

# Franklin's disease: immunoglobulin heavy chain disease

Akintunde Akinleye<sup>1</sup>, John Nelson<sup>1</sup>, Humayun Islam<sup>2</sup>, Faisal Saeed<sup>2</sup>, Delong Liu<sup>1</sup>

<sup>1</sup>Division of Hematology/Oncology, Department of Medicine, <sup>2</sup>Department of Pathology, New York Medical College, Valhalla, NY 10595, USA  
 Correspondence to: Delong Liu. Division of Hematology/Oncology, Department of Medicine, New York Medical College, Valhalla, NY 10595, USA.  
 Email: Delong\_liu@nyc.edu.

Received: 01 January 2015; Accepted: 05 January 2015; Published: 13 January 2015.

doi: 10.3978/j.issn.2306-9759.2015.01.01

View this article at: <http://dx.doi.org/10.3978/j.issn.2306-9759.2015.01.01>

## Case presentation

A 64-year-old male presented with persistent fatigue, weakness and abdominal discomfort. He was found to have pancytopenia and hepatosplenomegaly. His bone marrow examination was mildly hypocellular with trilineage hematopoiesis. Serum protein electrophoresis revealed broad beta protein area but no gamma monoclonal spike (A). Surprisingly, immunofixation study identified monoclonal  $\gamma$ -heavy chain with no corresponding  $\kappa$ - or  $\lambda$ -light chains (B). This finding is consistent with gamma heavy chain disease (Franklin's disease). Subsequently, a percutaneous liver biopsy was performed. The specimen showed focal areas of dense neoplastic lymphoplasmacytic infiltrate. The neoplastic

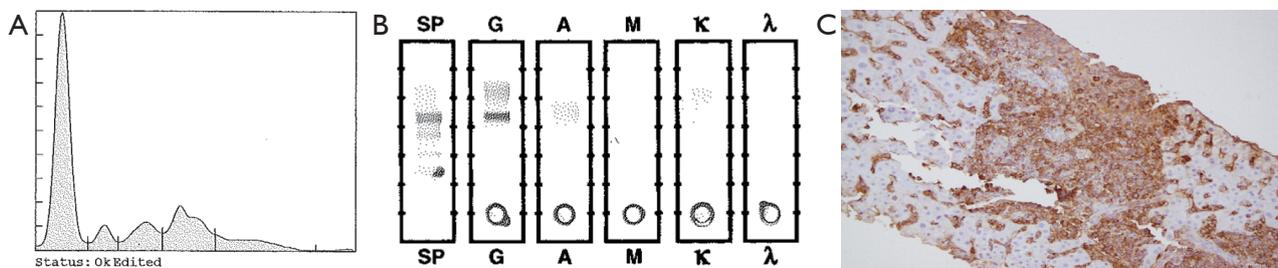
cells were immunoreactive for CD79A, CD20, PAX-5 and MUM-1, as well as gamma heavy chain but negative for kappa and lambda [(C),  $\gamma$ -heavy chain staining]. This is a rare case of gamma heavy chain disease (Franklin's disease) associated with B cell lymphoma.

## Acknowledgements

None.

## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.



doi: 10.3978/j.issn.2306-9759.2015.01.01

Cite this article as: Akinleye A, Nelson J, Islam H, Saeed F, Liu D. Franklin's disease: immunoglobulin heavy chain disease. Stem Cell Investig 2015;2:1.