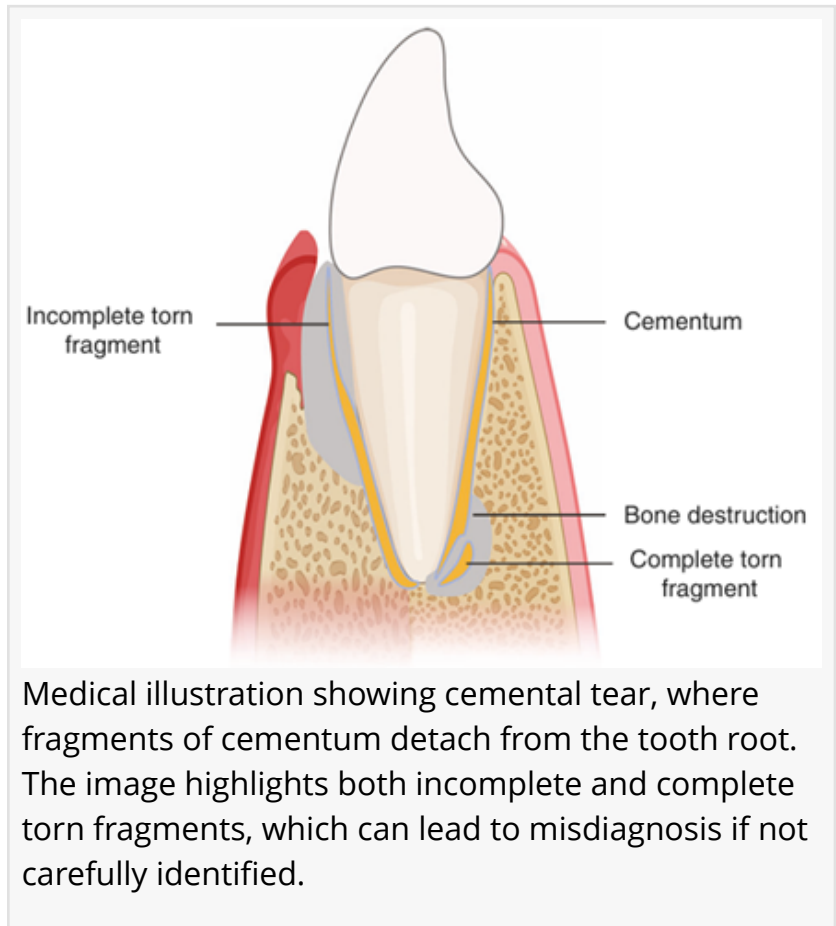


Cracks Beneath the Surface: New Consensus Sheds Light on Cemental Tear

Researchers created a standardized approach to identify cemental tears, reducing misdiagnosis and improving patient outcomes

CHINA, September 10, 2025

/EINPresswire.com/ -- Cemental tear is a rare dental condition where the cementum detaches from tooth roots. Often misdiagnosed, it can lead to unnecessary treatments and tooth loss. An international expert consensus has created guidelines for identifying and treating this overlooked condition, aiming to prevent tooth loss and improve care for similar dental problems. The consensus also addresses critical gaps in knowledge that can lead to ineffective treatments and avoidable extractions.



Medical illustration showing cemental tear, where fragments of cementum detach from the tooth root. The image highlights both incomplete and complete torn fragments, which can lead to misdiagnosis if not carefully identified.

Dentists worldwide have been battling with a silent and often overlooked dental problem known as a cemental tear. This rare condition occurs when a fragment of cementum—the hard, mineralized tissue covering a tooth's root—detaches, acting as a persistent irritant that triggers inflammation and destruction of surrounding bone and gum tissue. Because its symptoms closely mimic those of gum disease, root fractures, or abscesses, cemental tear frequently goes undetected, leading to misdiagnosis, ineffective treatments, and often, tooth loss.

To address this pressing gap, a team of experts has developed the first standardized clinical guidelines for diagnosing and treating cemental tear. The consensus was co-led by Professor Shaohua Ge, Shandong University, China; Professor Xuedong Zhou, Sichuan University, China; and Professor Chengfei Zhang, The University of Hong Kong, China. Published online in [the International Journal of Oral Science](#) on August 22, 2025, the consensus offers practical guidance

to sharpen diagnosis and improve patient care.

“Cemental tear is a hidden culprit behind many puzzling dental cases,” says Prof. Ge. “Our consensus is a call to action for clinicians to consider this diagnosis when they see isolated, rapid bone loss that doesn’t respond to conventional treatment. Often, the key to saving the tooth is finding and removing that fragment.”

While cemental tear is rare, its consequences can be devastating if overlooked. Patients may present with deep gum pockets, sinus tracts, swelling, pus discharge, or pain—symptoms that closely resemble other dental diseases. This diagnostic overlap often leads to root canal treatment or even extractions that fail to address the real problem. The consensus highlights that advanced imaging tools are essential for accurate detection. Cone-beam computed tomography (CBCT), which provides a three-dimensional view, can reveal the characteristic “flake-like” or “prickle-like” fragments that standard X-rays often miss.

The researchers also identified key risk factors. Age plays a major role: Cemental tears are most often seen in people over 60, as cementum thickens and weakens with time. Excessive biting forces (occlusal trauma), a history of gum disease, and previous dental injuries can all predispose patients to this condition. Systemic factors that impair tissue integrity may also increase susceptibility.

“Even experienced clinicians can misdiagnose these cases,” notes Prof. Zhou. “That’s why raising awareness is so important. With the right tools and knowledge, we can distinguish cemental tear from other conditions and avoid unnecessary or harmful treatments.”

Treatment guidance emphasizes one critical point: All torn cemental fragments must be removed for successful healing. If any fragments remain, disease can persist or recur. For some patients, non-surgical scaling and root planing may be sufficient, but surgical interventions are often required. These may include periodontal surgery, apical surgery, or regenerative therapies that use enamel matrix derivatives or bone grafts to restore lost bone.

Encouragingly, many affected teeth can be saved when fragments are completely removed and



Dentist performing a clinical examination. Expert consensus on cemental tear emphasizes the importance of thorough oral evaluation, combined with advanced imaging, to distinguish this rare root condition from more common dental diseases and unnecessary tooth loss.

the site is properly debrided and regenerated as needed. “Our goal is to preserve natural teeth whenever possible,” says Prof. Zhang. “With accurate diagnosis and tailored treatment, patients who might otherwise face extraction can keep their teeth and maintain better oral health.”

Overall, this study provides the first standardized roadmap for tackling cemental tear, a condition that is rare but often misdiagnosed. By clarifying risk factors, diagnostic strategies, and treatment principles, the consensus empowers clinicians to recognize and manage this hidden threat more effectively. With greater awareness and adherence to these guidelines, patients stand a much better chance of keeping their natural teeth—and avoiding unnecessary, irreversible treatments.

Reference

Title of original paper: Expert consensus on the diagnosis and treatment of cemental tear

Journal: International Journal of Oral Science

DOI: [10.1038/s41368-025-00381-9](https://doi.org/10.1038/s41368-025-00381-9)

About Shandong University

Shandong University (SDU) is one of China’s oldest and most prestigious comprehensive universities. Established in 1901, it is located in Jinan, Shandong Province, and spans multiple campuses and academic disciplines. According to the QS World University Rankings 2024, SDU is ranked among the top 500 universities globally. The university is renowned for its excellence in medicine, engineering, and the humanities, and is recognized for fostering cutting-edge research, international collaboration, and contributions to China’s higher education and scientific innovation.

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About Prof. Shaohua Ge from Shandong University

Prof. Shaohua Ge is Professor of Periodontology at Shandong University, specializing in periodontal disease and clinical management. With extensive experience in periodontal diagnosis and treatment, he has contributed to research on periodontal regeneration and rare root surface conditions, including cemental tear. Prof. Ge is recognized in China as an expert in advancing evidence-based guidelines for periodontology.

About Prof. Xuedong Zhou from Sichuan University

Prof. Xuedong Zhou is Dean of the State Key Laboratory of Oral Diseases at West China School of Stomatology, Sichuan University. With more than 35 years of experience, she has published extensively on dental caries and oral microbiology. Her team’s discovery of *Candida albicans* as a

key factor in root caries was recognized as one of China's Important Medical Advances in 2021. Widely regarded as a leader in dental research, she has advanced understanding of microbial pathogenesis and translational dentistry.

About Prof. Chengfei Zhang from The University of Hong Kong

Prof. Chengfei Zhang is Clinical Professor in Endodontics and Associate Dean for Research & Innovation at The University of Hong Kong. Holding a DDS and PhD from Peking University, he has published over 200 papers on pulp biology, regeneration, and endodontic microbiology. He is a Fellow of the International College of Dentists and recipient of the IADR Distinguished Scientist Award in Pulp Biology & Regeneration and the William J. Gies Award for best paper in the Journal of Endodontics.

Funding information

This research was supported by the National Natural Science Foundation of China (no. 82320108004), the Construction Engineering Special Fund of "Taishan Scholars" of Shandong Province (ts20190975), and the National Clinical Key Specialty (Periodontology) Construction Project.

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