



Leading the way in experimental and clinical research in hematology

[Advanced Search](#)

Advertisement

Home	About	Authors	Submit	Subscriptions	Blood Journals ▼	f	t	You Tube
	Classifieds				in	i		
Current Issue	First Edition	Collections	All Issues	Abstracts	Multimedia			

Paraproteins in CLL Are Frequently the Product of Another Clone.

Dennis A. Carney, Srinivas R. Mummadi, Susan A. Lerner, and Michael J. Keating

Blood 2004 104:1912;

Article [Info & Metrics](#)

Advertisement

Abstract

Paraproteins are found in 5–10% of CLL patients using conventional techniques and in a higher number using more sensitive techniques. The significance of this finding is uncertain although it has been suggested to be associated with a worse prognosis. When a paraprotein occurs with CLL it is usually considered to be a product of the leukemic clone. However there is an increased incidence of both B cell clonal expansions and monoclonal immunoglobulins (Igs) in the elderly suggesting an alternative source may exist.

We examined the clinicopathological features of 34

◀ [Previous](#)



[Table of Contents](#)
Volume: 104
Issue: 11
Pages: 1912
DOI: <https://doi.org/>

✉ [Email](#)

↪ [Share](#)

📢 [Alerts](#)

🌐 [Citation Tools](#)

🔍 [Cite This](#)

cases of paraproteins who had an immunophenotype consistent with CLL (CD5+ B cells and CD23+ if tested). These were untreated patients who had an elevation of one or more immunoglobulins (Igs) on routine screening and subsequently had immunofixation (IF) to determine the presence of a paraprotein.

In a database of chronic lymphoproliferative disorders 1380 patients had Ig quantitation and 168 were found to have an elevation in one or more Igs. Cases were excluded from this group if the disease was found to be T cell, CD5- or CD23-. This left 116 CLL patients with elevated Igs, of which 53 had IF. A polyclonal increase was detected in 19 and paraproteins in 34 (14 IgG, 16 IgM, 1 IgA and 3 oligoclonal). The level of paraprotein ranged from 0.2–4.4 g/dl for IgG, 0.2–2.4 g/dl for IgM and was 0.4 g/dl for IgA. Bence Jones Protein was associated with both IgG and IgM paraproteins when tested (2 patients in each group). Suppression of other Igs was observed in 12 patients (35%) with paraproteins and only one patient (5%) with a polyclonal increase.

When compared to patients with a polyclonal increase in Igs, the patients with paraproteins had more advanced disease and higher bone marrow lymphocytosis, β 2-microglobulin and LDH ($p < 0.05$). The immunophenotype in approximately half of the cases in both groups was atypical for CLL with features including CD22+, CD79b+, FMC7+ and moderate to strong expression of surface Ig. Cytogenetic abnormalities were present in 8 of 34 cases with paraproteins but were not detected in the polyclonal group. The most frequent abnormality was trisomy 12 found in 4 cases. The survival of the 2 groups was not statistically different with a median

Jump to



Related Articles

follow up of 104 months.

The origin of paraproteins is usually considered to be the CLL clone with CLL cells capable of secreting IgM as well as producing IgG and IgA paraproteins by isotype switching. In this cohort 5/14 patients with an IgG paraprotein had a different light chain expressed on the CLL clone. In addition 3/16 patients with IgM paraproteins had biconal IgMs and in one case the 2 Igs had different light chains suggesting that at least one was not a product of the CLL clone. In conclusion, paraproteins in CLL are frequently not the product of the CLL clone but may reflect an associated age-related restriction in B cell repertoire and existence of other clonal expansions. Further studies are needed to determine if CLL emerges from one of these clones or develops independently.

2005, The American Society of Hematology

Potential Articles of Interest

Immune response profiles after caterpillar exposure: a case report

Tamar A Smith-Norowitz et al., Journal of Inflammation Research, 2010

Long-term persistence of IgE anti-influenza A H1N1 virus antibodies in serum of children and adults following influenza A vaccination with subsequent H1N1 infection: a case study

Tamar A Smith-Norowitz et al., Journal of Inflammation Research, 2012

Bovine milk derived skimmed milk powder and whey protein concentrate modulates *Citrobacter rodentium* shedding in the mouse

intestinal tract

PeerJ

Effects of Salmonella enterica serovar Enteritidis infection on egg production and the immune response of the laying duck *Anas platyrhynchos*

PeerJ

Bone marrow mesenchymal stem cells as nuclear donors improve viability and health of cloned horses

R Olivera et al., Stem Cells and Cloning: Advances and Applications, 2018

Powered by **TREND MD**

 [Previous](#)

[^ Back to top](#)

Advertisement



Leading the way in experimental and clinical research in hematology

American Society of Hematology
2021 L Street NW, Suite 900,
Washington, DC 20036
Phone 202-776-0544 | Fax
202-776-0545

[Current Issue](#)

[First Edition](#)

[Collections](#)

[All Issues](#)

[Abstracts](#)

[Video Library](#)

[About *Blood*](#)

[Subscriptions](#)

[Newsroom](#)

[Copyright](#)

[Public Access](#)

[Permissions](#)

[Submit to *Blood*](#)

[Blood App](#)

[Alerts](#)

[RSS](#)

[Contact Us](#)

[Order Reprints](#)

Information for:

[Authors](#)

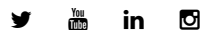
[Subscribers](#)

[Institutions/Librarians](#)

[Advertising in *Blood*](#)

[Terms and Conditions](#)

Blood Journals  



Advertisement

Copyright © 2019 by American Society of Hematology

[Privacy Policy](#) | [Terms of Service](#) | [Contact Us](#)
