediatric Henoch-Schönlein purpura

Methods

- Children between 3 and 15.6 years old
- 3 groups: A, acute HSP (n=30)
B, remission HSP (n=30)
C control (n=38) healthy children matched on age
- Plasma samples:
 - *Bacterial translocation
 - bacterial 16S rDNA level (qPCR)
 - LBP (LPS Binding Protein) level (ELISA)
 - sCD14 level (ELISA)
 - *Intestinal permeability: Zonuline level (ELISA)
 - *Intestinal damages: I-FABP level (ELISA)

I-FABP level in A was significantly higher than in C. Zonuline levels: no difference.

Discussion & Conclusions

16S rDNA assay is corresponding to intestinal translocation of whole bacteria; while LBP and sCD14 assays represent the host response to components of bacteria. (Abad-Fernández et al. 2013)

Despite higher intestinal damages in HSP group, the results suggested that bacterial translocation from gut to bloodstream occur only for some components of bacteria.

Immunoglobulin A is the major class of immunoglobulin that plays an important role in gut mucosal immunity; during HSP, serum immunoglobulin A is higher. (Purevdori et al, 2018)

Therefore, the role of mucosal immunoglobulin A in HSP needs be studied in the future to understand this phenomenon.