

Multiple Myeloma

Case Presentation

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Case Presentation

- A 64-year-old woman with a five-month history of progressive back pain presented to a local hospital for acute worsening of symptoms
- Imaging revealed numerous lytic lesions and compression fractures of lower thoracic and lumbar vertebrae
- Hematology/Oncology was consulted

- Past medical history
 - Asthma
 - GERD
 - Hypertension
- Past surgical history
 - Tubal ligation
 - Complete hysterectomy and oophorectomy
- Family history
 - No hematologic disorder or malignancy
- Social history
 - Former smoker
- Medications
 - Albuterol and beclomethasone INH
 - Aspirin
 - Atenolol
 - Oxycodone
 - Pantoprazole

Laboratory Results

- Initial workup revealed:

Labs	03/02/2017
Hemoglobin (g/dL)	11.4
Creatinine (mg/dL)	0.7
Calcium (mg/dL)	10.4
Albumin (g/dL)	3.4
Beta-2 Microglobulin (mg/L)	6.8
SPEP / IFE	1.3 g/dL IgA lambda
Kappa / Lambda = Ratio	4.3 / 91.5 = 0.047

Bone Marrow Aspirate and Biopsy Results

- Bone marrow aspirate and biopsy revealed a hypercellular marrow (90%) with markedly increased abnormal plasma cells (80%)
- FISH analysis:
 - Positive for 17p (TP53) deletion, gain of 4 (FGFR3), gain of 11 (CCND1), deletion of 13q, loss of 14 (IgH)
 - Negative for IgH rearrangement with FGFR3, CCND1, and MAF
- Flow cytometry confirmed lambda light chain restriction

Diagnosis

- IgA-lambda multiple myeloma with high-risk cytogenetics
 - International Staging System (ISS) = III
 - Revised-ISS (R-ISS) = III

Treatment

- Patient was started on lenalidomide, bortezomib, and dexamethasone (RVD)
- She was referred to the University of Florida for transplant evaluation

RVD x1 cycle



Labs	03/02/2017	3/30/2017
Hemoglobin (g/dL)	11.4	10.4
Creatinine (mg/dL)	0.7	0.7
Calcium (mg/dL)	10.4	8.9
Albumin (g/dL)	3.4	3.9
β 2M (mg/L)	6.8	
LDH (IU/L)		455
SPEP / IFE	1.3 g/dL IgA lambda	<0.1 g/dL IgA
Kappa / Lambda	4.3 / 91.5	1.4 / 1.2

- The patient completed three more cycles of RVD induction chemotherapy

RVD x1 cycle

RVD x3 cycles

Labs	03/02/2017	03/30/2017	06/55/2017
SPEP / IFE	1.3 g/dL IgA lambda	<0.1 g/dL IgA	Not detected
Kappa / Lambda	4.3 / 91.5	1.4 / 1.2	1.4 / 1.5

- Overall, she tolerated four cycles of RVD well except for some grade 1 sensory peripheral neuropathy

- Pre-transplant bone marrow evaluation revealed a normocellular marrow without evidence of involvement by myeloma
 - The patient was in a stringent complete response
- On 07/07/2017 she underwent autologous peripheral blood stem cell transplant conditioned with 200mg/m² melphalan
 - She tolerated transplant well except for engraftment syndrome manifesting as fevers, hypoxia, and rash

Follow-up

- At the time of this presentation, the patient is 105 days post autologous stem cell transplant

- Questions for our faculty and audience:
 - In a patient with newly diagnosed multiple myeloma with high-risk cytogenetics:
 - What induction regimen do you chose?
 - Does it vary if the patient is transplant-eligible or ineligible?
 - In transplant-eligible patients, how do you ‘consolidate’ therapy?
 - Single versus tandem transplant, allogeneic transplant, consolidative chemotherapy
 - What is your maintenance therapy strategy?

Thank You

