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Abstracts of Communications

Immunological demonstration of antigens in a toxic complex produced in broth cultures of Corynebacterium pyogenes hominis. A. SOUČEK, A. SOUČKOVÁ and F. PATOČKA, Institute of Medical Microbiology and Immunology, Charles University, Prague

As reported in previous papers, filtrate of broth cultures of human strains of *C. pyogenes* and *C. haemolyticum* has a dermonecrotic and lethal effect *in vivo* (rabbit and guinea-pig), while *in vitro* it inhibits staphylococcal α - β haemolysis and causes haemolysis. It was also demonstrated that all this activity of the filtrate was neutralized by rabbit hyperimmune serum, showing that it evidently contains a number of toxic or otherwise biologically active antigens. Immune sera were prepared by immunizing rabbits with whole filtrate and with filtrate partly purified by adsorption to erythrocytes. *In vitro* and *in vivo* methods were used for immunological and toxicological analysis, including neutralization of haemolysin and of the inhibitor of staphylococcal haemolysis, precipitation of whole and purified filtrate (or of the growing culture) in agar by the method of Ouchterlony and Oakley. Neutralization of the dermonecrotic effect and partial neutralization of the lethal effect was tested *in vivo* in rabbits. Active filtrate gave one or two precipitation lines with absorbed serum. With the strain *C. pyogenes hominis*, the serum gave two precipitation lines, one of which was also found with strains of *C. pyogenes bovis*. A laboratory standard was determined for indirect titration and the other sera were measured against this. The tests demonstrated that the filtrate contained at least two different antigens, one of which had haemolytic activity, while the other possessed dermonecrotic activity and was adsorbed to erythrocytes.