Paediatric Pathology Society

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Scientific Communications

Membranoproliferative Glomerulonephritis. E. F. Glasgow (*Department of Pathology, Children's Hospital, Ladywood Middleway, Birmingham B16 8ET*). Membranoproliferative glomerulonephritis forms a small distinctive group among patients with renal disease. This report considers 50 such patients, 26 children and 24 adults. Follow-up indicated a chronic progressive course. All showed characteristic appearances on needle-biopsy. These consisted of enlargement of tufts, variable lobularity, and especially a combination of mesangial expansion coupled with diffuse capillary wall thickening. The mesangial enlargement was due to mesangial cell proliferation and increase in matrix. The latter was fibrillary on light microscopy and had basement membrane-like consistency on electron microscopy. The mesangial material appeared to extend around the lumen of the capillaries between basement membrane and endothelial lining. Thus on electron microscopy the capillary walls were thickened due to subendothelial layers of basement membrane-like material, islands of cytoplasm, and irregular thickening of lamina densa. In early biopsies the capillary wall thickening was not present in all loops. The degrees of proliferation and mesangial increase are variable and where the former is slight the glomeruli may, on light microscopy, give an appearance of epimembranous nephropathy, but the location of the subendothelial aggregations is characteristic in membranoproliferative glomerulonephritis. The degree of lobularity, the tubular and interstitial changes, and the occurrence of 'fibrin cap' lesions were probably dependent on the severity and stage of the disease process, and all the features were well demonstrated on light microscopy of ultra-thin silver-stained sections of epon-embedded biopsy material.

Light Microscopy of Epon-embedded Kidney Biopsies. J. Huber (*Afd. Pathologische Anatomie der Medische Faculteit Rotterdam, P.O. Box 1738, Rotterdam*).

Renal Venous Thrombosis. A. M. MacDonald (*Department of Pathology, Royal Hospital for Sick Children, Yorkhill, Glasgow C.3*). The lesions of renal venous thrombosis were demonstrated and an attempt was made to show histologically the progress of the lesion and the pathological effects. It was emphasized

that renal venous thrombosis is probably always bilateral but the degree of thrombosis may vary in each kidney and the speed and extent of thrombus formation is also variable.

The Nephrotic Syndrome in Infants. F. Alexander (*Royal Belfast Hospital for Sick Children, Falls Road, Belfast BT12 6BE*). (To be published.)

Renal Dysplasia in Neurospinal Dysraphism. M. Forbes and J. L. Emery (*Department of Pathology, The Children's Hospital, Western Bank, Sheffield 10*). Wilcock and Emery (1970), in their necropsy survey of the relationship of renal tract deformity to abnormalities of the central nervous system, found an incidence of 6.9% of cysts and dysplasia in children with meningo-myelocele as compared with only 1.3% in those with no abnormality of the central nervous system. The present study was undertaken to determine if histological examination of the kidneys, using fairly rigid criteria, from a further series of cases of neurospinal dysraphism corroborated the above figures.

A total of 197 necropsy kidneys were examined. 97 were obtained from 50 children with neurospinal dysraphism. 5 of these had primary renal tract deformities such as horseshoe kidney, unilateral agenesis, and ectopia; and 17 had dilatation deformities, such as hydronephrosis and hydroureter. 100 control kidneys were obtained from 50 children with no abnormality of the central nervous system or renal tract on macroscopical examination.

The kidneys were weighed, bisected longitudinally, the reniculi counted, and the whole of the cut surface blocked, sectioned, and examined for evidence of dysplasia. The criteria used were those described by Bernstein and Meyer (1967), only primitive ducts and ductules and/or metaplastic cartilage being taken as evidence of embryonic maldevelopment. 6 of the 50 cases of neurospinal dysraphism fulfilled those criteria, i.e. 12%. There were no cases of dysplasia among the control series.

This histological study confirmed that the incidence of renal dysplasia was higher than previously reported in cases of neurospinal dysraphism. Since only 1/50th of the kidney was sampled, it seems reasonable to suggest that the true incidence is even higher in these children. As dysplastic kidneys have been reported as being more susceptible to pyelonephritis and hypertensive change, early investigation of the renal tract becomes even more important in children with dysraphia.