

Should ChatGPT Have Some Applicability in the Management of Emergency Dental Care for Emigrant Adults and Children?

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An important part of the world's population, including entire families, has emigrated to countries with better economic development, such as Switzerland, Germany, Canada, and the United States, mainly due to poor economic and social conditions in their countries of origin. However, medical and dental treatments can be quite expensive and out of reach for most emigrants living in high-income countries. This, in turn, has encouraged many of them, both adults and children, to return to their countries of origin in search of healthcare.^{1,2}

Contrary to that trend, the issue of lack of monthly follow-up due to travel costs is an obstacle that has been increasingly observed. In this context, delays and dental problems resulting from discontinued treatment,^{2,3} including delay in the removal of orthodontic appliances, soft tissue injury caused by broken orthodontic wire/appliance, orthodontic retainer breakage, use of temporary dental prostheses for prolonged periods, toothache resulting from irritation of the pulp, and even dental implant fall, are some of the examples of routinely encountered problems. In addition, other related factors, such as the impossibility of synchronous interaction between patients or their guardians with dentists in the country of origin (due to time zone differences), may result in additional work overload for dental teams and frustration and insecurity for patients.

It should be noted that advances in dental technology aimed at simplifying and properly managing patients have, in recent years, made the use of software based on artificial intelligence a reality, thus mitigating important gaps in the workflow of some dental treatments.⁴ From this perspective, the recent development of new and more dynamic artificial intelligence tools, such as ChatGPT (Generative Pre-trained Transformer) (Open AI, San Francisco, CA, USA), might, in principle, be even more useful in contributing to a more effective management of dental cases related to the issues presented above.

ChatGPT is a new tool based on artificial intelligence that can generate conversation-like interactions between patients and dentists/clinicians. By asking ChatGPT questions about the most frequent complaints of emigrant dental patients, the responses we obtained (Table 1) seem to be considered potentially satisfactory to obtain immediate and/or temporary solutions (especially for urgent situations). Thus, we believe that such an interaction might be reasonably positive to both adult and children patients within the perspective discussed, as well as of considerable importance in view of the existing management challenges.⁵

Although ChatGPT might, at first sight, serve as an additional tool aimed at obtaining clinical responses during dental treatments,

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Table 1: Questions addressed and responses from ChatGPT

Questions	Summary of responses*
1. What should I do if my dental implant falls out?	It is important to seek immediate dental care from your dentist. Here are some steps you can take in the meantime: (A) Don't panic, (B) Retrieve the implant, (C) Avoid chewing or putting pressure on the area, (D) Practice good oral hygiene, (E) Use a saltwater rinse, (F) Take pain medication
2. What should I do if my dental crown falls out?	It is important to see your dentist as soon as possible. In the meantime, here are some steps you can take: (A) Retrieve the crown, (B) Clean the affected area, (C) Check the fit, (D) Take pain medication, (E) See your dentist
3. What to do if the broken orthodontic wire is hurting me?	It is important to contact your orthodontist right away. In the meantime, here are some steps you can take to relieve the discomfort: (A) Use orthodontic wax, (B) Use a cotton swab, (C) Use a pencil eraser, (D) Take pain medication, (E) See your dentist

(Contd...)

Table 1: (Contd...)

Questions	Summary of responses*
4. How long can I wait if my orthodontic retainer is broken?	It is important to see your orthodontist as soon as possible. If you cannot see your orthodontist immediately: (A) Check the damage, (B) Keep the retainer clean, (C) Continue wearing the retainer, (D) Use dental wax, (E) Avoid eating hard or sticky foods

*A summary of responses from ChatGPT is described here, more details can be found on the website: <https://chat.openai.com/chat>.⁵

Source: ChatGPT/OpenAI.⁵

caution and respect for its limitations must always be applied and taken into account, given that artificial intelligence does not have the ability to, for example, creating on its own a completely personalized and specific treatment plan for each patient, among others.^{6,7} Finally, the use of ChatGPT for the management of dental treatment cases for patients who have emigrated abroad may be an alternative proposal to be further studied and eventually deepened, however not as a substitute for the dentist, but as an auxiliary tool.

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