Primary Radiation Therapy for Solitary Chloroma of Oral Tongue

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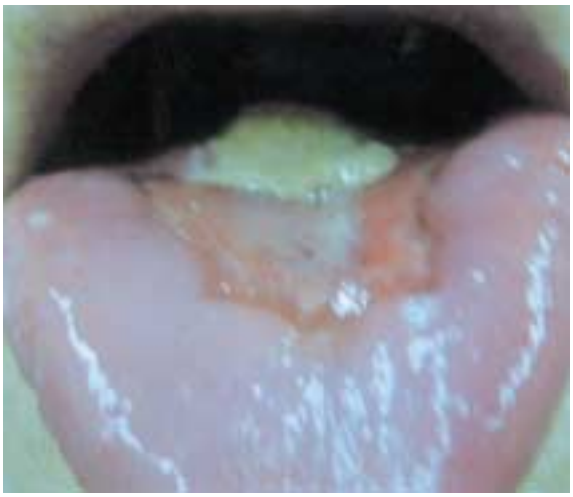
Key words: chloroma, oral tongue, radiation therapy

IMAJ 2003;5:452

Chloroma is a rare solid tumor, occurring in 1% of patients with acute myelogenous leukemia. It consists of focal masses of extramedullary immature myeloid cells that infiltrate various tissues [1–4]. Treatment is essentially based on chemotherapy [5], with additional radiotherapy and/or surgery being considered in particular cases. Solitary chloroma of the oral tongue in a patient with myelodysplastic syndrome (a preleukemic state) is extremely rare. We describe such a patient who was treated successfully with primary radiation therapy.



Oral tongue chloroma at the end of radiation therapy

Patient Description

A 72 year old woman presented with a white lesion over her oral tongue. Her symptoms of mouth dryness and local pain had developed several months earlier. A year previously she was diagnosed with myelodysplastic syndrome and refractory anemia and was treated with blood transfusions only.

Physical examination revealed a dehydrated and malnourished patient with a large fleshy-red lesion and a central crater in the mid-oral tongue. No regional lymphadenopathy was observed. A biopsy was obtained and immunostaining of the specimen was positive for myeloperoxidase and negative for CD20, CD3 and lymphocytotoxic antibody. Bone marrow aspiration showed profound dysplasia without evidence of acute leukemia. A diagnosis of chloroma was made. The patient was treated with radiation therapy using a linear accelerator operated on a 6 MV photon beam to the oral tongue using two opposed lateral fields, 2 Gy a day, five fractions a week to a total dose of 30 Gy in 3 weeks. Oral mucositis grade 1 was the only observed side effect and it was successfully treated with local anesthetic and antifungal medication. Tumor shrinkage was observed at completion of treatment [Figure] and complete tumor resolution occurred within 2 months. Currently the patient is 9 months following XRT with no local recurrence.

Comment

Chloroma is a rare finding in patients with acute myelogenous leukemia. A diagnosis of such disease in the preleukemic state in oral tongue is extremely rare. The conventional treatment is based on systemic chemotherapy and occasional local XRT or surgery. In our case, immediate systemic chemotherapy could not be given due to the patient's age and her quite asymptomatic preleukemic disease. The extensive tumor and its location in mid-tongue precluded her, according to the radiation oncologist but not the surgeon, to undergo surgery. XRT indeed was the only suitable modality. The treatment course was uneventful and prolonged complete response was achieved. We conclude that such a rare manifestation of this disease in the head and neck region should be considered, and that XRT, in addition to systemic chemotherapy, should be used as a primary treatment approach.

XRT = primary radiation therapy

References

1. Ficarra G, Silverman S Jr, Quivey JM, Hansen LS, Giannotti K. Granulocytic sarcoma (chloroma) of the oral cavity: a case with a leukemic presentation. *Oral Surg Oral Med Oral Pathol* 1987;63:709–14.
2. Ravandi-Kashani F, Estey E, Cortes J, Medeiros LJ, Giles FJ. Granulocytic sarcoma of the pancreas: a report of two cases and literature review. *Clin Lab Haematol* 1999;21: 219–24.
3. Binder C, Tiemann M, Haase D, Humpe A, Kneba M. Isolated meningeal chloroma (granulocytic sarcoma) – a case report and review of the literature. *Ann Hematol* 2000; 79:459–62.
4. Mostafavi H, Lennarson PJ, Traynelis VC. Granulocytic sarcoma of the spine. *Neurosurgery* 2000;46:78.
5. Imrie KR, Kovacs MJ, Selby D, et al. Isolated chloroma: the effect of early antileukemic therapy. *Ann Intern Med* 1995;123:351–3.

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