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Clinical Image Open Access

Multiple Myeloma with Prominent Auer Body Formation in Granulocytes

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Clinical Image

A 57-year-old man with IgG, ISS stage II multiple myeloma with normal cytogenetics was treated with vincristine/adriamycin/dexamethasone induction followed by autologous hematopoietic stem cell transplantation and achieved a very good partial response. The patient relapsed 4.5 years later and received bortezomib/dexamethasone treatment, which conferred a very good partial response once again. After 3 years, his M protein level showed a rapid increase to 7.9 g/dl for a month. He also developed anemia, thrombocytopenia (white blood cell count, 5600/l; hemoglobin, 7.3 g/dl; platelet count, 9000/l), acute kidney injury, and acute liver failure. Relapse of multiple myeloma was confirmed by bone marrow biopsy, which showed 55.8% clonal plasma cells with complex karyotype abnormality including addition of 1q21, and fluorescence in situ hybridization revealed deletion of p53. Notably, neutrophils harboring prominent Auer rods were found in his bone marrow. Several pseudo-Pelger-Huet anomaly cells were observed, however myeloblasts were only 0.5%; there was no myeloblast with Auer rods. Also mild dyserythropoiesis and few abnormal megakaryocytes were observed (Figure 1)

Although the mechanism of Auer rod formation in this case is uncertain, myeloma-related damage of the bone marrow microenvironment or dysregulation of hematopoietic stem cells may have played a role [1].

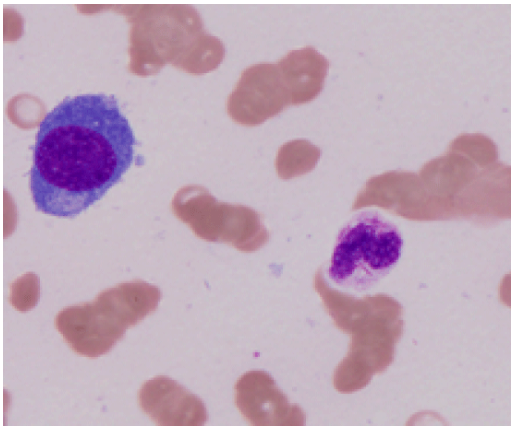

Figure 1: Myeloma cell and neutrophil with prominent Auer rods.

References

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