



## **CLINICO-MICROBIOLOGICAL DIAGNOSIS OF REACTIVE ARTHRITIS**

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Reactive Arthritis (ReA) is still insufficiently studied in regard to mixed inflammation preceded by urogenital, gastrointestinal or pharyngeal infection. Certain number of infectious agents are associated with ReA: Salmonella, Shigella, Klebsiella, Campylobacter, Gonococcus, haemolytic Streptococcus, Ureaplasma urealyticum, etc. ReA is often a common complication following infection with Yersinia enterocolitica (Y.e.), Yersinia pseudotuberculosis and Chlamydia trachomatis (C.t.). Y. e. and C. t. are considered possible reason for ReA. We aim at detecting antibodies against Y.e. and C.t. (separately and parallelly) in patients with ReA. A total of 425 serum samples are tested thoroughly. Antibodies against C.t. with IgA diagnostical titer 1:8 and IgG titer 1:16 are detected by application of immunoperoxidase test, using kit from Savion diagnostics (Israel). Specific antibodies against Y.e. serotypes 0:3 and 0:9 are registered by reaction agglutination with diagnostical titer 1:100. A total of 84 adult patients, admitted, tested and treated in the Department of Cardiology and Rheumatology during the period 1988-1991 have clinically evident ReA signs diagnosed after the criteria suggested by Amor. Two main groups of patients are formed based on medical examinations. First group includes 46 patients with ReA. Second control group includes 38 patients with other diseases - osteoarthritis, podagra, psoriatic arthropathia, etc. Results are discussed after individual analysis of each patient. Specificity, sensibility, relative diagnostical value of any antibody titers in applied serological reactions are analysed. Annual distribution of positive results (in per cent) is presented on Fig 1. Ten from 46 patients with ReA show antibodies against Y.e. (titers 1:200 and higher) with tendency to change and low titers against C.t. As for the control group 4 from 38 patients are the same. Twenty-two of the ReA patients have IgG diagnostical titers against C.t. (8 from the control group) and low titers against Y.e. Five patients with ReA have titers of antibodies against Y.e. as well as against C.t., which suggests simultaneous participation of both microorganisms in arthritis etiology. Just one patient from the control group shows similar result. Comparing specificity, sensibility and

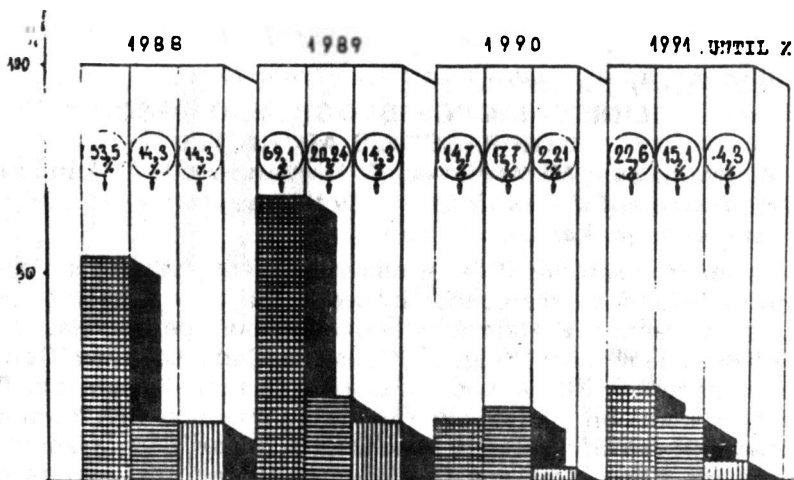


Fig. 1. Serological diagnosis of Y.e. and C.t. in patients with ReA

□ - total number of patients; ▨ - positive to Y.e. serotypes 0:3 and 0:9; ▩ - positive to C.t.; ▧ - simultaneously positive

relative diagnostical value of antibodies, titers for a single clinical diagnosis it is obvious that specificity of criteria increases with increasing of titers (accepted as diagnostical) (table 1).

Table 1

Criteria	ReA - Y.e.		ReA - C.t.		ReA - simultaneously	
	1:100/1:200	1:32/1:128	1:32/1:128	1:32/1:100-1:128/1:200	1:32/1:100-1:128/1:200	1:32/1:100-1:128/1:200
Sensibility	82%	22%	82%	51%	67%	11%
Specificity	63%	71%	79%	96%	82%	83%
R D V*	13%	13%	51%	25%	45%	10%

\* - Relative diagnostical value

We presume correct the increase of diagnostical titer for Y.e. 1:400, for C.t. 1:128, against those microorganisms if ReA is diagnosed. Seven patients from ReA-group have clinical triad of Reiter. Three of them are HLA B27-positive. Five patients have C.t. diagnostical titer and 3 - Y.e. diagnostical titers. HLA B27(+) and high titers of antibodies against Y.e. determine the disease as Yersinia-triggered ReA. This correlation is accepted as diagnostical criteria. Our data allow to conclude that the etiological role of Y.e. and C.t. in ReA patients could be accepted only on the basis of clinico-microbiological diagnostical complex with proper application of serodiagnosis.