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Case Study

Radiotherapy for Gum Hypertrophy in Acute Myeloid Leukemia

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ABSTRACT

A 67-year-old man with acute myeloid leukemia (AML) was referred for palliative radiotherapy. He had a history of aplastic anemia diagnosed in 2020, requiring a matched sibling donor allogeneic stem cell transplant in 2023. He subsequently developed myelodysplastic syndrome, progressing in 2024 to AML which proved refractory to chemotherapy. This led to gradually worsening gum hypertrophy encasing most of his teeth (Panel A), severely limiting oral intake and impairing speech. He was offered a short course of low dose radiotherapy to the gingiva (20 Gray in 10 treatments, 2.0 Gray/day over 2 weeks). The hypertrophic tissue regressed rapidly, with a near complete symptomatic response by one month following resolution of the acute mucositis (Panel B). He was able to eat a steak for the first time in 6 months. Gum hypertrophy in AML is due to leukemic infiltration of the gingival tissues. When chemo-refractory, radiotherapy is an effective treatment option.

Keywords: Acute Myeloid Leukemia; Gum Hypertrophy; Palliation; Radiotherapy

Panel A

Panel B