JAMD
Japan Association of Microscopic Dentistry

The 12th Asia-Pacific Microscopic Dentistry Meeting

Microscope Dentistry as a Global Standard in Daily Practice

Reproducibility, Visualization, and the Next Generation

2026 12.13 SUN

10:00～16:40

Fujimi Hall, 8th Floor, Main Building,
Nippon Dental University Tokyo Campus
1-9-20 Fujimi, Chiyoda-ku,
Tokyo 102-8159, Japan

日本歯科大学 東京キャンパス本館8階 富士見ホール
〒102-8159 東京都千代田区富士見 1-9-20

Congress President
Prof. Naohisa Wada

Chairman, International Exchange Committee
Dr. Junya Okawara

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APM
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as a Global Standard in Daily Practice
— Reproducibility, Visualization, and the Next Generation



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Keynote Lecture 基調講演



Dr. Masaki Tsujimoto



Dr. Kyungsan Min

General Speaker 一般口演



Dr. Shunichi Shibazaki



Dr. Taro Makino



Dr. Munekata Sasoh



Dr. Yuichiro Ihara



Dr. Takuro Fujino



Dr. Heejin Kim (Korea)



Dr. YiTing Lin (Taiwan)



Dr. Wang Hao Ting (Taiwan)



Dr. Shingo Sugeta



Dr. Yoshihiro Fujimoto

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詳細・申し込みはこちら

Dec.13 / 2026 Sun. | 10:00 AM - 4:40 PM

The Nippon Dental University Fujimi Hall(8th floor)

1-9-20 Fujimi, Chiyoda-ku, Tokyo 102-8159, Japan

日本歯科大学 生命歯学部8階 富士見ホール

〒102-8159 東京都千代田区富士見1丁目9-20

Registration Fees

Advance registration fees (parentheses indicate on-site rates.)

Members

Doctor	12,000yen (15,000yen)
Dental Hygienist	8,000yen (12,000yen)

Non-members

Doctor	18,000yen (22,500yen)
Dental Hygienist	12,000yen (18,000yen)
Graduate Students / Residents	5,000yen(5,000yen)
Students-Student ID Required	Free(Free)

Time Schedule

10:00- Opening Remarks

10:05-10:50 Keynote Lecture
Dr. Masaki Tsujimoto

10:50-12:10 Session 1 (Periodontal Regeneration)
Dr. Shunichi Shibazaki -The potential benefits of CTG for severe periodontitis
Dr. Taro Makino -The Surgical Microscope Enhance the Success of Periodontal Regenerative Therapy
Dr. Munekata Sasoh -Considerations and Clinical Management of Cementum Tear
Dr. Yuichiro Ihara -Microsurgical Management of Osseous Defect Extending Beyond the Root Apex in Vital Teeth

Lunch Break

13:10-13:55 Keynote Lecture
Dr. Kyungsan Min

Break & Networking

14:15-15:35 Session 2 (Endodontics)
Dr. Takuro Fujino -Treatment for a lesion including 2 root apices of teeth
Dr. Heejin Kim (Korea) -Pulp Sensibility Recovery After Surgical Management of a Large Radicular Cyst
Dr. YiTing Lin (Taiwan) -Tooth Preservation Through Microscopic Endodontics
Dr. Wang Hao Ting (Taiwan) -Cracked Tooth Rescue:Pre-Endodontic and Post-Endodontic Workflows

Break & Networking

15:55-16:35 Session 3 (Implant & Restorative)
Dr. Shingo Sugeta -Effectiveness and Predictability of Microscope-Assisted Soft Tissue Management in the Esthetic Zone
Dr. Yoshihiro Fujimoto -Ceramic restorations using microscope to guide long-term prognosis

-16:40 Closing Remarks

Minimally Invasive Endodontic Therapy and Post-Endodontic Restoration Under the Microscope



Masaki Tsujimoto
TSUJIMOTO DENTAL OFFICE

However, the most fundamental requirement for successful root canal treatment remains a thorough understanding of root canal anatomy. In addition, minimal intervention (MI) is now considered essential in endodontics as well, and the quality of post-endodontic restorations and the amount of remaining tooth structure are key factors in preserving the tooth. This lecture focuses on endodontic techniques that emphasize meticulous attention to anatomical detail, presenting clinical strategies based on an in-depth understanding of root canal morphology, as well as minimally invasive restorative approaches following root canal treatment.

Vital pulp therapy under dental operating microscope



Kyungsan Min
Jeonbuk National University

Calcium silicate–based bioceramic materials, widely recognized through mineral trioxide aggregate (MTA), were introduced to endodontics approximately three decades ago and have since been valued for their excellent biocompatibility and sealing ability. Their ability to set in the presence of moisture makes them particularly well suited for pulp capping, pulpotomy, and regenerative endodontic procedures. Continued advances in bioceramic technology have led to the development of materials with improved physical properties and handling characteristics. In particular, premixed formulations offer greater convenience in clinical practice.

Alongside these material advances, the increasing use of the dental operating microscope has enhanced precision across a broad range of dental procedures. In vital pulp therapy, including direct pulp capping, magnification and illumination can facilitate careful assessment of the exposed pulp and precise placement of bioceramic materials.

This lecture will provide an overview of contemporary bioceramic materials and techniques for pulp therapy, with an emphasis on their clinical applications. It will also present practical clinical guidance on integrating the dental operating microscope into vital pulp therapy.

The potential benefits of CTG for severe periodontitis

Shunichi Shibazaki
Keio University Hospital

(Introduction / Purpose)
In this presentation, we compare two cases of Class III furcation defects—one treated with adjunctive subepithelial connective tissue grafting (SCTG) and one without—to discuss the potential benefits of SCTG.

(Materials / Case Overview)
Case 1 : A 54-year-old female patient presented with vertical intrabony defects at the mesial aspects of teeth #36 and #37 and a Class III furcation defect at tooth #36 after initial periodontal therapy. Despite the extensive defect, the tooth remained vital, and regenerative therapy was considered feasible. An extended flap design was used, followed by the application of rhFGF-2, carbonate apatite, and Bio-Gide. Primary closure was achieved with a periosteal releasing incision.
Case 2 : A 46-year-old female patient presented with a mesial intrabony defect and a Class III furcation defect at tooth #46 after initial periodontal therapy. Regenerative therapy was performed using an extended flap design with rhFGF-2 and carbonate apatite. A subepithelial connective tissue graft (SCTG) was additionally performed, and primary closure was achieved with a periosteal releasing incision.

(Results)
Case 1 demonstrated substantial bone fill; however, complete regeneration up to the roof of the furcation was not achieved. Although the probing pocket depth (PPD) remained stable at 4–5 mm, the Class III furcation defect persisted.

In Case 2, despite anatomical conditions similar to those in Case 1—including a furcation roof located more coronally than the mesial and distal bone crest—complete furcation filling was achieved. This favorable outcome may be attributable to the adjunctive use of a subepithelial connective tissue graft (SCTG). In addition, the previously exposed furcation was completely covered postoperatively, and the PPD remained stable at approximately 4 mm.

(Discussion)The more severe the periodontal bone defect, the more difficult it becomes to achieve complete periodontal regeneration. Mesenchymal stem cells (MSCs), which are essential for regeneration, migrate from the base of the defect and the remaining healthy periodontal ligament. Consequently, in severe defects, these cells are less likely to reach the coronal portion of the defect. Therefore, we believe that combining regenerative therapy with a subepithelial connective tissue graft (SCTG) may be beneficial for severe periodontal defects. Our recent studies suggest that subepithelial connective tissue contains MSCs essential for regeneration. This approach may facilitate cell recruitment from both the apical and coronal aspects of the defect, enhancing the regenerative potential of severe periodontal defects.

(Conclusion)In addition to serving as an additional tissue wall, CTG may act as a biological enhancer of periodontal regeneration in more severe defects while facilitating favorable flap management.

The Surgical Microscope Enhance the Success of Periodontal Regenerative Therapy

Taro Makino
Inage dental clinic

(Introduction / Purpose)
The advantages of applying a surgical microscope to dental treatment include magnification, enhanced illumination, improved ergonomics, and documentation. In periodontal regenerative surgery, successful outcomes depend on several biological principles, including primary wound closure and wound stability, as emphasized in the PASS concept (Primary closure, Angiogenesis, Space maintenance, and Stability) (Wang & Boyapati, 2006).
Microsurgical techniques using delicate instruments may facilitate atraumatic soft tissue manipulation and precise flap adaptation, thereby promoting primary wound closure and wound stability, both of which are considered key determinants of regenerative success. Consequently, microscope-assisted surgery may enhance the predictability and maximize the regenerative potential of periodontal regenerative procedures, which are highly technique-sensitive.
The purpose of this presentation was to demonstrate the clinical benefits of microscope-assisted periodontal regenerative therapy in the treatment of an intrabony defect associated with a mandibular molar.

(Materials / Case Overview)
A patient presenting with an intrabony defect associated with a mandibular molar underwent periodontal regenerative therapy under a surgical microscope. Microsurgical flap management and precise soft tissue handling were performed to minimize surgical trauma and achieve stable primary closure of the wound.

(Results)
Uneventful healing was achieved without postoperative complications. Clinical attachment gain and radiographic evidence of bone fill were observed during the follow-up period.

(Discussion)
The enhanced visualization provided by the surgical microscope facilitated precise soft tissue manipulation and accurate flap adaptation, contributing to primary wound closure and wound stability. Since these are fundamental principles for predictable periodontal regeneration according to the PASS concept, the use of a surgical microscope may improve the predictability of regenerative therapy and help maximize its regenerative potential.

(Conclusion)
Within the limitations of a single case report, microscope-assisted periodontal regenerative therapy resulted in favorable clinical and radiographic outcomes. The surgical microscope may serve as a valuable adjunct for improving primary closure and wound stability, thereby maximizing the regenerative potential of periodontal regenerative therapy.

Considerations and Clinical Management of Cementum Tear

Munekata Sasoh
Mune Dental Clinic

(Introduction / Purpose)
In cases involving deep pockets, cementum tear is sometimes the underlying cause. While torn cementum serves as a source of infection, its removal alone does not lead to the restoration of damaged periodontal tissues. This issue becomes particularly complex in the anterior region, where aesthetic considerations are also a major concern. In this report, we describe a case in which favorable results were achieved by utilizing a combined approach targeting both the root surface and the gingiva, based on pathological findings.

(Materials / Case Overview)
A 66-year-old woman presented for her first visit. The patient visited the clinic complaining of bad breath. Based on her dental history and overall condition, comprehensive treatment was indicated. Periodontal pockets were present around the arch, and root planing was performed on a 6-mm pocket near the mesial aspects of tooth #11 in particular; however, while the inflammatory symptoms resolved, the gingiva also recession occurred. As there was no significant tartar buildup and the root surfaces felt rough, infection and loss of attachment due to cementum tear were suspected. An Er:YAG laser and CTG were applied to the root surfaces to achieve aesthetic and morphological restoration.

(Results)
Although it has been four years since the procedure, no significant deterioration such as deepening of periodontal pockets or signs of inflammation has been observed at the treatment site. While the patient tends to brush too vigorously, resulting in some gum recession, the prognosis appears to be relatively favorable.

(Discussion)
The histopathological findings suggest that subsurface microcracks in the cementum tear of the detached root surface may extend over a wider area than previously thought. Progression of root surface contamination and loss of attachment means that standard root surface debridement alone will not resolve the issue. Particularly in esthetically sensitive areas such as the maxillary anterior region, controlling the infection alone is insufficient.

(Conclusion)
Treatment of cementum tear in the aesthetic zone must focus on two aspects: infection control and restoration of tooth morphology; evidence suggests that achieving these goals may lead to long-term stability.

Microsurgical Management of Osseous Defect Extending Beyond the Root Apex in Vital Teeth

Yuichiro Ihara
Ihara dental clinic

(Introduction / Purpose)
Advances in periodontal regenerative therapy have enabled the preservation of periodontally compromised teeth, even in the presence of osseous defects extending the root apex. However, the necessity of preventive root canal treatment before regenerative therapy in these cases remains unclear.

(Materials / Case Overview)
Two patients presented with probing depths exceeding 10 mm at the mandibular incisors. Cone-beam computed tomography demonstrated osseous defects extending beyond the root apex. Comprehensive pulp vitality testing revealed positive responses, which were reconfirmed after initial periodontal therapy. Periodontal regenerative therapy was performed under an operating microscope. Meticulous debridement and placement of regenerative materials were carried out while instrumentation within approximately 2mm of the root apex was intentionally avoided to minimize disruption of the pulpal blood supply.

(Results)
At follow-up, probing depths were reduced from more than 10 mm to 3 mm with no bleeding on probing. Clinical attachment gain was achieved, and pulp vitality was maintained in both teeth.

(Discussion)
Pulpal pathology after periodontal regenerative therapy has been a concern. However, postoperative pulpal complications can be managed with conventional root canal treatment. In the present case, pulp testing showed positive responses before surgery. Therefore, preventive root canal treatment before periodontal regenerative therapy was not justified.

(Conclusion)
These cases suggest that periodontally compromised teeth with osseous defects extending beyond the root apex can be successfully preserved without preventive root canal treatment. Careful assessment of pulp vitality and preservation of pulpal vascularity during surgical debridement are the key factors for successful outcomes. Microsurgical periodontal regenerative therapy may represent a viable treatment option for selected vital teeth.

Treatment for a lesion including 2 root apices of teeth

Takuro Fujino
Hiro yokohama dental

(Introduction / Purpose)
"A lesion including 2 root apices of teeth" is a complex pathology in which a periapical lesion extends to the apices of multiple adjacent teeth, a condition reported by Yoshioka et al. The decision-making process and procedures for its diagnosis and treatment are often complicated, which can pose a challenge for clinicians. The objective of this presentation is to outline the pathology of a lesion including 2 root apices of teeth and discuss examination, diagnosis, and treatment strategies based on the latest knowledge, supported by a clinical case presentation.

(Materials / Case Overview)
Patient: 39-year-old female.
Chief complaint: Swelling of the lower left gum.
Dental History: The mandibular left first molar (tooth #36) was treated over 10 years ago, and the mandibular left second premolar (tooth #35) was treated 1 year ago.
Clinical Findings and Treatment: An 8-mm periodontal pocket and a sinus tract were observed on #36. Radiographic examination using periapical radiographs and Cone-Beam Computed Tomography (CBCT) revealed apical periodontitis with a confluent lesion communicating across the apices of #36 and #35. Because a root fracture was also suspected in #36, simultaneous periradicular endodontic surgery (apicoectomy) was performed on both #36 and #35, which also served as a means for differential diagnosis.

(Results)
During intraoperative inspection, no root fracture was detected on #36. Over the course of postoperative follow-up, the sinus tract resolved, and radiographic imaging demonstrated signs of healing of the periapical lesion.

(Discussion)
In the “A lesion including 2 root apices of teeth” presented in this case, it could not be definitively determined preoperatively whether one specific tooth was the true source of infection or if both teeth were causative. However, simultaneous surgical intervention on both teeth ultimately led to successful healing. Assuming that #35—which historically had a preexisting lesion—was the sole causative tooth, it is highly probable that the deep periodontal pocket observed on #36 was an ectopic sinus tract. Therefore, in such complex pathologies, identifying the primary etiology and determining the sequence and approach to treatment largely depend on the specific clinical situation at that time.

(Conclusion)
When apical periodontitis encompasses multiple teeth, relying solely on conventional periapical radiography makes it difficult to accurately assess the exact extent of the lesion or identify the causative tooth. Consequently, a multifaceted evaluation, including CBCT imaging and pulp vitality testing, is essential. However, since these diagnostic tests do not always yield clear-cut answers, formulating an appropriate diagnosis and treatment plan ultimately requires the clinician's experience and comprehensive clinical judgment.

Pulp Sensibility Recovery After Surgical Management of a Large Radicular Cyst

Heejin Kim
Department of Dentistry, College of Medicine, Kosin University, Busan, Korea

(Introduction / Purpose)
This case report describes the long-term recovery of pulp sensibility in teeth involved in a large radicular cyst following surgical enucleation without elective endodontic treatment.

(Materials / Case Overview)
A 42-year-old woman presented with a large mandibular radicular cyst associated with a previously root canal-treated mandibular canine. Adjacent incisors encompassed by the cystic lesion exhibited normal preoperative pulp sensibility and were preserved during cyst enucleation and endodontic microsurgery. Although all involved teeth were non-responsive to pulp sensibility tests one week after surgery, sensibility gradually returned and was fully restored within one year.

(Results)
At the 4.5-year follow-up, complete radiographic bone healing was evident, and all preserved teeth remained asymptomatic, functional, and responsive to sensibility testing.

(Discussion)
This case demonstrates that transient loss of pulp sensibility may occur after surgical management of large radicular cysts and does not necessarily indicate pulpal necrosis.

(Conclusion)
Careful long-term monitoring may allow preservation of pulp vitality and help avoid unnecessary endodontic treatment in selected cases.

Tooth Preservation Through Microscopic Endodontics

YiTing Lin
Quality Dental Clinic / Chung Shan Medical University

(Introduction / Purpose)
In referral-based clinical practice, endodontically compromised teeth often present with uncertain prognoses and challenging treatment decisions. This presentation uses selected cases to demonstrate how microscopic endodontic management can expand the possibilities for tooth preservation.

(Materials / Case Overview)
Cases referred for endodontic evaluation often involve failed previous treatment, uncertain prognosis, or complex interdisciplinary considerations. In addition to the patient's desire to preserve the natural tooth, clinical decision-making requires careful assessment of the biological and technical limits of endodontic treatment. This presentation will review selected cases ranging from nonsurgical microscopic endodontic management to endodontic microsurgery, highlighting how magnification, modern instruments, clinical judgment, and long-term follow-up can reveal the healing potential of compromised teeth.

(Results)
The selected cases demonstrated that teeth with uncertain or compromised prognoses could be preserved through careful diagnosis, appropriate case selection, and microscopic endodontic management. In several cases, clinical symptoms were resolved or effectively controlled, and follow-up examinations showed favorable healing responses, including reduction or resolution of periapical lesions. The use of magnification, modern endodontic instruments, and both nonsurgical and surgical approaches allowed more precise management of complex clinical situations. These findings suggest that microscopic endodontics can expand treatment possibilities and provide a biologically based option for tooth preservation, even in cases initially considered difficult to predict.

(Discussion)
These cases highlight that microscopic endodontic management should not be viewed merely as a technical procedure, but as part of a comprehensive decision-making process for tooth preservation. Magnification and illumination may improve diagnostic accuracy, allow more controlled management of complex anatomy or procedural complications, and support the selection of either nonsurgical or surgical approaches when appropriate. Long-term follow-up remains essential for evaluating true healing and prognosis. Within the limitations of selected clinical cases, microscopic endodontics may provide clinicians with additional options before extraction is considered.

(Conclusion)
Microscopic endodontic management can expand treatment possibilities for teeth with uncertain or compromised prognoses. With careful diagnosis, appropriate case selection, and long-term follow-up, both nonsurgical and surgical approaches may provide biologically based options for tooth preservation before extraction is considered.

Cracked Tooth Rescue: Pre-Endodontic and Post-Endodontic Workflows

Wang Hao Ting
Shine Dental Clinic

(Introduction / Purpose)
Cracked Tooth Syndrome presents one of the most unpredictable challenges in daily dental practice. This presentation emphasizes the "Endo-Restorative Continuum," highlighting that the rescue of a cracked tooth begins the moment the bur touches the enamel. By integrating microscopic dentistry and minimal invasive principles, we can shift our focus toward maximum tooth preservation and predictable biomechanical rehabilitation.

(Materials / Case Overview)
A comprehensive clinical workflow is demonstrated through a severely compromised posterior tooth exhibiting symptomatic crack propagation. The intervention was executed under high-magnification microscopic evaluation. The protocol initiated with meticulous crack tracking and the removal of infected dentin. Crucially, a pre-endodontic build-up was performed to establish a reliable coronal seal and facilitate ideal rubber dam isolation before endodontic access. Following the completion of the root canal therapy, the post-endodontic phase utilized adhesive dentistry to reconstruct the core, focusing on the monoblock concept to unify the remaining tooth structure.

(Results)
The synergistic approach of rigorous pre-endodontic restoration and post-endodontic reconstruction successfully stabilized the crack and completely resolved the patient's symptoms. The structural foundation was effectively fortified, allowing for the successful delivery of a partial crown. This provided optimal cuspal coverage, excellent marginal adaptation, and robust protection against occlusal forces, ensuring the long-term survivability of the compromised tooth.

(Discussion)
The success of rescuing a cracked tooth relies heavily on managing stress distribution and optimizing bond strength. The pre-endodontic build-up is not merely an endodontic convenience; it is a fundamental step to prevent coronal leakage and protect vulnerable dentin. During the post-endodontic phase, managing polymerization shrinkage stress is critical.

(Conclusion)
The predictable rescue of a cracked tooth demands a paradigm shift from disconnected treatments to a unified pre- and post-endodontic strategy. By leveraging microscopic visualization, clinicians can effectively arrest crack progression and preserve the natural dentition. Ultimately, an understanding of the management of shrinkage stress is the cornerstone of long-term restorative success.

Effectiveness and Predictability of Microscope-Assisted Soft Tissue Management in the Esthetic Zone

Shingo Sugeta
SUGETA DENTAL CLINIC

(Introduction / Purpose)
In implant therapy for multiple missing teeth in the esthetic zone, not only appropriate implant positioning but also the acquisition of sufficient hard and soft tissue is essential. Particularly in the maxillary anterior region, soft tissue augmentation is often required to reconstruct the ridge contour lost after tooth extraction and to provide a natural and harmonious prosthetic form. However, soft tissue has limited morphological stability, and achieving an ideal tissue contour with high predictability remains challenging. This report presents a case of multiple missing teeth in the maxillary anterior region in which the amount of soft tissue deficiency was evaluated using digital data, and soft tissue augmentation was performed at appropriate sites under a microscope, resulting in a favorable esthetic outcome.

(Materials / Case Overview)
The patient was a 62-year-old male who presented with mobility of a maxillary anterior bridge. The bridge, supported by #12, #13, and #23, showed partial cement loss. Severe subgingival caries was observed on #13 and #23; therefore, these teeth were deemed hopeless, and implant treatment was planned for the edentulous area.
A diagnostic wax-up was first performed to simulate the final crown morphology and gingival contour based on facial and intraoral findings. Using this wax-up as a reference, implant positions were determined according to a prosthetically driven approach. During the first surgery, implant placement was performed simultaneously with hard tissue augmentation.
After healing, the current ridge contour was superimposed onto the preoperatively established ideal wax-up data, and the amount of soft tissue deficiency was digitally measured. Based on this evaluation, soft tissue augmentation was performed at the deficient sites under a microscope.
Subsequently, second-stage surgery was performed, and provisional restorations were delivered. Free gingival grafting was then performed to obtain keratinized mucosa on the labial side of the implants, where it was deficient. Additional soft tissue augmentation was also performed where necessary. After delivery of the final prosthesis, favorable esthetic and functional outcomes were achieved, and the patient was highly satisfied.

(Results)
By superimposing digital data using the preoperatively established ideal crown morphology and gingival contour as a reference, the sites and amount of soft tissue deficiency could be objectively evaluated. Based on this evaluation, autogenous soft tissue harvested from the palate was transplanted to the deficient areas, resulting in the acquisition of a favorable soft tissue contour in the esthetic zone.
After delivery of the final prosthesis, favorable esthetic and functional outcomes were achieved, and the patient showed a high level of satisfaction.

(Discussion)
When performing soft tissue augmentation, it is important to accurately identify the required augmentation sites and volume preoperatively. In this case, the use of digital data allowed visualization of the soft tissue deficiency and clarification of the augmentation sites. In addition, performing the surgery under a microscope enabled precise surgical procedures. As a result, highly predictable soft tissue management was achieved. Further follow-up is required to determine whether the augmented soft tissue can maintain its contour over the long term.

(Conclusion)
In implant therapy in the esthetic zone, it is important to evaluate tissue deficiency preoperatively in order to provide an ideal crown morphology with the final prosthesis. This case suggests that determining the sites and volume of soft tissue augmentation based on the preoperatively established ideal crown morphology and gingival contour, and performing precise soft tissue management under a microscope, may be effective in improving the predictability of implant therapy in the esthetic zone.

Ceramic restorations using microscope to guide long-term prognosis.

Yoshihiro Fujimoto
UTO Dental Clinic

(Introduction / Purpose)
Defective or ill-fitting restorations will be replaced with ceramics to improve both esthetics and function, thereby enhancing the overall oral environment.

(Materials / Case Overview)
『1.Patient Profile & Chief Complaint』
A 51-year-old female presented with a chief complaint of esthetic dissatisfaction regarding the discolored restorations in her upper right posterior teeth, desiring a more natural, white appearance.
『2.Diagnosis』
Clinical examination revealed an ill-fitting composite resin restoration with marginal staining at the interface on the maxillary right second premolar. Additionally, a defective metal inlay on the maxillary right first molar exhibited a marginal gap.
『3.Clinical Intervention』
Under rubber dam isolation, the defective restorations and secondary caries were thoroughly removed. Following ceramic cavity preparation, Immediate Dentin Sealing (IDS) was performed on the exposed dentin, and a final impression was taken using silicone impression material. At the delivery appointment, the ceramic restorations were bonded under rubber dam isolation to optimize adhesion to both the ceramic and tooth structure. Furthermore, by utilizing a restorative composite resin for cementation, microleakage originating from any crevices at the tooth-restoration interface was successfully prevented.

(Result)
The treatment successfully restored natural shade harmony and proper crown morphology. The patient was highly satisfied with the significant improvement in her smile and overall appearance. 27-month follow-up, the ceramic restorations showed no evidence of chipping or fracture. Furthermore, evaluation under a dental microscope in fluorescence mode revealed a complete absence of marginal gaps, with no bacterial-induced autofluorescence (porphyrin emission) detected.

(Discussion)
The excellent 27-month clinical outcome demonstrates the synergistic efficacy of meticulous isolation, advanced adhesive protocols, and objective microscopic evaluation. The total absence of structural complications, such as chipping or fracture, indicates that the initial cavity design provided adequate material thickness and eliminated stress concentration, while Immediate Dentin Sealing (IDS) successfully optimized the bond strength to dentin under masticatory forces.
Biologically, the complete lack of bacterial-induced porphyrin fluorescence under the operating microscope confirms the absence of microleakage and molecular-level discrepancies at the tooth-restoration interface. This objective finding validates that utilizing a restorative composite resin under strict rubber dam isolation effectively sealed the critical crevices. Consequently, this comprehensive adhesive approach achieved long-term marginal integrity and a stable biological seal, which are paramount for preventing secondary caries and ensuring the longevity of esthetic ceramic restorations.

(Conclusion)
Within the limitations of this 27-month clinical observation, the combination of Immediate Dentin Sealing (IDS) and cementation with restorative composite resin under strict rubber dam isolation provides an exceptional biological seal and mechanical durability for ceramic restorations. Utilizing the fluorescence mode of an operating microscope offers a highly effective, objective method for long-term monitoring of marginal integrity and microleakage prevention.