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Urological Research

CONGRESS REPORT

Report on the 72nd Annual Meeting of the American Urological Association

H.-U. Eickenberg

This 72nd annual meeting which was held in Chicago from April 24th to 28th 1977, represented also the 75th anniversary of the American Urological Association and urologists from all over the world congratulated the AUA on this special day.

The Urological Research forum paid particular attention to the immunobiology of Bladder and Prostatic Cancer. Several experimental models were presented for the study of murine and human bladder cancers and Soloway (Memphis) had looked at the effect of intravesical and parenteral chemotherapy on the adherence and growth of transitional tumour cells placed in the bladder. He found that intravesical epodyl and mitomycin-C proved superior to thiotepa, but that the most effective agent was parenteral cytoxan which completely prevented tumour implantation. Clinical studies concentrated on the immune staging and immune monitoring of patients with bladder cancer utilising in vivo (DNCB) and in vitro methods (mixed lymphocyte cultures).

Catalona (St. Louis) demonstrated his technique for the study of immunoregulation in patients with genitourinary cancer. Because it has become apparent that suppressor T-cells may play a role in the impairment of host immunity he made suppressor extracts using lymphocytes from lymph nodes regional to bladder cancer. He found that in three out of four patients tested, an antibody-dependent cellular cytotoxicity was found.

The next logical step after establishing the immune status of patients with bladder cancer seems to be immuno-therapy. Animal experiments with BCG and other immuno-potentiating agents (Albert, New Haven) and clinical trials with levamisole (Smith, Los Angeles) started some interesting discussion on the future of non-specific and specific immunotherapy.

Several papers were given on androgen receptors in the prostates of humans and animals. Whereas Chisholm (London) measured the free and bound receptor proteins for androgens in the cytoplasmic fraction of human benign hypertrophied prostate, others presented their techniques for the study of prostatic carcinoma. Cellular and humoral immune responses were studied after cryosurgery of prostatic cancer in the animal model (Lubaroff, Iowa City; Al-Sheik, Chicago) and in patients with carcinoma of the prostate.

The discussion on cancer of the prostate developed the theme that one of urology's more important needs is determining the type of cancer involved. As Murphy (Buffalo) pointed out in his summary of the session, the built-in variability of prostatic carcinoma makes classification difficult. However, such classification is necessary if progress is to be made in determining the results of various types of therapy. Towards this end, the World Health Organisation's histological classification of prostatic tumours was offered as a model by Mostofi (Washington) and as applied to 2000 cases showed good correlation. In terms of treatment, surgery and lymphadenectomy (Golimbu, New York) and radiotherapeutic techniques (Gill, Chicago) showed promise. As with other urinary cancers, the emphasis for chemotherapeutic measures, Murphy said, must be restricted until there is better data and more developmental work with the agents involved.

The research session on Renal Physiology and Stones was chaired by Gillenwater (Charlottesville). Hautmann (Aachen) reported on the first micropuncture results on renal handling of oxalate. In the rat model he has studied the single nephron glomerular filtration rate and oxalate clearance by stop flow and free flow microperfusion with ^{3}H-inulin and ^{14}C-oxalate. He found that oxalate is excreted by glomerular filtration, tubular secretion as well as by an invert diffusion dependent on the concentration gradients of ionized calcium and oxalate in the tubular and peritubular fluid.

In the session dealing with Infection and Pharmacokinetics Janson (New Orleans) presented his prize-winning paper on non-invasive localisation of urinary tract infection. The combination of antibody-coating of urinary

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bacteria, ^{67}Gallium localisation and ^{131}I Hippuran scintiphotos was found to offer a significantly greater accuracy in localising the source of infection when compared to standard methods. The presentations by Baumueller (Madison) on experimental bacterial prostatitis in dogs and by Eickenberg (Essen) on protein-binding and concentration of antibiotics in prostatic interstitial fluid were felt to be an elegant pharmacokinetic model with a great future potential.

The highlight of the infertility session was the discussion of the role of microsurgery in reanastomosis of the vas deferens. Several investigators are now comparing this method with the conventional methods of vasovasostomy and long-term results in the form of pregnancies are starting to come in.

The last day brought some excellent papers on Prosthetic Devices. Utilising different material prostheses for the urethra (Kjaer, Madison; Anquetil, Orleans) and the ureter (Block, Miami; Crescimano, Cleveland) were presented. The discussion brought out that we are still far from the ultimate goal, i.e. a collapsible ureter with no residual which therefore cannot be a reservoir for infection.
Block (Miami) demonstrated some preliminary work on the ideal total prosthetic bladder using an electromechanical substitute which should meet 5 criteria: a flap valve ureter, a bladder reservoir which empties with minimum pressure, complete emptying, good urethral connection and a urethral valve to protect the bladder.

H.-U. Eickenberg
Oberarzt der Urologischen
Universitätsklinik
der Gesamthochschule
Hufelandstr. 55
D-4300 Essen
Federal Republic of Germany

Responsible for the text: Professor G. D. Chisholm, Western General Hospital, Edinburgh.
Responsible for advertisements: L. Siegel, Kurfürstendamm 237, D-1000 Berlin 15
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