2. They seek to specify the casual role of lymphocyte cultures and mitoses preparation conditions in the apparition of chromosomal breaks. For this purpose peripheral blood of a patient suffering from Fanconi's anemia and peripheral blood from a normal subject of opposite sex are cultivated in the same tube.

Upon metaphasic plates coming from these mixed cultures, the gonosomic equipment marks respective mitoses from both subjects; only patients' mitoses have a chromosomal abnormalities high rate. For example:
Patients: 14 abnormal mitoses out of 19
Control: 1 abnormal mitoses out of 18

3. Report and argue of the results of chromosomal examinations practised in:
4 cases of idiopathic bone-marrow aplasia
4 cases of Blackfan Diamond's anemia
1 case of amegacaryocytic thrombopenia.

4. Expound first results of a cytogenetic study practised on blood in 43 children suffering from chronic nephropathy and subjected to an immuno-depressive treatment by nitrogen mustard, azathioprine and chlorambucil.

27 *Clinical Significance of Precipitating* E. coli *Antibodies in Urinary Tract Infections.* U. JODAL*, J. HOLMGREN*, L.A. HANSON and J. WINBERG, Department of Paediatrics and Institute of Medical Microbiology, Department of Bacteriology, University of Göteborg, Sweden.

It is well known that attacks of pyelonephritis are followed by production of antibodies demonstrable by the passive haemagglutination technique using O-antigen from the infecting *E. coli* strain. This method, however, reflects mainly the amount of IgM-antibodies present, but IgG-antibodies are produced as well as shown by earlier studies. The latter type of antibody is better demonstrated using precipitation techniques such as immunodiffusion methods.

This study was initiated to test our preliminary findings that IgG antibodies are mainly formed during recurrent but not during the first attack of first-time pyelonephritis.

Sera from 25 children with acute pyelonephritis were collected. Ten of these children had definite recurrencies, while 15 were suffering from their first urinary tract infection as far as could be ascertained by clinical history and examination. The diagnosis of pyelonephritis was made by clinical signs and symptoms, quantitative bacterial cultures (>100.000 *E. coli* per ml of urine), pyuria and elevated titers of agglutinating *E. coli* antibodies. In addition sera from 4 patients with renal scars ('chronic' pyelonephritis), but without demonstrable actual bacteriuria were investigated.

Each serum sample was analysed with O antigen from the infecting strain (bacterial suspension boiled for 2 hours), as well as from type strain of the eight O groups most prevalent in cases of urinary tract infection (purified lipopolysaccharides).

A double-diffusion method was used in the micro modification of Wadsworth.

In all sera from patients with recurrent urinary tract infections precipitating antibodies against O antigen from their infecting *E. coli* strain could be demonstrated. In the sera from the 4 patients with renal scars, but without actual bacteriuria precipitating antibodies were also found using as antigen the eight different purified O antigens. On the other hand such antibodies could be detected in only three of the 15 sera from children with their first attack of pyelonephritis. One of these three patients had antibodies against three different O groups, indicating that also this patient had a recurrent infection. Precipitating *E. coli* antibodies could not be found in sera from 20 adult blood donors.

Thus precipitating antibodies against the infecting *E. coli* strain seem to be demonstrable in all children with recurrent or 'chronic' pyelonephritis, while such antibodies are rarely found in cases with probable first infections.

The diagnostic possibilities of this method especially for screening of recurrent or 'chronic' pyelonephritis and for prognostic evaluation will be further investigated.

INDEX OF ABSTRACTS

(Numbers following entries refer to abstract number)