

# **Difference Between Myeloma and Multiple Myeloma**

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#### Myeloma vs Multiple Myeloma

Both terms myeloma and multiple myeloma are interchangeably used words that describe the <u>malignancies</u> arising from the plasma cells in the <u>bone</u> <u>marrows</u>. There is no difference between myeloma and multiple myeloma. Therefore it is important, not to think of them as two different disease entities. At the same time improving the community to awareness mainly on the tale-telling signs and symptoms of this malignancy can be a great patronage in achieving a better prognosis.

### What is Myeloma?

The malignancies arising from the plasma cells in the bone marrows are called myelomas. This disease is associated with the excessive proliferation of plasma cells, resulting in an overproduction of monoclonal paraproteins, mainly IgG. Excretion of light chains in urine (Bence Jones proteins) can occur in paraproteinaemia. Myelomas are commonly seen among elderly males.

Cytogenetic abnormalities have been identified by FISH and microarray techniques in most cases of myeloma. Bone lytic lesions can be typically seen in the spine, skull, long bones and ribs due to dysregulation of bone remodeling. The osteoclastic activity is increased with no increment in the osteoblastic activity.

# **Clinicopathological Features**

Bone destruction can cause vertebral collapse or fracture of long bones and hypercalcemia. Spinal cord compression can be caused by soft tissue plasmacytomas. Bone marrow infiltration with plasma cells may result in <u>anemia</u>, neutropenia, and thrombocytopenia. Kidney injury can be caused by multiple reasons such as secondary hypercalcemia or hyperuricemia, use of NSAIDs and secondary amyloidosis.

# **Symptoms**

• Symptoms of anemia

- Recurrent infections
- Symptoms of <u>renal failure</u>
- Bone pain
- Symptoms of hypercalcemia

# Investigations

- Full blood count- <u>Hemoglobin</u>, <u>white cells</u> and <u>platelet</u> counts are normal or low
- ESR (Erythrocyte Sedimentation Rate)-usually high
- Blood film
- Urea and electrolytes
- Serum calcium-normal or elevated
- Total protein levels
- Serum protein electrophoresis-characteristically shows a monoclonal band
- Skeletal survey-characteristic lytic lesions can be seen

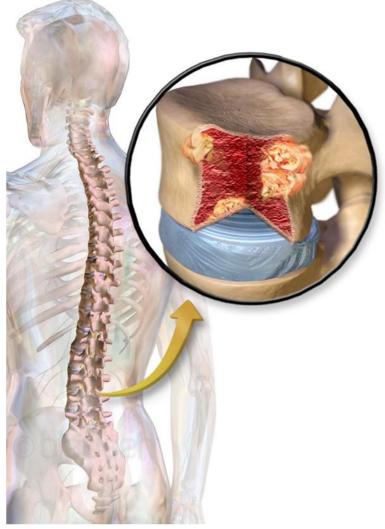


Figure 01: Myeloma / Multiple Myeloma

# Complications

- Renal impairment this is due to the hypercalcemia associated with myeloma. Long-term peritoneal or hemodialysis is sometimes required.
- Spinal cord compression that can give rise to various neurological deficits. This has to be treated with dexamethasone followed by radiotherapy.
- Hyperviscosity of the circulating fluid that should be corrected by plasmapheresis.

# Management

Although the life expectancy of myeloma patients has been improved by about five years with good supportive care and chemotherapy still there is no definitive cure for this condition. The therapy is aimed at prevention of further complications and prolongation of survival.

#### **Supportive Therapy**

Anemia can be corrected with blood transfusion. In patients with hyperviscosity, transfusion should be done slowly. Erythropoietin can be used. Hypercalcemia, kidney injury and hyperviscosity should be treated appropriately. Infections can be treated with antibiotics. Yearly vaccinations can be given if necessary. Bone pain can be reduced by radiotherapy and systemic chemotherapy or high-dose dexamethasone. Pathological fractures can be prevented by orthopedic surgery.

#### **Specific Therapy**

- Chemotherapy-Thalidomide/Lenalidomide/bortezomib/steroids/Melphalan
- Autologous bone marrow transplant
- Radiotherapy

# What is Multiple Myeloma?

Both myeloma and multiple myeloma essentially mean the same thing. There is no difference between myeloma and multiple myeloma apart from the later being more decorated by the adjective "multiple".

# What is the Difference Between Myeloma and Multiple Myeloma?

• As previously mentioned there is no difference between myeloma and multiple myeloma. Both names are interchangeably used to recognize the same set of clinical features.

# Summary – Myeloma vs Multiple Myeloma

Myelomas or multiple myelomas are the malignancies arising from the plasma cells in the bone marrows. Although these two terms are commonly mistaken for different disease conditions, there is no difference between myeloma and multiple myeloma.

#### **References:**

1. Kumar, Parveen J., and Michael L. Clark. Kumar & Clark clinical medicine. Edinburgh: W.B. Saunders, 2009.

#### **Image Courtesy:**

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