BWP Belgian Week of Pathology

11th BELGIAN WEEK OF PATHOLOGY

22.10 > 23.10.21

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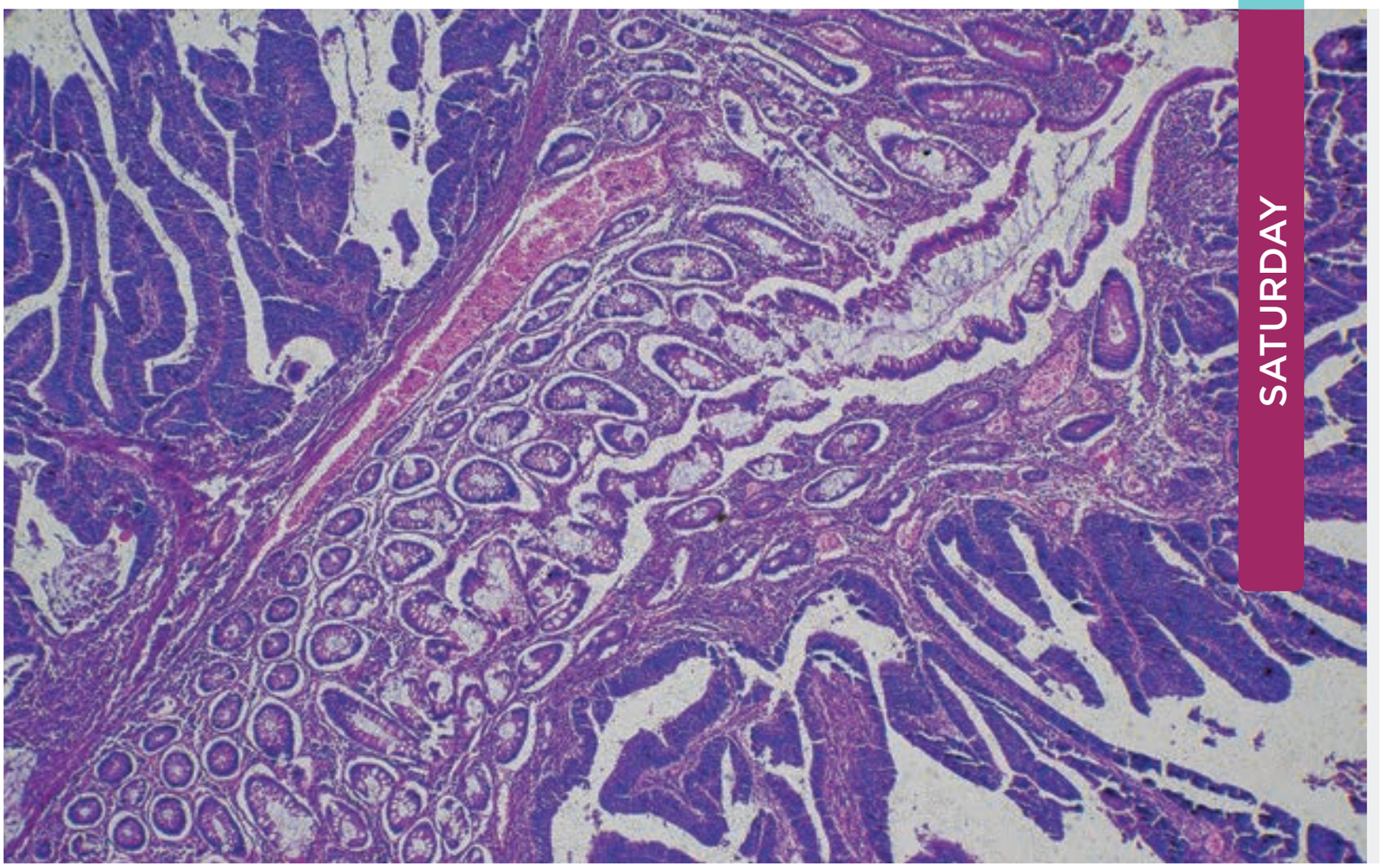
FRIDAY

SATURDAY



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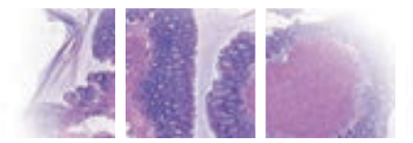
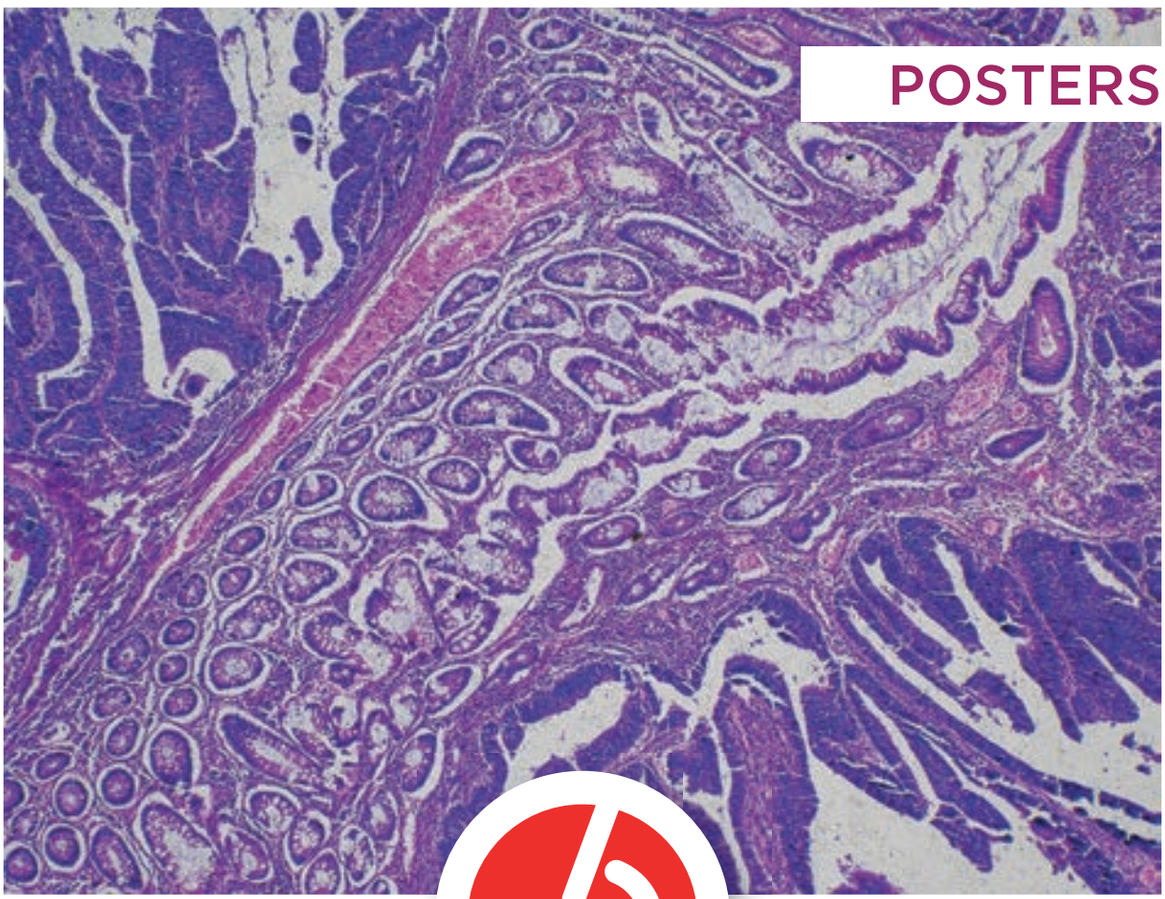
INDEX

FRIDAY

SATURDAY





POSTERS

P 22

MACROPHAGE ACTIVITY IN THE KIDNEYS OF NEWBORNS, DEVELOPED UNDER MATERNAL PREECLAMPSIA CONDITIONS

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Background

Preeclampsia (PE) is a common pregnancy complication, negatively affecting the health status of a woman and her baby.
The objective is to identify the features of macrophage activity in the kidneys of newborns from mothers whose pregnancy was complicated by PE.

Materials and methods

The studied material was the kidneys of full-term newborns. There were 4 groups formed. Group 1 included 15 newborns from mothers with physiological pregnancy. Group 2 was represented by 13 newborns from mothers whose pregnancy was complicated by mild PE. Group 3 consisted of 14 newborns, developed in conditions of moderate severity maternal PE. Group 4 included 13 newborns, developed in conditions of severe maternal PE. Microspecimens were stained with hematoxylin and eosin. Immunohistochemical study was performed with a monoclonal antibody to CD 68.

Results

In group 1 a few CD 68-cells were identified in the fat capsule, in the stroma of the cortical and medulla in the intertubular, peritubular, perivascular and periglomerular areas. The absolute number of CD 68-cells was 6.77±0.20. In groups 2-4 CD 68-cells were located not only in similar sites of group 1 but also in areas of sclerosis, around immature glomeruli and tubules, glomerular and tubular cysts. The absolute number of CD 68-cells increased ($p<0.05$) in the direction from group 2 to group 4 and amounted to 10.63±0.25 in group 2, 11.67±0.23 in group 3, and in group 4 15.46±0.27. In groups 2-4, the number of CD 68-cells increased ($p<0.05$) compared to group 1.

Conclusions

Maternal PE leads to activation of the macrophage system in the kidneys of newborns, indicating both increased needs for these cells for damaged structures phagocytosis, and their possible participation in the morphogenesis of sclerosis, cyst formation, delayed processes of glomerulogenesis and tubulogenesis.