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CYTODIAGNOSIS OF MULTIPLE MYELOMA PRESENTING AS CHEST WALL SWELLING: A RARE CASE DIAGNOSED AT TERTIARY CARE HOSPITAL CHANDRAPUR MAHARASHTRA

Pathology

Dr Bhushan Naitam — Assistant Professor, Department of Pathology GMC Chandrapur

Dr Devishri Atram* — Assistant Professor , Department of Community Medicine GMC Chandrapur *Corresponding Author

Dr Ameet Premchand — MD Pathology, Department of Pathology GMC Chandrapur

Dr V. Sawaitul — Professor and Head , Department of Pathology GMC Chandrapur

ABSTRACT

Myeloma is a malignancy of terminally differentiated B cells (plasma cells) that produce a complete and/or partial monoclonal immunoglobulin protein. Myeloma accounts for approximately 1% of all malignancies and 10% of haematological tumors. It becomes difficult to arrive at early diagnosis because myeloma manifests itself in different forms. The disease usually presents as bone pains, pathological fractures and anemia but can also present as swelling in jaw, orbit, rib, sternoclavicular area, scalp, paraspinal region and tonsil. We report a case of multiple myeloma in a 55 year old female which presented as a soft tissue mass on anterior chest wall and diagnosed by FNAC. This case is presented because diagnosis was made on cytology and not many cases have been reported in literature where FNAC helped in making the diagnosis. This increases the hope of early diagnosis so that treatment can be advocated.

KEYWORDS

Multiple Myeloma, anterior chest wall mass, FNAC

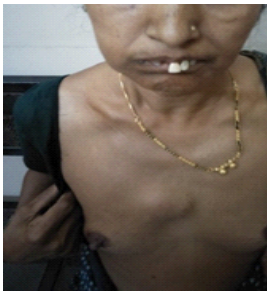
INTRODUCTION:

Multiple Myeloma (MM) is relatively a rare hematological malignancy that predominantly occurs in patients above 60 years of age. [1] The disease is somewhat more common in men than in women. [2] It is a malignant proliferation of plasma cells predominantly affecting bone marrow and skeletal system. It is commonly diagnosed late due to different modes of presentation and clinically apparent stage is usually preceded by an asymptomatic period of variable duration. The term multiple myeloma was first coined in the year 1873 by Von Rustizky. [3,4] Multiple Myeloma is named for the 'clock face' appearance of these cancer cells when seen under the microscope. They infiltrate virtually all of patient's bone marrow. When only one lesion is found it is called plasmacytoma. Multiple Myeloma usually occurs spontaneously. Patients exposed to ionizing radiation and the pesticide dioxin may develop the disease. Infections with some viruses (HIV and human herpes virus 8) have also been associated with multiple myeloma. [5]This article reports a case of multiple myeloma in a 55 year old female presenting with anterior chest wall swelling.

CASE REPORT:

A 55 year old female presented to surgical outpatient department at tertiary care hospital with swelling of anterior chest wall region since two months. There is history of pain over the swelling and loss of weight. There was no past history of any major illnessess. There was no obvious cervical lymphadenopathy. On clinical examination the lump was located on sternal region . It was hard, fixed to chest wall and size 4cm X 5 cm. Another lump was palpable on right mandibular region (2cm X 3cm),firm to hard, fixed to underlying structures.

fig:1



Severe pallor noted in the patient.

Laboratory investigations were as follows: Hemoglobin: 4.6 gm%, total Leucocyte count: 4600 cells/cm, differential count: polymorphs: 48%, lymphocytes:50%, eosinophils: 1%, basophils: 1%, ESR:80 mm 1st hour, platelets:1.4 lakhs/cumm, serum protein: 3.1gm/dl, serum albumin: 2.5 mg/dl, serum creatinine: 1.5 mg/dl, serum sodium: 131 mmol/l, serum potassium: 3.1 mmol/l, serum calcium: 10.5 mg/dl, SGPT: 61IU/l.

FNAC smears showed irregular clusters and scattered population of plasma cells on a bluish background. Individual cells showed pleomorphism with abundant basophilic cytoplasm and eccentric nucleus. The nucleus shows cart wheel pattern of chromatin and a perinuclear halo . Mitotic figures seen with tumour giant cells.(fig:2)

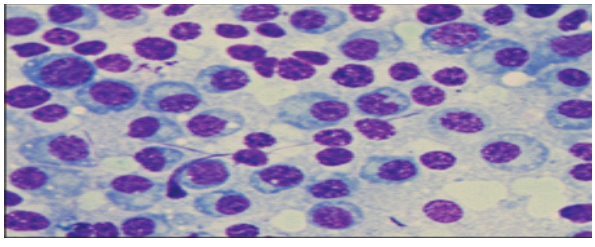


Fig:2 cytological examination

Bone marrow aspiration showed hypercellular marrow with increased proliferation of plasma cells which constituted 38% of marrow cells with flame cells. The diagnosis of Multiple Myeloma was confirmed

DISCUSSION:

Plasma cell myeloma may occur as one of the three distinct clinical variants: Multiple myeloma, solitary plasmacytoma of bone and extramedullary plasmacytoma. The first well documented case of multiple myeloma was reported by Samuel Solley in 1844. [6,4] Multiple myeloma occurs in the disseminated forms affecting various bones. It is more common in males above 60 years of age. Common systemic manifestation includes bone pain, pathological fracture, renal failure, hypercalcemia, weight loss, fatigue, weakness, shortening of spine, fever, thrombocytopenia, neutropenia ,diarrhea etc.

Swelling of chest wall as initial presentation is an unusual presentation of Multiple Myeloma and can be a difficult diagnosis, for clinicians. [7,5] In such cases FNAC of the swelling will be definitely helpful in guiding the clinician towards the diagnosis which can be confirmed by further relevant investigation. Kyle et al in his review reported that back pain (58%) and anaemia (32%) are the most common symptoms

in multiple myeloma . [3] Sachidanand MK et al reported (2012) a case of 72 year old male with multiple myeloma with initial presentation in oral cavity. [4] G. Parvathi et al published (2015) a case of multiple myeloma in a 63 year old male which presented as a soft tissue mass on anterior chest wall and diagnosed by FNAC. [5] Sunil Kumar et al reported (2010) a case of multiple myeloma in a 55-yearold male who presented with multiple cystic swellings on the chest. [8]

The potential for malignant systemic progression is higher for solitary plasmacytoma of bone than extramedullary plasmacytoma. [9,5] Local irradiation is the primary mode of treatment for extramedullary plasmacytoma, occasionally followed by surgical resection of residual tumor. When extramedullary plasmacytoma with MM is diagnosed, local treatment of plasmacytoma should be followed the systemic combination chemotherapy. The prognosis for extramedullary plasmacytoma with Multiple Myeloma is poor and most patients die within 2years of diagnosis. The 3year survival rate is only about 10%. [10,5]

CONCLUSION:

Multiple Myeloma presenting as chest wall mass is an uncommon presentation. Failure to recognize the multiple presentations of MM leads to delayed diagnosis and treatment. FNAC definitely offers an early and accurate method of diagnosis of these unusual cases which present as a diagnostic dilemma to the clinician.

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