The Dental Hygienist as Oral Caregiver

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ABSTRACT

Introduction: The purpose of this article is to highlight the professional role of the dental hygienist as an oral caregiver, and to underscore the importance of "active" communication between the patient and the dental hygienist across different anamnestic profiles.
Materials and methods: The present study reports the case of a patient diagnosed with Crohn's disease, who underwent an initial evaluation and recording of periodontal parameters: Bleeding on Probing (BOP) and Full Mouth Bleeding Score (FMBS) (1). The patient followed distinct clinical and home-care protocols; the instruments employed during the professional session included:
- Cavitron ultrasonic instrumentation with multiple tip configurations
- Antibacterial-action air-polishing powders
- A home-care kit comprising ozonated oil-based gel.

Results: The outcomes recorded included an improvement in the clinical indices assessed and in the subjective well-being perceived by the patient. In both cases, communication between the healthcare operator and the patient proved essential in order to achieve satisfactory compliance and to promote a sustained perception of well-being over time..
Conclusions: The objective of the present study was not merely to document clinical improvements, but to assert the importance of active listening on the part of the healthcare professional, with the aim of enhancing compliance and the overall well-being of the individual – encompassing both somatic and psychological dimensions (2). In this manner, the dental hygienist further enriches and consolidates his or her professional identity as an oral caregiver.

Keywords Crohn's disease; communication; clinical protocol; FMBS; compliance.

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Received: March 10, 2026 | **Accepted:** April 9, 2026 | **Published online:** April 15, 2026 | **DOI:** 10.33393/ohj.2026.3781

INTRODUCTION

Crohn's disease is a chronic inflammatory condition affecting the small intestine and colon, classified within the category of inflammatory bowel diseases (IBD) alongside ulcerative colitis (3). Patients affected by this pathology are typically managed with pharmacological therapy aimed at alleviating symptoms and preventing disease exacerbations. The pharmacological agents most commonly employed include:
- Corticosteroids, which downregulate immune system activation and consequently impede progression of the disease.
- Immunosuppressive agents, which induce apoptosis/necrosis of T lymphocytes.
- Aminosalicylates, which exert anti-inflammatory effects on the intestinal mucosa by reducing the release of pro-inflammatory mediators.

The most recent scientific evidence has estimated the extent to which Crohn's disease affects oral cavity health: oral manifestations have been reported to occur in 20–50% of affected patients (Fig. 1).
Malabsorption of essential nutrients may result in deficiencies of iron, vitamin B12, and folic acid. Within the oral cavity, the following manifestations may be observed: aphthous ulcers, angular cheilitis, stomatitis, and dysphagia. Dysphagia may lead to difficulty in deglutition, while the increased oral dryness associated with aphthous

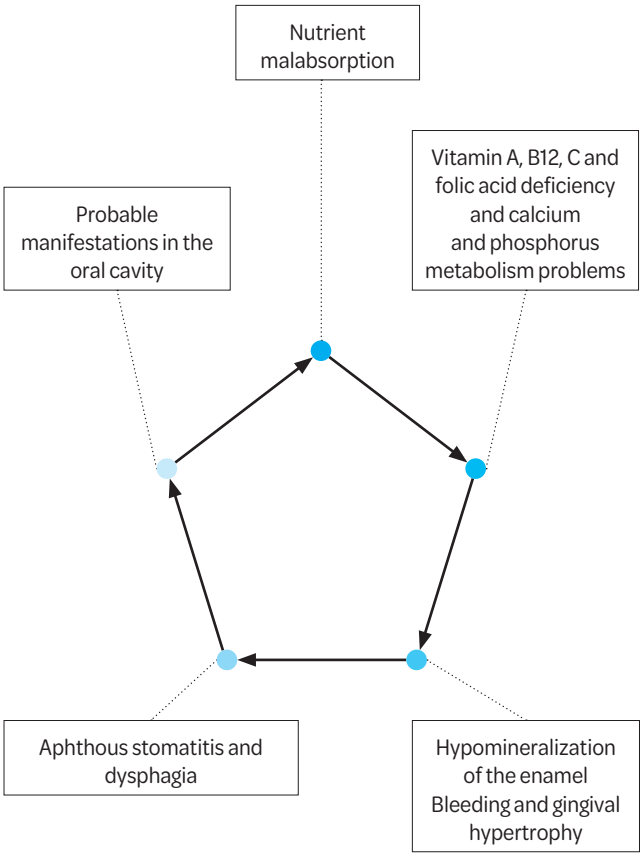

Fig. 1 Summary table of the oral manifestations of Crohn's disease.

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ulceration reduces salivary flow rate and increases the probability of enamel hypomineralization.

Clinical Case

A 25-year-old female patient with a confirmed diagnosis of Crohn's disease, regularly followed with periodic check-ups and professional oral hygiene recall appointments every three months, presented to the clinic reporting increased gingival discomfort and pain during periods of heightened psychological stress. The patient was under active medical management, regularly followed by a gastroenterologist, and adhering to a prescribed dietary regimen.

Clinical Examination

An initial intraoral inspection was performed using a periodontal probe. The examination revealed generalized gingival inflammation; accordingly, the use of plaque-disclosing agents was indicated. This enabled the patient to visualize the areas of most significant bacterial plaque accumulation, and the healthcare operator proceeded with patient motivational counseling, as follows:

- Application of plaque-disclosing agents and a sonic toothbrush for pre-professional-session removal of the disclosed bacterial plaque.
- Selection of the most appropriate toothbrush for the patient: in this case, a sonic toothbrush with soft bristles was chosen in consideration of the patient's pronounced pain sensitivity.
- Prior to plaque removal with the sonic toothbrush, a small quantity of ozonated oil-based gel was applied to alleviate gingival discomfort and enhance oxygenation of the soft tissues.

During the same appointment, following the recording of the plaque index and inflammation levels, an assessment of both soft tissue status and enamel health was conducted.

The enamel examination revealed multiple areas of enamel hypomineralization; accordingly, two diagnostic tests were performed (4):

- Dentin hypersensitivity test using the Schiff Cold Air Sensitivity Scale (SCASS): the recorded score was 1 (the patient responded to the air stimulus but did not request discontinuation);
- ICDAS classification (International Caries Detection and Assessment System): code 1was assigned.

Instrumentation Employed During the Operative Session

Following the assessment and recording of the evaluated clinical parameters, professional oral hygiene treatment was initiated.

The selection of appropriate instrumentation was guided by the principle of minimizing invasiveness toward both hard and soft tissues, in order to maximize patient comfort during the operative session. Based on the patient's medical history and intraoral examination findings, a combined instrumentation protocol was adopted:

- Ultrasonic scaling using Cavitron thin-profile tips of varying angulations, to optimize anatomical adaptation to individual tooth morphology.
- Antibacterial-action air-polishing powders: glycine-based powder (glycine powder air-polishing, GPAP) was employed during the operative session, given its demonstrated biofilm removal efficacy with minimal soft tissue trauma.
- Selection of less traumatic polishing cups for enamel surfaces, maintaining equivalent clinical efficacy.
- Pre- and post-operative patient motivational reinforcement using a mirror and a soft-bristle electric toothbrush test drive.

At the conclusion of the clinical session, a follow-up appointment for inflammation reassessment was scheduled at 15 days. In the interim, the patient was instructed to follow a customized home-care protocol using a personalized oral hygiene kit provided at the clinic, comprising:

- Glic toothpaste to reduce oxidative stress
- Gel containing ozonated oil and hyaluronic acid
- Sonic toothbrush with soft silicone interdental brushes

Fig. 2 Combined professional oral hygiene and in-office whitening treatment performed in a single session to improve both oral health and the aesthetic perception of the smile, with particular attention to the maxillary incisors. The patient expressed satisfaction with the outcome at the end of the treatment.

Reassessment

At the 15-day reassessment, the patient was re-examined by means of periodontal probing. The clinical examination demonstrated absence of pain on probing; the recorded clinical index parameters showed: resolution of generalized gingival inflammation, with residual inflammation confined to a limited number of specific sites (Fig. 2).

Enamel health status was subsequently re-evaluated, and parameters indicative of dentin hypersensitivity and degree of mineralization were recorded using the ICDAS classification system.

Based on the recorded indices, a fluoride varnish at 22,600 ppm was applied chairside and left in situ for 10 minutes; the patient was then advised to consume only water for the two hours following treatment.

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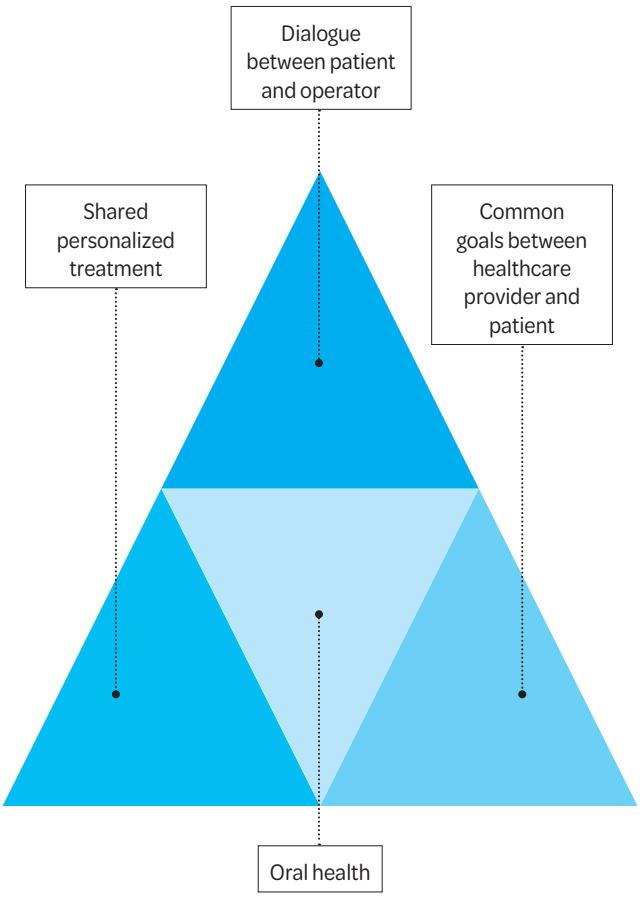

Fig. 3 Summary table illustrating the importance of communication in clinical treatment.

A professional oral hygiene recall appointment with reassessment of both hard and soft tissues was scheduled at 3 months.
At the three-month follow-up, the patient reported complete absence of discomfort and absence of bleeding on toothbrushing.
The Schiff Cold Air Sensitivity Scale test was repeated, yielding a score of 0 (no subject response to the evaporative air stimulus); however, enamel hypomineralization remained clinically visible on the maxillary incisor segments.
Accordingly, an in-office chairside tooth-whitening procedure was performed in conjunction with the professional hygiene session, to address the aesthetic dimension of the smile.

CONCLUSIONS

The purpose of the present study, beyond documenting an improvement in the recorded clinical indices, was to underscore the importance of designing an individualized, evidence-based operative protocol tailored to each specific patient.
The outcome achieved was made possible by the compliance established and the effective communication maintained between the healthcare operator and the patient (5).
The long-term success of a lifelong oral disease-prevention strategy is contingent upon continuous and effective communication among the following key figures:

- The healthcare operator and the dental team
- The patient
- The family caregiver

In this context, the dental hygienist – acting as the primary healthcare operator – must engage with diverse and complex anamnestic profiles, and collaborate within the dental team to maintain or restore oral health.
The dental hygienist's approach must be multidisciplinary in nature, involving interaction with multiple professional figures, with the singular overarching objective of promoting the patient's overall well-being (Fig. 3).

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