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# Acute Myeloid Leukaemia Presenting As Chloroma:a Rare Case Report

KEYWORDS: Myxoma, myeloid sarcoma, granulomatous sarcoma, chloroma, leukemia

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**ABSTRACT** *Myeloid sarcoma (granulocytic) represents the tissue mass form of various subtypes of acute myeloid leukemia, the diagnosis is equivalent to the diagnosis of AML. It may occur de novo, may precede or coincide with AML.We report a case of 70 year old male who presented with chloroma*

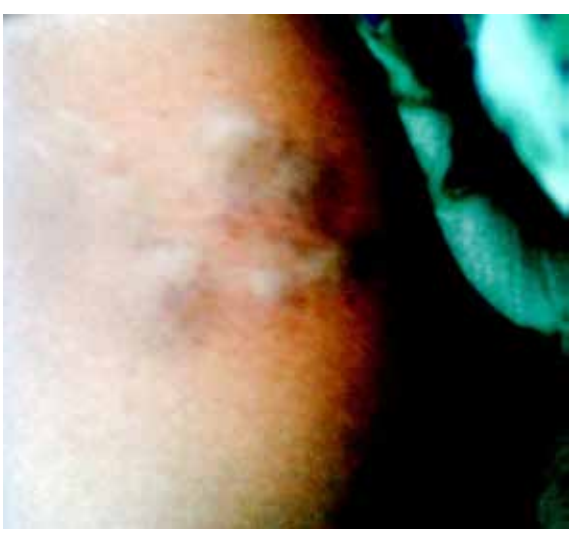
**SUMMARY:**
70 year old male who presented with weakness,easy fatiguability,exertional dyspnea and painless swellings over the left arm and periumbilical region since 2 weeks. Known diabetic on insulin management. Underwent routine blood investigations. Bone marrow aspiration was performed in view of bicytopenia and has been diagnosed as AML. Wedge biopsy of the tissue mass was done and sent for histopathological examination where the diagnosis of chloroma was made.

**CASE REPORT:**

- A 70 year male patient ,farmer by occupation, has come to medicine OPD with history of easy fatiguability and exertional shortness of breath since 6months ( grade 1 dyspnea -MRC grading)
- SOB gradually progressed over 6months
- No H/O cough/ orthopnea/PND
- No H/O Fever
- No H/O abdominal pain/loss of appetite/loss of weight
- No H/O bleeding manifestations,worm infestations
- H/O multiple swellings over the leftarm and a swelling over the peri umbilical region,painless,greenish in colour,gradually progressed over a period of 1month
- H/O type 2 diabetes mellitus –since 2months on insulin therapy
- No significant family history.
- On general physical examination patient was moderately built and nourished,pallor present.
- Vital data-normal

**EXAMINATION OF THE SWELLING**

- Local examination showed multiple subcutaneous firm nodular swellings each approximately 2X2 cms with illdefined margins over the left arm and a solitary swelling in the peri umbilical region 2X3cms. There is no local rise of temperature Or tenderness



- **Systemic examination is normal**

**LAB INVESTIGATIONS**

- Peripheral smear- Hb -8gm% with normochromic normocytic Rbc morphology,total leukocyte count is 1500/$mm^3$ - suggestive of bicytopenia
- Reticulocyte count- 1%
- Stool for occult blood is negative
- Blood urea -80mg /dl , Serum Creatinine- 1.2mg/dl
- LFT normal

**Bone marrow aspiration:**

1. High cellularity.

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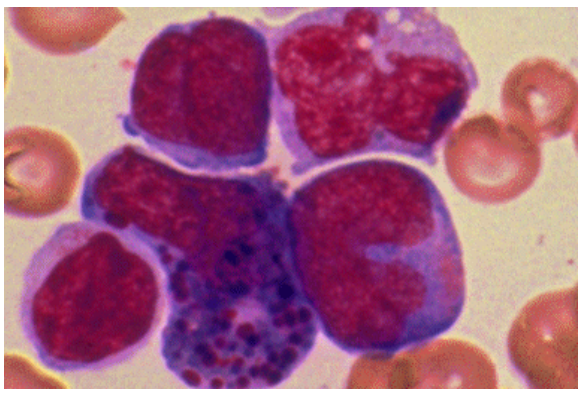
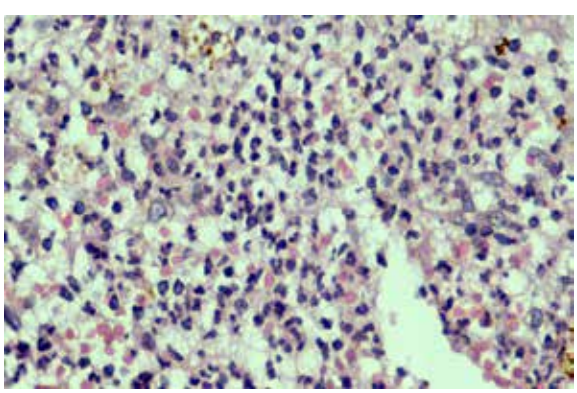
2. M:E ratio 7:1

3. Myeloid series-shows myeloblasts àmost of the cells have abundant pale basophilic cytoplasm and irregularly convoluted nuclear configuration with prominent nucleoli. There is distinct eosinophilic myelocytic differentiation and metamyelocytes with evidence of dysmyelopoisis-M4E0



**Histopathology report**
poorly differentiated blasts along with scattered mature myeloid cells.there are metamyelocytes,myelocytes and many mature neutrophils noted diffusely infiltrating the entire stroma –features suggestive of chloroma



**Discussion:**

- The incidence of AML is ~3.5 per 100,000 people per year, and the age-adjusted incidence is higher in men than in women (4.5 vs 3.1). AML incidence increases with age; it is 1.7 in individuals age <65 years and 15.9 in those age >65 years. The median age at diagnosis is 67 years.

- The clinical signs and symptoms are Fatigue, pallor, abnormal bleeding, and infections are common in newly diagnosed patients, who typically present within a few weeks of the onset of symptoms.

- Splenomegaly and lymphadenopathy generally are less prominent but on rare occasions AML mimics a lymphoma by manifesting as a discrete tissue mass (a so-called granulocytic sarcoma).

- The incidence of chloromas is between 3-9.1% of all AML[4,5]

- Chloroma is a rare malignant extra-medullary neoplasm of myeloid precursor cells. It was described for the first time by Burns in 1811 and later, called Chloroma by King in 1853 on account of its green colour which is believed to be caused by myelo-peroxidase, an enzyme present in the myeloid cells.[1]

- almost three decades later was called Granulocytic Sarcoma or Myeloid Sarcoma according to the WHO classification.[2]

- chloromas develop mostly concomitantly with the FAB subtype M5a, M5b, M4 and M2 of the AML.[3]

- This disorder often occurs in concomitance with other myelo-proliferative disorders such as polycythemia vera (PV) and myeloid metaplasia . On the other hand, it rarely develops in patients with no symptoms of leukaemia, either in the peripheral blood or in bone marrow. In most of these patients, following the occurrence of chloroma, an overt acute myeloid leukaemia develops within 1 and 49 months.

- Evidence is conflicting on the prognostic significance of chloromas in patients with acute myeloid leukemia. In general, they are felt to augur a poorer prognosis, with a poorer response to treatment and worse survival;however, others have reported chloromas associate, as a biologic marker, with other poor prognostic factors, and therefore do not have independent prognostic significance.

**CONCLUSION:**
This presentation is to emphasise the importance that primary chloroma can be considered as an initial manifestation of acute leukemia and could be treated as such

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