

Case Report

Myeloid Sarcoma of Nasal Cavity: An Unusual Presentation for Chronic Myelogenous Leukemia

Bachheti Y^{1*}, Khanna T², Mittal H³ and Das K²

¹Department of Radiation Oncology, Swami Rama Himalayan University, India

²Division of Hematology and BMT, Swami Rama Himalayan University, India

³Department of Otorhinolaryngology, Swami Rama Himalayan University, India

*Corresponding author: Bachheti Y, Department of Radiation Oncology, Swami Ram Himalayan University, % Holy Angel Senior Secondary School, Resham Majri, Doiwala, Dehradun, Uttarakhand, India

Received: June 19, 2020; Accepted: August 19, 2020;

Published: August 26, 2020

Abbreviations

PCR: Polymerase Chain Reaction; CML: Chronic Myelogenous Leukemia; AML: Acute Myelogenous Leukemia; MPD: Myeloproliferative Disease

Case Presentation

A 60 years old lady with no known comorbidity presented to the Otorhinolaryngology department with nasal stuffiness and swelling on the bridge of her nose for 2 months. There was no history of bleeding, fever or any other complaints. Clinical examination showed mild pallor and a non-tender, hyperactive pigmented irregular swelling on the nasal bridge (Figure 1). Nasal examination showed a small mass in the right nostril attached to the nasal bridge. Abdominal examination showed splenomegaly (7cms below costal margin). No lymphadenopathy or bony tenderness was noted. Other systemic examinations was unremarkable. Investigation showed mild anemia with raised white blood cell counts and raised platelet counts (Table 1). Differential counts showed all lineage of myeloid maturation and 2% blasts. PCR for Bcr-Abl was positive for major translocation. Biopsy from nasal mass showed dense population of loosely cohesive myeloid series cells suggestive of myeloid sarcoma. Based on her clinical features and laboratory reports, CML with nasal chloroma was diagnosed. Differential of nasal abscess was kept although less likely after the biopsy report. She was started on Imatinib Mesylate [400mg once a day] along with allopurinol and oral hydration. Her blood count (Table I) as well as nasal mass (Figure 2) showed gradual regression with this treatment. However she defaulted the treatment after 4 months and could not be traced thereafter.

Discussion

Myeloid sarcoma or granulocytic sarcomas are deposition of immature myeloid cells in various structures [1]. Earlier chloroma was termed based on greenish pigmentation of these deposits however this color is not consistent [2]. They are more commonly associated with acute myeloid leukemia and confer aggressive nature of disease [3]. Association with CML is rare and limited to literature

Abstract

Myeloid sarcoma is an extra medullary deposit of myeloid cells and often encountered in Acute myeloid leukemia. Rare associations with chronic myelogenous leukemia has been noted as well. Site preponderance of skin, lymph nodes and intestine has been seen but the nasal cavity remains an unusual site. Authors report an unusual case of chronic myelogenous leukemia in chronic phase presented with nasal myeloid sarcoma. It showed good clinical response to the treatment directed to chronic myelogenous leukemia.

Keywords: Chronic myelogenous leukemia; Myeloid sarcoma; Nasal mass; Chloroma



Figure 1: Clinical photograph at presentation.



Figure 2: Clinical photograph showed reduction in nasal bridge swelling.

[4]. Analysis of 92 myeloid sarcoma cases showed CML association among 7 cases only. It can occur in any site however, common areas are skin, node, intestine or bone [5]. Case reports of myeloid sarcomas in nose and maxillary sinuses are also noted but not with chronic phase CML [6,7]. Index case represent an unusual location of a rare entity.

Myeloid sarcoma deposits are often misdiagnosed in cases where concurrent history or report of AML/MPD is not present [4]. In this case, a biopsy showed myeloid cell deposits and complete hemogram along with splenomegaly raised the suspicion of CML. This was

Table 1:

Parameters	Baseline [at diagnosis]	At 2 months of treatment
Hemoglobin [g/L]	94.2	78.1
Total leucocyte count [10 ⁹ /L]	245.10	3.44
Platelet count [10 ⁹ /L]	1245.0	309.9
Differential counts[%]		
Polymorphs	60	61
Monocytes	--	02
Metamyelocytes	05	-
Promyelocytes	03	-
Blasts	04	-
Lymphocyte	06	35
Eosinophil	06	02
Basophil	01	-
PCR for Bcr-ABL	detected	-

confirmed with PCR detection of mutation. Clinical response to Imatinib re confirmed the occurrence of myeloid sarcoma in this case.

Significance of myeloid sarcoma in CML is not known. It is not clear whether the site of myeloid sarcoma will require any radiotherapy or local therapy in subsequent course. Non-leukemic myeloid sarcoma has been noted to do better with chemotherapy than surgery or radiotherapy [8]. Rarity of the entity is the possible explanation for this. A pooled long-term data for all such cases will define its clinical significance.

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