

## Multiple solitary plasmocytoma with multifocal medullary asymptomatic presentation for diabetic patient (Case Report)

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### Abstract

Multiple solitary plasmocytoma with multiple bone involvement, it's very rare cases, in the literature, special skull vault associated with other medullary involvement,

In our case is the first case report for multiple skull vault, with multiple focal medullary, asymptomatic for diabetic patient, also highlighted the accurate diagnostic of plasmocytoma and management.

**Keywords:** Multiple solitary plasmocytoma; Skull vault; Multifocal; Medullary; Asymptomatic

### 1. Introduction

Plasmacytomas are referred to benign lesions that may progress to multiple myeloma, a fatal neoplasm [1].

Plasmacytomas classified as solitary plasmacytoma of bone (SBP) when a single bone lesion was present, solitary extramedullary plasmacytoma (SEP) when a solitary soft-tissue lesion was present and multiple solitary plasmacytoma (MSP) when multiple sites of disease were present in soft tissue, bone or both. SBP, Multiple solitary plasmacytoma (MSP) is a rare plasma cell dyscrasia, characterized by multiple lesions of neoplastic monoclonal plasma cells.

It differs from multiple myeloma by the lack of hypercalcemia, renal insufficiency, anemia and pathological monoclonal plasmocytosis on a random bone biopsy.

Skull plasmacytomas are unusual tumors accounting for 4% of all plasma cell tumors [1–6]. Most of cases presenting symptoms of headache or symptoms of intracranial hypertension.

In our case we report multiple solitary plasmocytoma with multifocal medullary involvement, which is asymptomatic on the skull, which is successful diagnosis and treated surgical and chemotherapy.

### 2. Case Report

A 41 year old male patient admitted in the department of the neurosurgery at Avicenna hospital in Rabat for mass lesion vault of skull on the parietal for 6 months ,the mass lesion was progressively growing , not associated head ache , no history of convulsion ,fever, hemiparesis , or loss of consciousness , the patient has past history of drug addiction before 1 year and chronic smoker , also diabetic type 2 under metformin tablets , and positive family history for his sister ,she had colon cancer, Physically patient weight normal and no jaundice, cyanosis, pale, he is conscious, Gcs 15/15, walking

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normal, no neurological deficit, Local examination there is mass on the left parietal bone, up to 15\*23 mm, fixed non mobile, color of skin was normal, rubbery like, smooth surface, no tender during examination, During examination he get fracture of the right humerus, and done X ray of the right arm.

All routine blood work up was Hb =10.4, GB = 6430, PMN; 3356, Platelets; 687000, CPR; 114.60 mg/dl.

Hemoglobin (HbA1c) its 6%, coagulation profile is normal, phosphate; 38 mg\dl, parathyroid hormone ;8.33pg/ml (normal).

Electrophoresis there is high Beta globunemia, And Protein M was negative and for Bone Marrow aspiration result: - 1% of plasmocyte.

Fluorescent in Situ Hybridization:-Del 17p f 53% of the plasma.

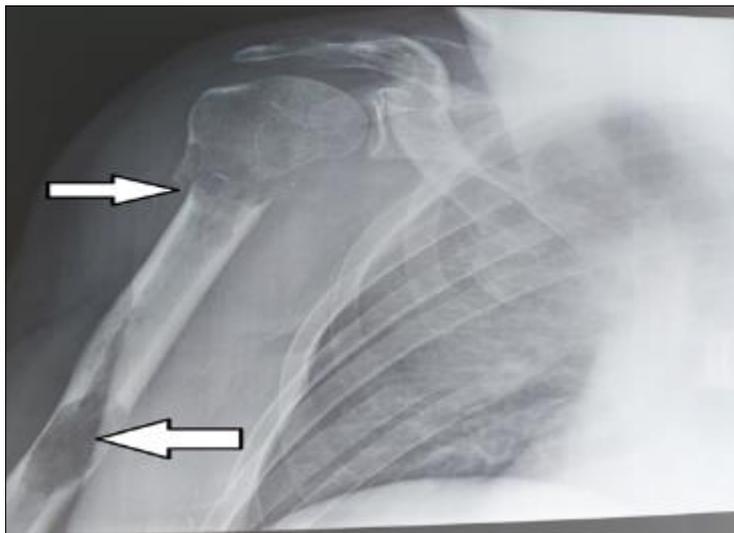
For radiological assessment;- Upper limb Xray ; there is right humerus osteolytic lesion of metaphysis and pathological fracture of the neck humerus (figure 1)

CT scan cerebral, there is Mass osteolytic left parietal massive, and two small mass on the occipital and other side of parietal, and CT scan bone field with 3D dimension for assessment of bone (Figure 2).

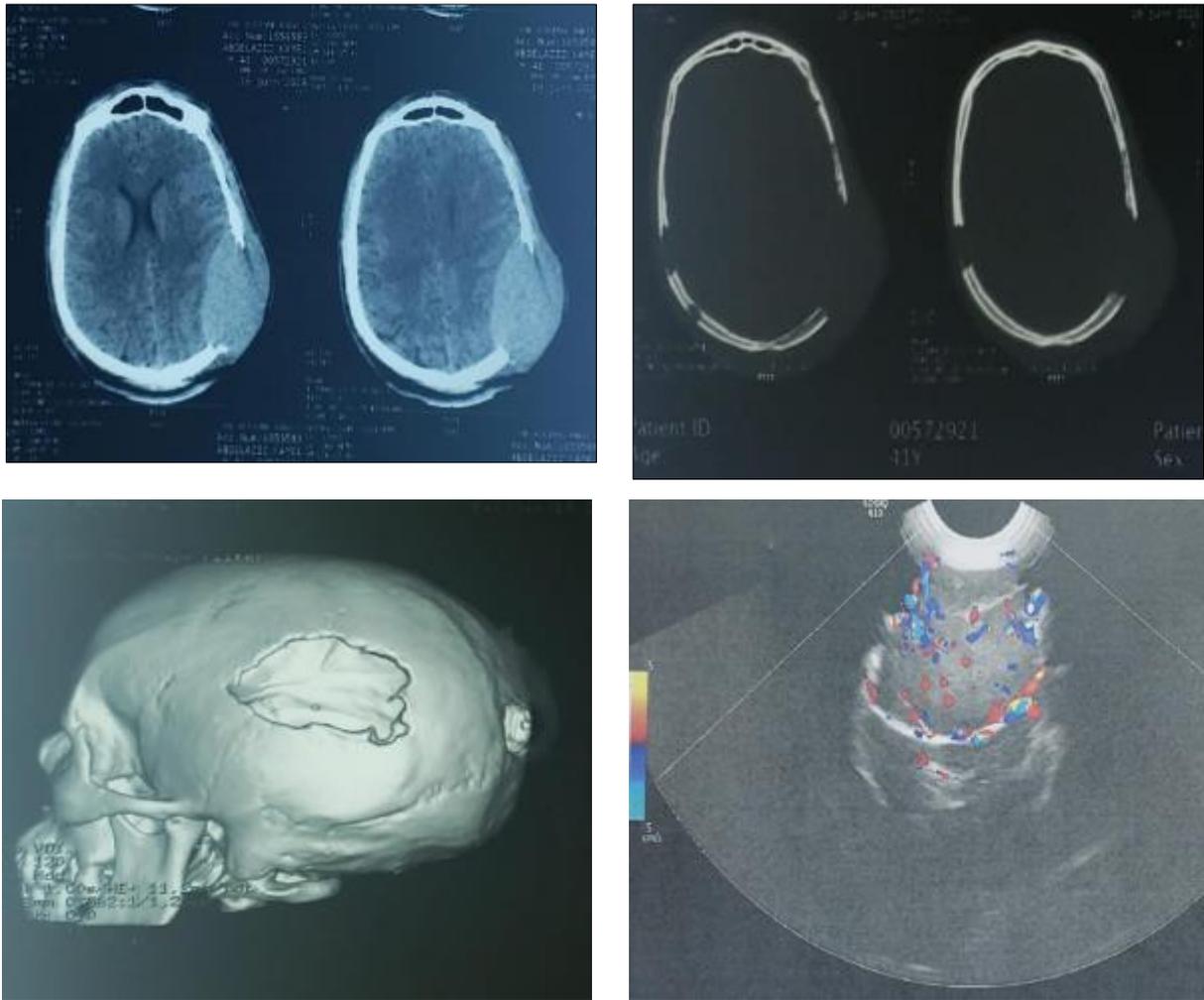
MRI, Shows multifocal lesions exophytic tumor on the left parietal and occipital with contralateral small mass of the parietal right extradural (Figure 3)

ALSO DONE Thoracic-abdominal-pelvic scanner for assessment other location of tumors, S tumoral thoracic cage, sternum and both humerus Osseo right and left. (Figure 4)

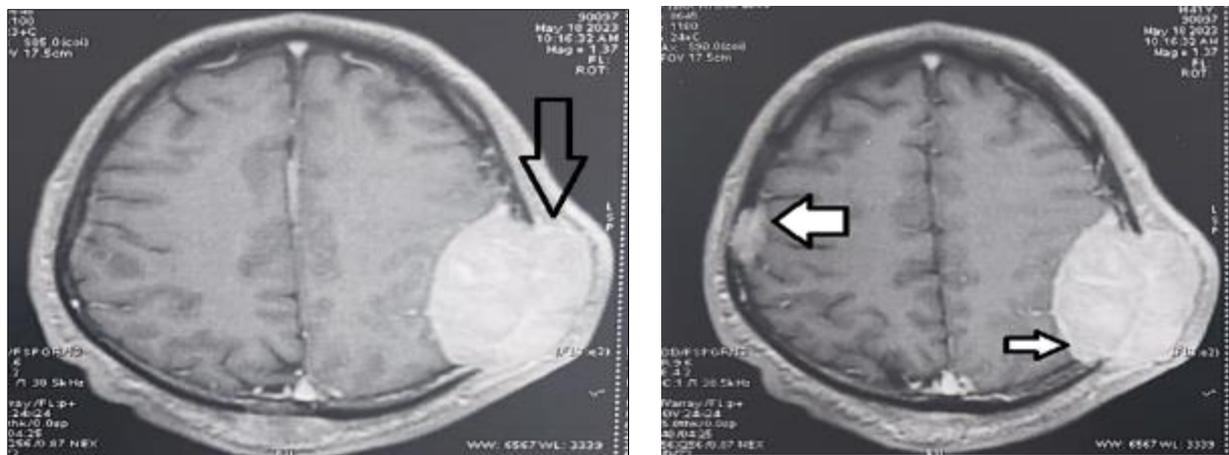
Then patient operated for resection of the most prominent on the parietal, and done biopsy (Figure 5), which indicated plasmocytoma (plasmocytoma CD 138+), also operated the fracture of the humerus on the left for osteolytic lesion, patient conscious, no deficit post op CT scan control indicates there part of residue (figure 6), then he start treatment of chemotherapy, immediately after diagnosis.



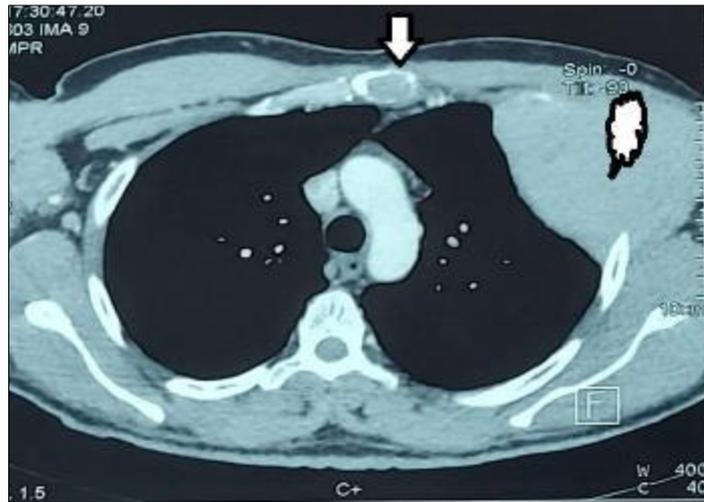
**Figure 1** Its right humerus with pathological fracture associated osteolytic lesion on the metaphysis of the humerus



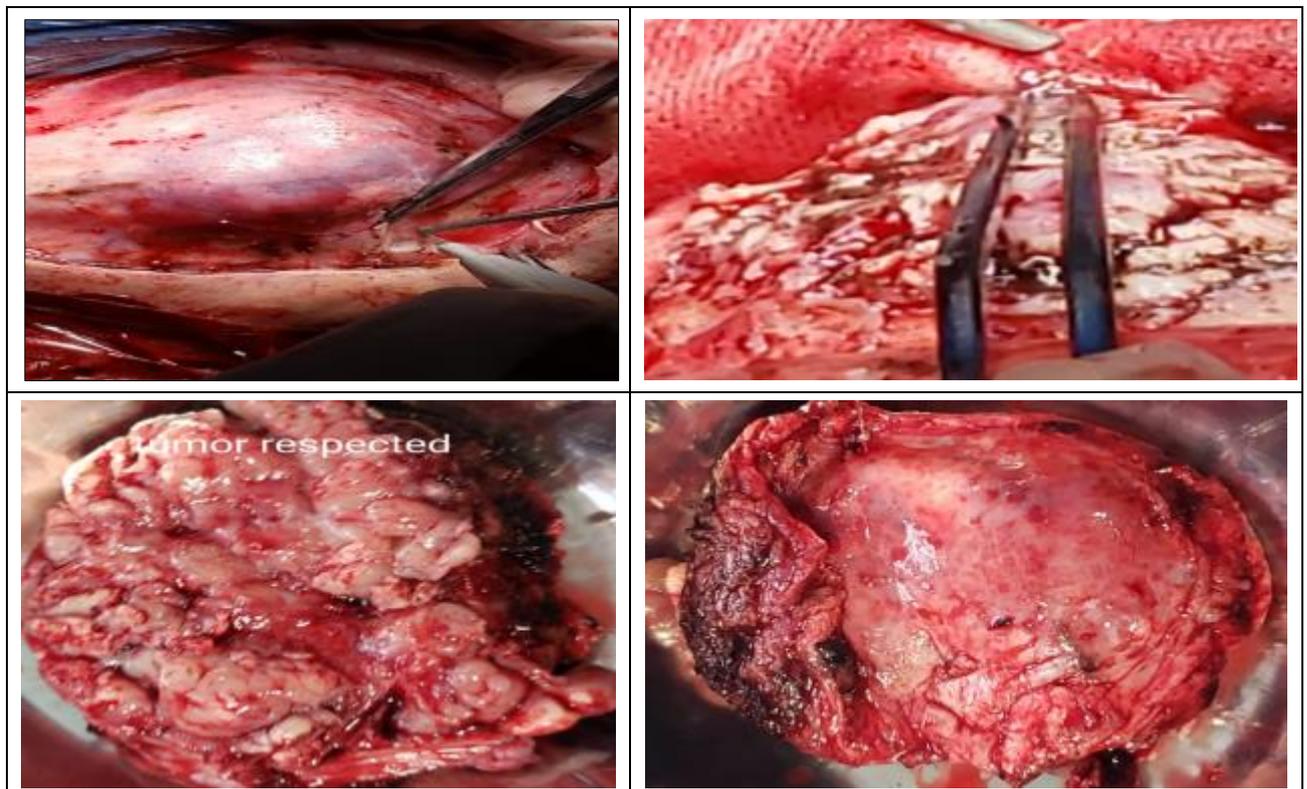
**Figure 2** There is osteolytic lesion on the parietal left and small lesion right parietal with occipital, and echo shows hyper vascular tumor



**Figure 3** There hyperintense lesion exophytic on the parietal left extra dural

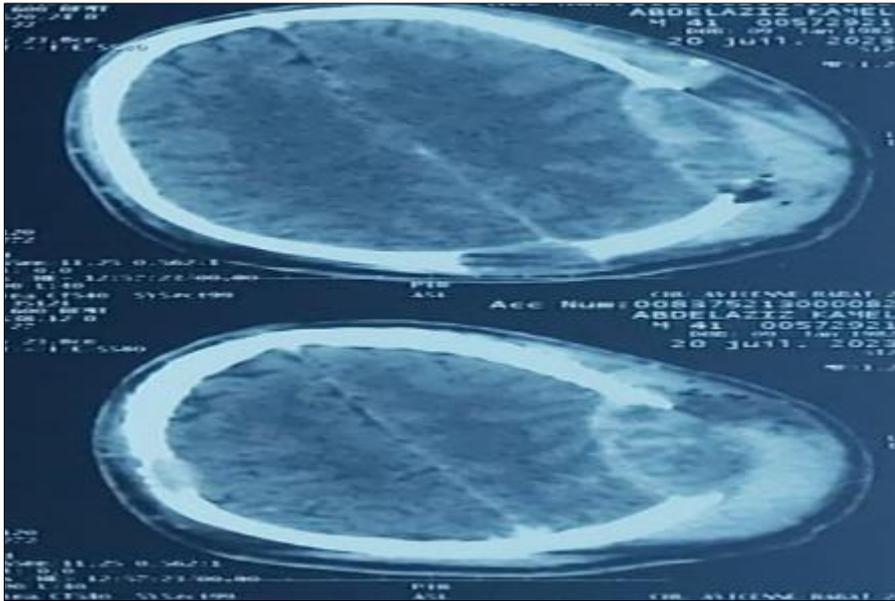


**Figure 4** There massive lesion hyper dense on the right thoracic cage exophytic and osteolytic lesion on the sternum



**Figure 5** This is show intraoperative resection appearance of the highly vascularized

## 2.1. Post op; control



**Figure 6** There is post op residual of the tumor

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## 3. Discussion

Plasmacytoma is a rare disease, Metastatic spread of plasmacytoma occurs to soft tissues frequently and occasionally to bones.

Solitary plasmacytoma has an annual incidence of fewer than 450 cases. The incidence of SPB is 40% more than EMP, with SPB constituting 2% to 5% of all plasma cell malignancies and EMP constituting 4% of all plasma cell malignancies.[1] Plasmacytoma is prevalent in older individuals, African Americans, and males.[10] It presents in the middle to old aged people with the mean age of presentation of 55 to 60 years.[11] Plasmacytoma is more prevalent in males than females, with a male to female ratio of 2 to 1 in SPB and 3:1 in EMP.

Only a few cases of MSP have been documented in the literature [3, 4, 5, 6]. most of cases reported in the literature of MSP are mainly on vertebral or soft tissue involvement, in our case is very unique for involvement of multiple bone infiltration, mainly of the vault of skull and sternum, costal and humors bilateral , for skull plasmocytoma in the literature they report mainly solitary plasmocytoma ,indeed our case report multiple location of the skull vault and other location , and almost most of the multiple solitary plasmocytoma mimic the metastatic tumor unless confirms the pathological analysis ,

According to literature search, no case could be found where MSP was associated with skull vault and multiple focal bone infiltration with asymptomatic presentation, although many cases of SBP producing the above features have been reported.

For the rarity and heterogeneous presentation of MSP, no clear management guidelines are available.[127] Chemotherapy, radiotherapy, and surgery have been tried with variable results. For MSP, a multimodality treatment including surgery followed by radiotherapy and chemotherapy is considered optimum.[27].

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## 4. Conclusion

Multiple solitary plasmocytoma ,which is involved of vault of skull associated others location most be considers very important differential diagnosis for multiple focal lesion of bone including skull , which is mimic to metastatic tumors , although extremely rare cases for MSP , its clinical important to diagnosis and assessment malignant transformation , and immediately intervention will improve the outcome of the patient .

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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