- (9) Authors will be notified (i) when an abstract is received, (ii) when it is either accepted or rejected, (iii) when it is placed on a programme for a particular meeting.
- (10) It is the author's responsibility to keep the Senior Hon. Secretary informed of the date of publication of any paper submitted to the Society.

Clinical meeting

The following papers were presented at the Annual General Meeting on November 24 and 25, 1972.

Articular Mobility in an African Population. By P. BEIGHTON, L. SOLOMON, and C. SOSKOLNE (*Department of Orthopaedic Surgery, University of the Witwatersrand, South Africa*)
To be published in the *Annals* in September, 1973.

Role of Thymic and Bursal Lymphocyte Subclasses in Chronic Allergic Synovitis in the Chicken. By D. C. DUMONDE, C. M. OATES, R. N. MAINI, and L. N. PAYNE (*Kennedy Institute of Rheumatology, London, and Houghton Poultry Research Station, Houghton, Hunts*)

Studies of experimental allergic monoarthritis indicate that both cellular and humoral immune mechanisms are involved in the pathogenesis of these laboratory models of the rheumatoid joint. The present experiments investigated the ability of thymic and bursal lymphocyte systems to support antigen-induced chronic synovitis in sensitized chickens. Adult chickens were sensitized to bovine γ -globulin (BGG) by intramuscular injection of BGG emulsified in a mycobacterial adjuvant; 3 weeks later, a suspension of BGG coated on to silica particles was injected into the ankle joints. A chronic proliferative synovitis developed with widespread synovial infiltration by lymphocytes, macrophages, and plasma cells and the gradual formation of two types of ectopic lymphoid foci:

(a) large lymphoid follicles with mature germinal centres;

(b) large aggregates of macrophages and lymphocytes.

Neonatal thymectomy markedly suppressed synovial mononuclear cell infiltration and suppressed both types of lymphoid foci. Agammaglobulinaemic neonatally bursectomized birds supported a chronic allergic synovitis with intense lymphocyte-macrophage infiltration but absence of germinal centre follicles and plasma cells. Cell-mediated (thymus-dependent) mechanisms alone were therefore capable of supporting a chronic allergic synovitis; but both thymic (T-cell) and bursal (B-cell) systems were necessary for full development of the rheumatoid-like histology. Studies *in vitro* likewise showed that the peripheral lymphocytes of bursectomized chickens were able to generate mediators of delayed hypersensitivity (lymphokines), but that both T-cells and B-cells were needed for maximum lymphokine activity. It is suggested that an early event in the development of the ectopic synovial lymphoid foci involves the production of T-cell

lymphokines which then recruit other lymphoid cells (e.g. B-cells and macrophages) into activity in the local (synovial) environment. On this basis local persistence of antigen might provide the continuing stimulus to generation of further T-cell and B-cell activation products which would facilitate the histogenesis of the synovial lymphoid foci.

Discussion

DR. W. CARSON DICK (*Glasgow*) Could you expand on the question of recruitment? Do you envisage the interaction of either a Lawrence type of transfer factor or an immunogenic RNA molecule in the recruitment phase in the model that you have described?

DR. DUMONDE We would not go as far as that. We think it is lymphokines which do the recruiting and once the cells get there lymphokines do the activating and the co-ordinating. There is no evidence for the existence of immunogenic RNA or of Lawrence type transfer factor in the bird but of course your suggestion is one which could well be investigated.

PROF. E. G. L. BYWATERS (*London*) I am not quite sure why the birds were irradiated before they were sensitized.

DR. DUMONDE It is difficult to knock out the T-cell or B-cell system by simple surgical intervention and the avian immunologists have got round this by following the surgery at birth by whole-body irradiation to suppress the activity of T-cells or B-cells in various peripheral areas. 5 or 6 weeks usually elapses before a newly-hatched chick given 900 rads whole-body radiation attains full recovery of the T-cell and B-cell systems in the normal non-surgically treated animals.

PROF. E. G. L. BYWATERS (*London*) So it is a question of dosage. If you give too much presumably in the bursectomized animal the thymic type of cells will not survive?

DR. DUMONDE If you give too much you will kill the bird. If you give too little you may end with such a low yield of totally bursectomized and adequately thymectomized animals that the difference between the groups is less significant.

Joint Capsule Collagen in Osteoarthritis. By C. HERBERT, A. J. BAILEY, and M. I. V. JAYSON (*Department of Medicine, University of Bristol, Meat Research Institute, Langford and Royal National Hospital for Rheumatic Disease, Bath*)
To be published in full in the *Annals*.

533 Patients with Ankylosing Spondylitis, seen and followed in the Period 1948 to 1971. By J. J. DE BLÉCOURT (*Groningen, Holland*)

Since 1948 the 'fight against rheumatism' in the Groningen-area ($\pm 600,000$ inhabitants) has been organized as a 'closed circuit', both the intramural (hospital) and extramural (general practitioner, public health nurse, social services) services being under the direction of one team of rheumatologists.