Abstract: PB2549

Title: CO-EXISTENT COLD AGGLUTININ DISEASE AND CRYOGLOBULINAEMIA

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Background:

Cold agglutinin disease (CAD) is a clonal IgM disorder of erythrocyte agglutination and complement-mediated haemolysis due to antibody binding optimally at 4°C. This may result in anaemia or circulatory symptoms (cold intolerance, acrocyanosis and thrombosis). Cryoglobulinaemia (CRYO) is defined by the presence of immunoglobulins which precipitate at temperatures below 37°C and redissolve on warming. Patients with IgM gammopathies may have associated type I or II cryoglobulinaemia due to monoclonal IgM protein. The symptoms of CAD and CRYO overlap, but the pathology and management has differences. In our specialist practice, we observed the co-existence of these disorders in notable numbers of patients.

Aims:

To review the prevalence of cryoglobulinaemia in a cohort of patients with CAD and delineate clinical features and outcomes.

Methods:

Cryoglobulin testing is performed on all new patients as a part of clinic screening in our specialist IgM clinic. We reviewed consecutive patients with CAD who were tested for cryoglobulinaemia from 2017-2022. Baseline characteristics, symptom burden and treatment details were collected.

Results:

24 patients (11 male, 13 female) with a diagnosis of CAD who were tested for cryoglobulins were included. 15/24 (63%) had cryoglobulins detected on testing: the majority were IgM type I (n=12) and remaining type II (n=1) or polyclonal type III (n=3). Median time to cryoglobulin detection was 21 months (range 1-64) from CAD diagnosis. Median age at CAD diagnosis was 70 (range 41-81) years. 14/24 (58%) had circulatory symptoms (11 acrocyanosis, 3 digital ischaemia/gangrene); 7/24 (29%) had thromboses: 6/24 venous (DVT/PE) and 1/24 arterial (stroke). All patients with digital ischaemia/gangrene or stroke had plasma exchange as a part of initial management. Therapy for CAD included blood transfusions (19/24; 79%), erythropoietic stimulating agents (2/24; 8%), chemoimmunotherapy (15/24; 63%), complement inhibition (4/24; 17%). At a median follow up of 24 months (range 6-73 months) from CAD diagnosis, 2-year overall survival was 91% (95% CI 72-97).

Conclusion:

In our cohort of patients with CAD, there was a high proportion of co-existent cryoglobulinaemia, predominantly type I and a notable incidence of digital ischaemia/ gangrene. Screening for CRYO is recommended to identify patients with exceptionally severe circulatory symptoms as the use of PLEX may be indicated.

	Total n=24	Cryoglobulins detected n=15	No cryoglobulins detected n=9
Age at CAD diagnosis, yr	70 (41-81)	71 (41-76)	66 (48-81)
Haemoglobin at diagnosis, g/l	92 (44-124)	87 (60-124)	97 (48-123)
Venous thrombosis	7 (29)	5 (33)	2 (22)
Arterial thrombosis	1 (4)	1 (6)	0
Acrocyanosis	11 (46)	8 (53)	3 (33)
Digital ischaemia/gangrene	3 (13)	3 (20)	0

Keywords: AIHA (see autoimmune hemolytic anemia)