(International Print/Online Journal)

SJIF IMPACT FACTOR: 4.617
PUBMED-National Library of Medicine ID-101739732

ISSN (Print): 2209-2870
ISSN (Online): 2209-2862

International Journal of Medical Science and Current Research (IJMSCR)
Available online at: www.ijmscr.com
Volume2, Issue 2, Page No: 343-345
March-April 2019

Clinical profile of the spectrum of multiple myeloma in a tertiary care hospital

Aamir Majeed Malik[1], Neha Sharma[2]
Handwara Kupwara Jammu and Kashmir

***Corresponding Author:**

Aamir Majeed Malik
Handwara Kupwara Jammu and Kashmir

Type of Publication: Original Research Paper
Conflicts of Interest: Nil

ABSTRACT

Introduction: Multiple myeloma is characterised by neoplastic proliferation of plasma cells in the bone marrow which causes osteolytic lesions that lead to bone pain, pathological fracture, and various systemic manifestations like anaemia, renal failure and recurrent bacterial infections.

Materials and methods: It was a cross-sectional study of 25 newly diagnosed patients with MM over a period of 2 years in a tertiary health-care center.Diagnosis was based on fulfilling clinical and laboratory features. Routine hematological and biochemical investigations, bone marrow examination, serum protein electrophoresis and urine for Bence Jones protein were done. Radiological investigations were also conducted to look for osteolytic lesions, extramedullary involvement and other pathologies.

Results: Out of total 25 patients, 18 were males and 7 were females with sixth decade as the common age group at presentation. Common clinical symptoms were bone pains (80%), fever (40%), generalized weakness and fatigue (100%) and altered sensorium(16%). All patients had a presence of M band on serum protein electrophoresis, whereas 20% patients had urinary Bonce Jones protein positive. Among skeletal system spine and skull were the common sites of involvement (44%).

Conclusions: Among 25 patients; various clinical presentations observed were infections, renal impairment, hypercalcemia and extramedullary plasmacytosis in addition to anemia and bony pains.

Keywords: Lytic lesions, M band, multiple myeloma

INTRODUCTION

Multiple myeloma (MM) is a disorder caused by neoplastic proliferation of a clone of malignant plasma cells. The characteristic features include accumulation of monoclonal plasma cells in the bone marrow associated with monoclonal immunoglobulin (Ig) synthesis and osteolytic bone lesions. It comprises 13% of hematologic malignancies. MM is a disease of the elderly, with the peak age of 60-70 years at presentation. Though most patients of MM are symptomatic at presentation needing prompt treatment, about 10-15% may remain asymptomatic in whom treatment may be delayed. Complications such as renal failure, infections, anemia, lytic bone lesions and amyloidosis lead to morbidity as well as mortality. Though the disease is uniformly fatal; newer advances in treatment like autologous hematopoietic stem cell transplantation mini-transplants and advances in chemotherapy have improved the quality-of-life and increased survival.Hence, this study was undertaken to evaluate the clinical profile of MM.

Materials and Methods: This was a cross-sectional study conducted over a period of 2 years, in a tertiary care hospital. Institutional Ethical Committee's clearance was taken. Patients admitted in medical wards with features of bony pains, anemia, lytic bony lesions were included. Detailed history was taken and

clinical examination was performed. Hematological investigations such as Hemoglobin (Hb), Total differential cell counts, erythrocyte sedimentation rate (ESR), platelet count, peripheral blood smear, bone marrow examination were done. Serum protein electrophoresis was done, using the cellulose acelate membrane and ponceau S stain to detect M band in all. Urine was examined for Bence Jones Proteinuria. Radiological investigations included skeletal survey; imaging studies like magnetic resonance imaging were performed, wherever indicated to look for osteolytic lesions, generalized osteoporosis, vertebral compressions, pathological fractures and spinal cord compression. Radiographs of local sites were taken if extramedullary involvement was present.

Results

Out of total 25 patients 18 were Males and 7 were females.the mean age group was 6th decade.cheif complaints were mainly generalized weakness and bone pains. 4 patients came with hypercalcemia encephalopathy.3 patients came with infections out of which 2 patients had pneumonia and one patient had recurrent urinary tract infection. Out of 10 patients who presented with azotemia 3 had already developed chronic kidney disease. The results are shown below.

Age(yrs)	Number(N)	Percent(%)
50-60	19	76
60-70	5	20
>70	1	4

Gender	Number(N)	Percent(%)
male	18	72
female	7	28

Chief complaints	Number(N)	Percent(%)
Bone pains	20	80
Generalised weakness	25	100
fever	10	40
Altered sensorium	4	16
infections	3	12

Labs	Number(N)	Percent(%)
anemia	25	100
azotemia	10	40
hypercalcemia	4	16
Urine for BJP	5	20
SPEP	25	100
Lytic lesions	11	44

BJP:bence jones proteins. SPEP:serum protein electrophoresis.

Volume 2, Issue 2; March-April 2019; Page No. 343-345

Bone marrow plasma cells	number	Percent(%)
10-30%	18	72
30-60%	5	20
>60%	2	8

Discussion

Multiple myeloma is a hematological malignancy usually presenting in elderly.the diagnosis of multiple myeloma is done by following diagnostic criteria.

Clonal bone marrow plasma cells or biopsy-proven bony or extramedullary plasmacytomaa and any one or more of the following myeloma defining events:

- Evidence of one or more end-organ damage that can be attributed to the underlying plasma cell proliferative disorder, specifically:
- Hypercalcemia: serum calcium >0.25 mmol/L (>1 mg/dL) higher than the upper limit of normal or >2.75 mmol/L (>11 mg/dL)
- Renal insufficiency: creatinine clearance <40 mL per minb or serum creatinine >177 µmol/L (>2 mg/dL)
- Anemia: hemoglobin value of >20 g/L below the lower limit of normal, or a hemoglobin value <100 g/L
- Bone lesions: one or more osteolytic lesions on skeletal radiography, CT, or PET-CTc
- Any one or more of the following biomarkers of malignancy:
- Clonal bone marrow plasma cell percentagea ≥60%
- Involved: uninvolved serum free light chain ratiod ≥100
- 1 focal lesions on MRI studies

The patients were managed by both hematologists and oncologists in conjunction.8 patients out of 25 died.others are on follow up.

Conclusion

Majority of our patients had anemia and skeletal involvement. Non-specific symptoms like generalized weakness and fatigue can be presenting symptoms of MM. unexplained anemia, renal failure, bone pains especially backache should give the physician a high index of suspicion for MM.

References

1. International Myeloma Working Group — Criteria for the classification of monoclonal gammopathies, multiple myeloma and related disorders: a report of the International Myeloma Working Group. Br J Haematol 2003; 121: 749-57.
2. UK myeloma forum. British Committee for Standards in Haematology. Diagnosis and management of multiple myeloma. Br J Haematol 2001;115:522-40.
3. Shah PM. Plasma cell dyscrasias. In Munjal Y P (ed) API Text Book of Medicine. 7th ed.The Association of Physicians of India. New Delhi Jaypee Brothers Medical Publishers 2003; 961-3.
4. Kyle RA, Gertz MA, Witzig TE, Lust JA, Lacy MQ, Dispenzieri A, et al. Review of 1027 patients with newly diagnosed multiple myeloma. Mayo Clin Proc 2003;78:21-33.
5. Harrisons principle of internal medicine 20th edition,2018.plasma cell disorders(793-803)

Volume 2, Issue 2; March-April 2019; Page No. 343-345