



aGvHD, cGvHD

Graft-versus-host disease of the tongue and oral cavity

 **Anna Bartus** | Aug 31, 2018

Oral symptoms are present in more than 80% of graft-versus-host disease (GvHD) cases. Mouth pain, dry mouth, pain of the oral mucosa after eating or drinking, and restricted mouth opening are common symptoms of the serious condition which can lead to cachexia. [Andrea Piccin](#) from San Maurizio Regional Hospital, Bolzano, South Tyrol, Italy, *et al.* investigated the clinical impact of GvHD with oral cavity involvement. The group of researchers retrospectively studied consecutive patients who had oral GvHD after hematopoietic stem cell transplantation (HSCT) between 2000 and 2014. The results of the study were published in the *International Journal of Hematology*.

Patient characteristics:

- N = 53 patients
- Median age = 48.6 years
- Median follow-up: 3 years and 6 months
- Conditioning regimens contained busulfan, cyclophosphamide and fludarabine
- Eleven patients received radiotherapy

GvHD prophylaxis:

- Patients received either cyclosporine or tacrolimus and a short course of methotrexate
- Patients with acute GvHD symptoms (> stage II) received iv. methylprednisolone at a dose of 1–2 mg/kg/day
- If patients were steroid-refractory, either mycophenolate mofetil or sirolimus or monoclonal antibodies (rituximab, alemtuzumab) were administered as second-line treatment

Oral prophylaxis:

- Correct dental-care
- Cleaning of the interdental spaces and rinsing with mouthwash
- Manual toothbrushes with soft bristles were allowed only

Key findings:

- The following complications were seen pre-HSCT: gingivitis (1.9%), tooth decay (26.4%), tooth extraction was performed in 45.3% of cases, filling was done in 13.2% of patients, root canal treatment was performed in 7.5% of patients, and tartar ablation was performed in 24.5% of cases, subgingival scaling was performed in 3.8% of cases

- The following complications were observed post-HSCT: tooth decay (32.1%), parodontosis (11.3%), gingivitis (7.5%), xerostomia (22.6%), hyposialia (18.9%), dysgeusia (3.8%), mucositis (9.4%), oral scleroderma (7.5%), dental hypersensitivity (n = 1), tooth extraction was performed in 17% of cases, fillings were done in 13.2% of cases, tartar ablation was performed in 22.6% of patients, root canal filling was done in 9.4% of cases, and subgingival scaling in 3.8% of patients
- Oral complications were significantly lower post-transplant: mean value = 1.81 (median = 2.00, SD = 0.873) pre-HSCT vs mean value = 0.38 (median = 0.00, SD = 1.161) post-HSCT, $P = 0.002$
- Patients receiving radiotherapy were more likely to have:
 - tooth decay requiring fillings, $P = 0.029$
 - canal root interventions, $P = 0.005$
 - tartar requiring oral hygiene interventions, $P = 0.011$
- Patients diagnosed with lymphoma were more likely to have perioral scleroderma and chronic oral GvHD, $P = 0.045$
- Oral acute GvHD was observed in 26 patients (49.1%)
- Oral chronic GvHD was observed in 21 patients (39.6%)
- GvHD of the tongue was observed in 21 patients (40%)
- Oral mucositis was observed in 5 patients (9.4%)

Taken together, complications of the periodontium may improve after stem cell transplant in patients with hematological malignancies. This study also indicates that oral complications with adequate dental care can be reduced in patients with GvHD. Additionally, patients treated with radiotherapy were more likely to develop several dental complications as well as conditioning regimens including radiotherapy can induce oral aGvHD.

References

1. [Piccin A. et al. Graft-versus-host disease \(GvHD\) of the tongue and of the oral cavity: a large retrospective study. *Int J Hematol*. 2018 Aug 24. DOI: \[10.1007/s12185-018-2520-5\]\(https://doi.org/10.1007/s12185-018-2520-5\). \[Epub ahead of print\].](#)

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