

RENAL, LIVER AND PLACENTAL PATHOLOGIC CHANGES IN PREECLAMPSIA: WHAT'S NEW?

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Placental pathohistology in preeclampsia/eclampsia

- Normal for gestational age
- Infarcts
- Minimal hypoxic injury
- Accelerated maturation
- Chronic villitis
- Intervillous thrombosis, subchorial thrombi
- Immaturity of villi, placental insufficiency

Fibrosis of villi and decreased vascularity

PATHOLOGY OF PLACENTA IN PREECLAMPSIA/ECLAMPSIA

Renal changes in preeclampsia/eclampsia

- Functional changes (renal perfusion, GFR \downarrow , oliguria) not accompanied by diagnostic structural changes
 - Endothelial swelling (“endotheliosis”) - not specific
 - Deposits of fibrin (30%)
 - Tubular changes - reactive
- Renal changes in severe preeclampsia/HELLP syndrome

- Renal failure in 5%
 - Intracapillary glomerular thrombi
 - Tubular necrosis
 - Renal cortical necrosis - rare
- In 5% patients symptoms do not improve after delivery
- Syndrome that develops postpartum has the same pathologic changes as antepartum

Hepatic changes in preeclampsia eclampsia

- Fatal cases rare
 - First described by Virchow in 1856
- Typical changes include

- Hepatic rupture

- Subcapsular hematoma

- Intraparenchymal hemorrhage

Mortality still high (20-30%)

Hepatic changes in preeclampsia eclampsia

- Functional changes more prominent than anatomic changes

- Anatomic changes nonspecific-biopsy provides no significant insight

- Ultrastructural changes in hepatocytes do not correspond to functional disturbances

Cerebral changes in preeclampsia eclampsia

A. Gross hemorrhage

- usually in patients with preexisting hypertension

- high mortality

- rare today

B.Edema, hyperemia, widespread petechiae

- correlates with neuroimaging studies

Conclusions

- Pathologic changes in the placenta and maternal organs are secondary to the basic disturbances of uteroplacental perfusion

- Pathologic changes are nonspecific

- The severity of pathologic changes correlates with the severity of the disease

- Pathology provides no insight into the pathogenesis of preeclampsia/eclampsia