Herpes immune complex nephritis.

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It was previously reported by us that, in animals infected with herpes simplex virus type I in a 4-lo day acute experiment, virus antigen and antibodies could be detected in the glomeruli.
In the present chronic experiment, 11 New Zealand rabbits were infected i.v. with herpes simplex virus type I for 8 weeks. 10 animals served as controls.After 8 weeks, kidney,brain,blood and urine examinations were performed. The quantity of soluble immune complex value was measured in 6 of the 11 animals, and a moderately pathologic value in 3. In 9 rabbits virus antigen and granular IgG were detected on the glomerular basal membrane, and light-microscopic examination confirmed mesangial proliferative glomerulonephritis in all 9. Independently of the renal virus titre, viruria was found in 8 cases.

224 CIRCULATING IMMUNE COMPLEXES AND PROPHYLACTIC EFFECTS OF STEROIDS IN ANAPHYLACTOID PURPURA NEPHRITIS OF CHILDREN

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Circulating immune complexes(IC) were measured in anaphylactoid purpura(AP) with or without renal involvement of children. IC were measured by 4% polyethlene glycol precipitated method. IC levels of IgG, IgA and IgE in AP were higher than in control and moreover these IC levels in cases with renal involvement were higher than in cases without renal involvement except IC of IgM. The frequency of complicated purpura nephritis in 98 cases of AP (1976-1979) treated with prednisolone(1-2mg/kg/day) was compared with that in 104 cases of AP(1963-1971) treated with small doses of steroid or without steroids.

According to the data, the frequency in both groups showed the significant difference; 18.4% in the former group and 35.6% in the latter group.

It may suggest that sufficient steroid therapy during the initial stage in AP shows prophylactic effect on complicated nephritis.

225 EXTRAMEMBRANOUS GLOMERULOPATHY ASSOCIATED WITH VILLOUS ATROPHY OF THE SMALL INTESTINE: PRESENCE OF CIRCULATING ANTIBODIES(Ab)DIRECTED AGAINST RENAL TUBULAR BASEMENT MEMBRANE (TBM) AND CYTOPLASM OF INTESTINAL EPITHELIUM. Partini A. Mariani G. Binda S. Department of Pediatrics, University of Pavia, Italy.

A 4-year old boy presented with nephrotic syndrome, severe malnutrition and clinical and laboratory signs of malabsorption. Renal biopsy showed an extramembranous glomerulopathy, minimal tubulo-interstitial lesions and linear deposition of IgG along TBM.The presence of circulating anti-TBM Ab was confirmed both by indirect immunofluorescence(IIF)and radioimmunoassay.Signs of Fanconi syndrome were absent.Intestinal biopsy showed villous atrophy;no deposition of IgG on intestinal epithelium was present.However IIF with patient's serum on his own intestinal biopsy and normal human and monkey duodenum showed the presence of circulating IgG directed against the cytoplasm of intestinal epithelial cells(titer:1/128). The patient was put on a gluten-free diet and treated with prednisone with improvement of intestinal and renal symptoms.

226 EFFECTS OF MESANGIAL LOADING WITH POLYVINYL ALCOHOL(PVA) UPON EXPERIMENTAL IMMUNE COMPLEX GLOMERULONEPHRITIS(GN):Ehrich,J.H.H.,Barmeier F.W.,Foellmer,H.G.,Sterzel,R.B.,Medizinische Hochschule Hannover,West Germany.

PVA inhibits the clearance of macromolecules from the mesangium.This phenomenon was investigated during a malarial GN.GroupI:11Sprague Dawley rats(5og) were treated with PVA(50mg/d s.c.) for 2 weeks.PVA localised in mesangial cells without causing renal dysfunction.GroupII:11 rats were infected with Plasmodium berghei(10 parasites i.p.) and developped a transient mesangial deposition of malarial antigen,IgG,IgM and C3,mild hypercellularity and proteinuria.GroupIII:47 rats received both PVA and malaria.Parasitemia was not different from groupII.Sequential renal biopsies showed transient diffuse deposition of immune complexes along the capillaries surrounding PVA deposits and in the mesangium of PVA free glomerular segments,however,PVA deposits were free from immunoglobulin aggregations.Disappearance of glomerular immune deposits and renal function were not different from groupII.The findings indicate,that - contrary to previously reported inhibition of elimination of exogenous macromolecules - the glomerular clearance of endogenous malarial immune complexes was not altered by PVA.It may therefore be necessary to induce a more severe GN to test the hypothesis of the role of PVA impaired mesangial function upon the course of glomerular inflammation.

227 USE OF SERUM β1H AND C3b INACTIVATOR (C3bINA) LEVELS IN DETERMINING SIGNIFICANCE OF C3 LEVEL. Wyatt, R.J., University of Kentucky School of Medicine, Lexington, Kentucky, U.S.A.

Alternative complement pathway activation occurs through circumvention of regulatory function of β1H and C3bINA. A previous study(Wyatt,et al, J.Lab.Clin.Med.,in press) demonstrated dependence of combined C3 and Factor B (B) levels on β1H and C3bINA levels in normal adults and infants but not in hypocomplementemic glomerulonephritis. Levels were measured by radial immunodiffusion in serial specimens from patients with lupus erythematosus(SLE), acute poststreptococcal(AGN), membranoproliferative (MPGN) and shunt nephritis(SN). Lower limit of normal for C3 is usually considered 2 standard deviations below the normal adult mean; 90mg% in most laboratories. When levels of B, β1H and C3bINA are examined, a borderline(70-110mg%) C3 level is easier to interpret. Ratio of component (C3 + B) to control (β1H + C3bINA) proteins is normal if C3 is depressed on basis of synthesis; if depressed on basis of activation component protein levels will be low relative to control proteins. In AGN and SN component to control ratio (CCR) demonstrates length of time from onset or treatment to cessation of complement activation. In Type I MPGN with 104mg% C3, CCR strongly suggests activation. In SLE, C3 level and CCR do not always concur in indicating complement activation. In conclusion CCR offers a more precise method than use of absolute C3 level for determination of complement activation. CCR may prove of diagnostic importance and aid in judging response to therapy in some nephridites.

RENAL FAILURE

228 VACCINE AGAINST HEPATITIS B IN CHILDREN WITH RENAL FAILURE. Nivet,H.,Drucker,J.,Maupas Ph.,Goudeau,A., Grenier,B. Hopital Univ. de Tours-France.

To prevent hepatitis B (HB) infection in the pediatric hemodialysis unit, 8 children with chronic renal failure were immunized by means of a vaccine. Three children dialysed in the same unit were hepatitis B surface antigen (HBsAg) chronic carriers and represented a permanent high risk of HB infection for the whole unit. The vaccine was prepared by purification of HBsAg from human sera and was formalin inactivated. The children received 3 injections of vaccine at one month interval. Monthly screening of seric transaminases (ALT, AST) and markers of HB virus (HBsAg, anti-HBs, anti-HBc) was performed.
The 8 vaccinated children were followed from 3 to 17 months after vaccination. All of them seroconverted for anti-HBs. None of the children evidenced clinical, biological or serological sign of active HB infection. Hepatitis B vaccine in children with chronic renal failure appeared to be safe and its potency satisfactory. Presence of anti-HBs and absence of HB infection in vaccinated children suggest that this vaccine represents an efficient method of prevention against HB infection in high risk setting.