

Letter TJH-2018-0197.R2

Submitted: 5 June 2018

Accepted: 9 July 2018

Light chain myeloma with highly atypical plasma cells and extensive Auer rod-like inclusions

Dietmar Enko^{1,2} and Gernot Kriegshäuser^{1,2}

¹Institute of Clinical Chemistry and Laboratory Medicine, General Hospital Steyr, Steyr, Austria

²Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University Graz, Graz, Austria

Authors degrees: Dietmar Enko, MD
Gernot Kriegshäuser, MD, PhD

Address for Correspondence: Gernot Kriegshäuser, MD, PhD
Institute of Clinical Chemistry and Laboratory Medicine
General Hospital Steyr, Sierninger Straße 170
4400 Steyr, Austria
Telephone: +43 50554 66 25308
Fax: +43 50554 66 25304
E-mail address: gernot.kriegshaeuser@gespag.at

Brief title: Light chain myeloma with unusual cells

Keywords: Light chain myeloma, plasma cells, bone marrow aspirate

Informed consent: Was obtained from the patient.

Conflict of Interest: The authors of this paper have no conflicts of interest, including specific financial interests, relationships, and/or affiliations relevant to subject matter or materials included.

To the Editor,

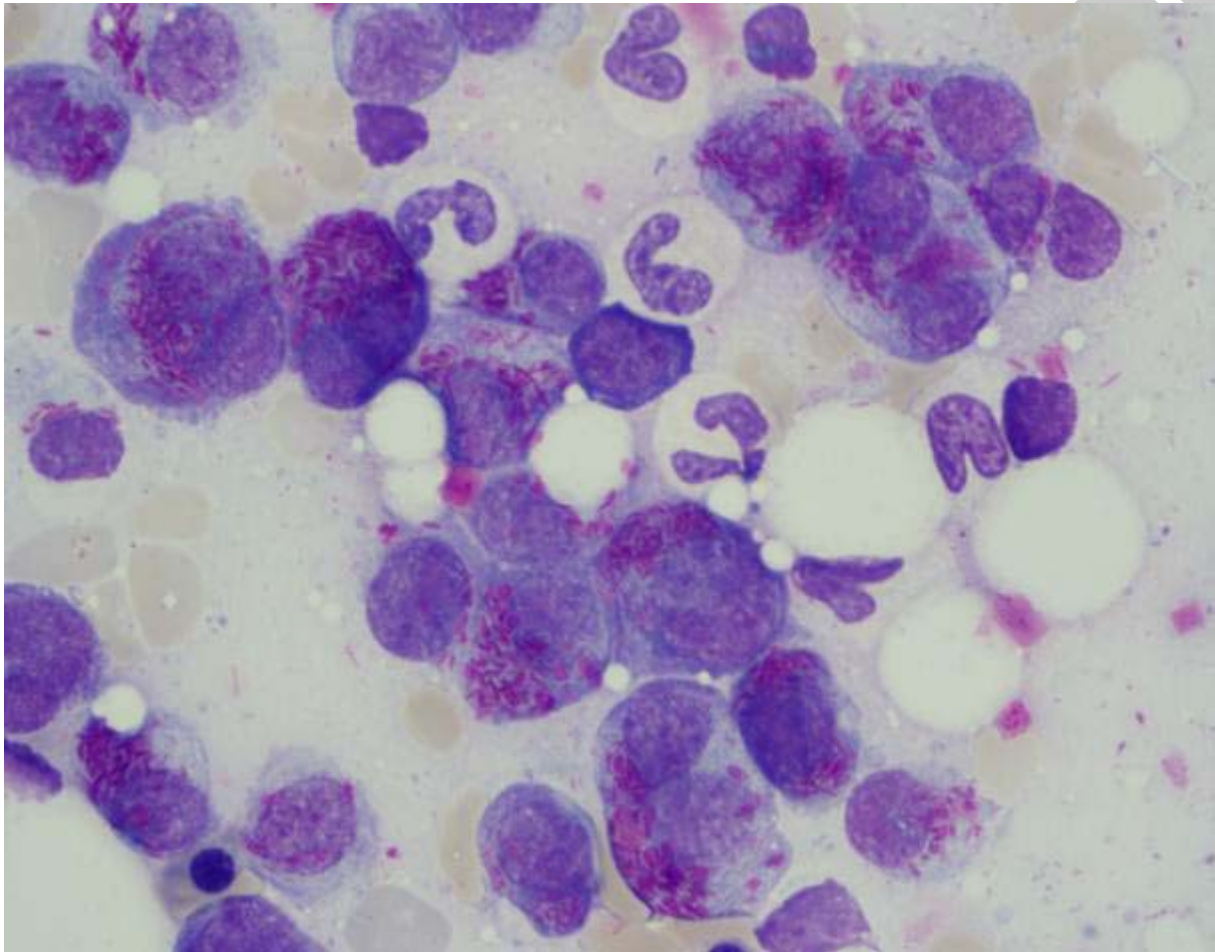
A 73-year-old woman with a history of chronic kidney disease presented with fever (39.8 °C), dyspnoea and fatigue. Complete blood count showed moderate normocytic anemia with hemoglobin of 10.0 g/dL (12.0 – 16.0), mild leukocytosis of 10.8 x 10⁹/L (4.0 – 9.0), and thrombocytopenia of 102 x 10⁹/L (150 – 400). Serum protein electrophoresis showed mild hypogammaglobulinemia of 6.7 g/L (7.0 – 16.0). Serum immunofixation demonstrated monoclonal κ -type light chains without heavy chain correlate (IgG, IgM, IgA, IgD, IgE). Moreover, serum-free light chain assay measured high κ -type light chain level of 2060.0 mg/L (3.3 – 19.4) with a κ/λ -ratio of 48.5 (0.3 – 1.7).

The bone marrow aspirate smear showed 40% plasma cells, many of which appeared as binuclear plasmoblastic cells with nucleoli (“owl-eyed” plasma cells), bright cytoplasm and bundles of numerous Auer rod-like cytoplasmatic inclusions (Figure 1 A and B). This unique morphology is remarkable. While current literature describes Auer rod-like inclusions in single cases of different forms of myeloma [1,2,3,4,5], this is, to the best of our knowledge, the first report on the concomitant appearance with enlarged highly atypical “owl-eyed” plasma cells in a patient suffering from κ -type light chain myeloma. However, the prognostic value of this unusual plasma cell phenotype remains unclear.

References

1. Castoldi G, Piva N, Tomasi P. Multiple myeloma with Auer-rod-like inclusions. *Haematologica* 1999;84:859-860 [PubMed](#) .
2. Metzgeroth G, Back W, Maywald O, Schatz M, Willer A, Hehlmann R, Hastka J. Auer rod-like inclusions in multiple myeloma. *Ann Hematol* 2003;82:57-60 [PubMed](#) .
3. Abdulsalam AH, Al-Yassin FM. Myeloma cells with Auer rod-like inclusions. *Turk J Haematol* 2012;29:206.

A



B

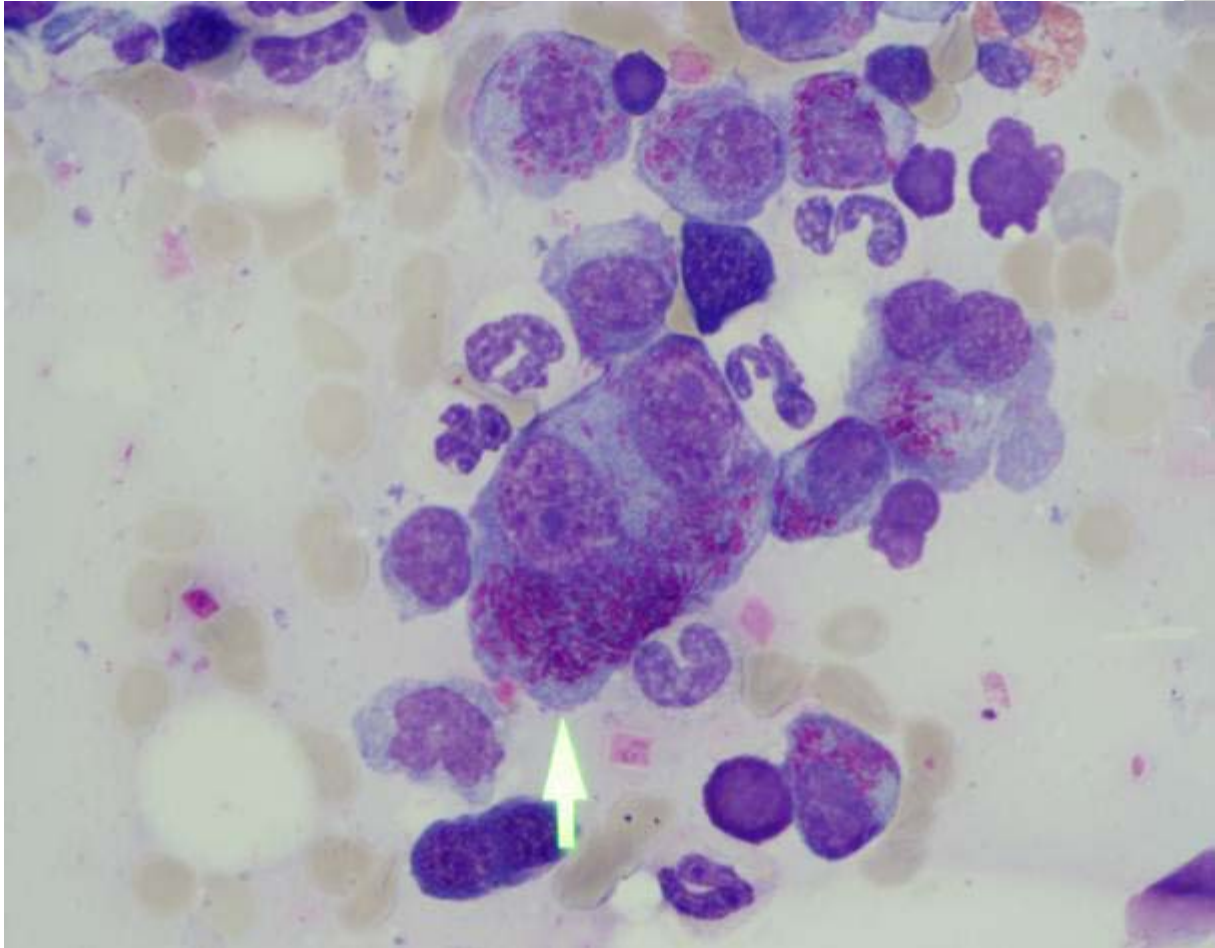


Figure 1. Bone marrow aspirate smear of a 73-year old patient with κ -type light chain myeloma (A and B). The arrow marks a plasmoblastic cell with massive Auer rod-like inclusions.