

thrombotic occlusion is manifested by intensive pain, haematuria, oliguria and renal failure. If the renal functions recover a massive proteinuria appears.

4.13 Prae-eclampsia and eclampsia

In the last trimester of pregnancy sometimes abnormalities occur characterised by trias of symptoms: systemic arterial hypertension, oedemas and proteinuria. This condition is termed praе-eclampsia. In some cases unconsciousness and convulsions with impaired hypertension may occur. This condition is termed eclampsia.

In kidneys a generalized oedema is present. The thickened glomerular capillary basement membrane and narrowed capillary lumen due to enlargement of endothelial cells occur. This finding is sometimes termed glomerular endotheliosis. In addition, between and under the endothelial cells fibrinoid deposits are observed. In patients deceased in this stage of disease necroses in renal tubules, liver cells, petechial haemorrhage in brain accompanied with signs of disseminated intravascular coagulation are found. The pathogenesis of this condition is not clear. Attention is focused mainly on renin-angiotensine-aldosterone system and sodium balance. It is generally accepted, that during the pregnancy sodium is retained expanding the volume of circulating blood. When the symptoms of praе-eclampsia appear the volume of the plasma is lower in comparison with normal pregnancy. It is not well understood why the plasmatic volume is reduced. In this condition the signs of utero-placental ischaemia are stated. It is generally known that in uterus the renin and prostaglandins are synthesized. Thus, it could be supposed, that the renin production in uterus might be responsible for the hypertension. The hypertension is accompanied with oedemas and later with proteinuria.

If seizures appear induced termination of gravidity becomes inevitable. This is the most effective therapeutic intervention. All disorders disappear in some weeks. It is not univocally clear if the women with

praе-eclampsia or eclampsia are the candidates for later developing of hypertension.

4.14 Hereditary renal diseases

4.14.1 Polycystic kidney disease

Is inherited as an autosomal dominant trait. It is relatively uncommon, occurring in 5 per cent of all terminal renal conditions.

Globular cysts of various dimensions, with diameter measuring from 1 mm to some cm, occur in kidneys. Among the cysts are islets of normal tissue. The cysts are pressing the nephrons and cause so intrarenal obstruction. The cysts may occur also in other close, or distant organs.

The disease becomes clinically manifest in adults by lumbosacral pains or haematuria appearing following trauma or physical exertion. The condition is in many cases associated with hypertension and leads to the progression of renal failure. Proteinuria is present very frequently. Acute renal failure may be due to the obstruction, resp. compression of ureters by large cysts.

One form of polycystic kidney disease is combined with congenital hepatic fibrosis and portal hypertension; it is a relatively severe hepatic disturbance, therefore the hepatic symptoms prevail.

4.14.2 Disturbances of tubular functions

4.14.2.1 Bartter's syndrome

This condition is characterised by hypokalaemia due to potassium loss induced by renal disturbances. Renin plasmatic activity and aldosterone secretion are elevated. The pressor reaction following angiotensin II administration and the cellular hyperplasia in juxta-glomerular apparatus are evident. Weakness and polyuria appear in patients. Histological examination reveals hyperplasia of interstitial cells producing prostaglandins E and F in renal medulla.