
2nd Issue / March 2024

Flossing

CeraSeal
Case
Report

By Dr.Vishal Gandhi

All about
Bioceramic

In AEEDC DUBAI

CeraSeal
Clinical Case

By Dr.Filippo Cardinali

Upcoming Events

About AAE 24, SIDEX 2024,
I ♥ ENDO

What an honor!

The Order of Industrial Service
Merit (Gold)

META
BIOMED
GLOBAL
JOURNEY



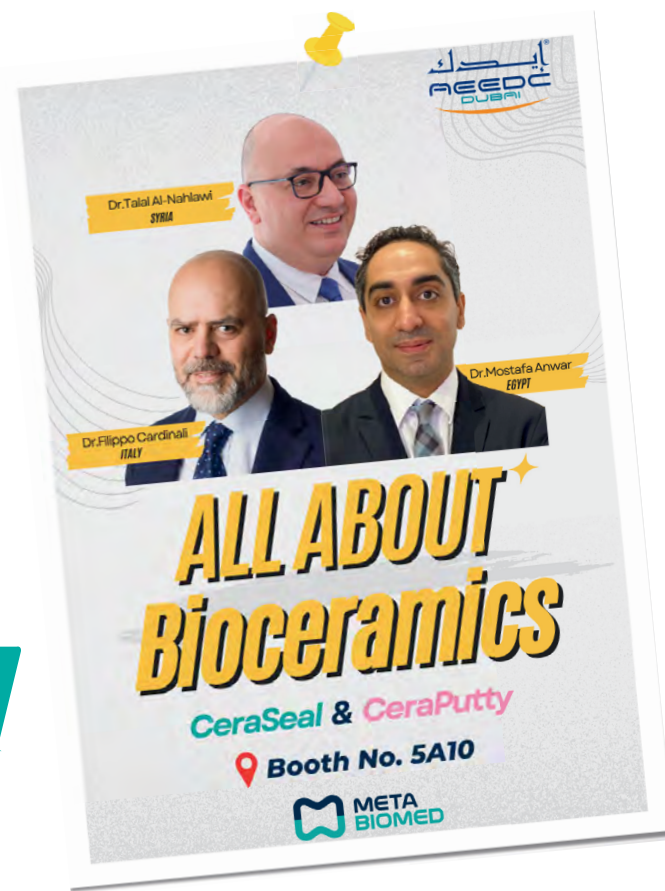
ALL ABOUT Bioceramics IN AEEDC DUBAI

Meta Biomed participated in AEEDC 2024 last February, the world's largest dental exhibition in the Middle East and Africa region with almost 30 years of history. Around 4,800 companies from 155 countries also participated in the show, presenting new products and finding new business opportunities.

At this year's show, Meta Biomed introduced the soon-to-be-released Bioceramic Putty, CeraPutty, and the best-selling Bioceramic sealer, CeraSeal, drawing a lot of attention from the visitors. Also, to celebrate Meta-Biomed's 33rd anniversary (2023.10), 'CeraSeal Buy 3 Get 1 Free' promotion was also conducted, a limited-time offer in the AEEDC 2024.



▲ 2024 AEEDC Meta Biomed Booth



▲ Meta Biomed's Best-selling BC sealer CeraSeal (front) and the soon-to-be-released BC Putty, CeraPutty (behind)

ALL ABOUT BIO CERAMIC IN AEEDC DUBAI



Furthermore, the 'Advanced Speciality Course' was conducted at the Novotel World Trade Centre Hotel. At this course, Dr. Filippo Cardinali and Dr. Riccardo Tonini delivered informative lectures and demonstrated live hands-on, of course, participants also demonstrated Meta Biomed's products. Many participants newly found the advantage of CeraPutty and CeraSeal, and even EQ-V cordless endo obturator in this course.

◀ Advance Speciality Course



In addition, Meta Biomed provided 6 times of live lectures delivered by Dr. Talal Al-Nahlawi, Dr. Mostafa Anwar, and Dr. Filippo Cardinali under the topic of 'ALL ABOUT BIO CERAMIC', having increased the satisfaction of the visitors, also broadcasted live worldwide through Meta Biomed Endodontics Facebook page. Almost 300 people were gathered around the onsite live lectures.

◀◀ Meta Biomed Booth Lectures



Three lecturers, Dr. Talal Al-Nahlawi, Dr. Mostafa Anwar, and Dr. Filippo Cardinali, willingly shared their know-how of using bioceramics and various clinical tips with their long-time follow-up clinical cases.

Dr. Talal Al-Nahlawi, Dr. Filippo Cardinali, Dr. Mostafa Anwar
Pictures of Meta Biomed Booth ▶



MetaBiomed

Global Journey!

OFFICIAL APEC ONLINE SEMINAR
Navigating the Third Dimension: Endodontic Obturation Advancements
 Free Webinar (ZOOM) | Nov 16th, 9:30PM (GMT+09:00)
 Meeting code: 831 2399 8257 | Password: 000000
 Speaker: **Dr. Kranthi Raja**, Deputy Dean, MAHSA University, Malaysia

Official APEC Online Seminar

Dr. Kranthi Raja delivered a valuable lecture titled "Navigating the Third Dimension: Endodontic Obturation Advancements" on November 16, 2023, under the support of APEC, Asian Pacific Endodontic Confederation. This lecture was broadcast live via Zoom for about an hour, with over 100 doctors and students from around the world attending. After being shared on YouTube for 24 hours, it achieved hundreds of views.

In United States



The Meta Biomed US team participated in the CDS Midwinter Meeting held in Chicago for three days starting on February 22nd. The meeting attracted around 21,000 visitors, and we received significant interest from attendees from the US and South America! Please look forward to the Meta Biomed US team's next event, which will surely shine just as brightly after successful participation in the CDS Midwinter Meeting!

In Jordan

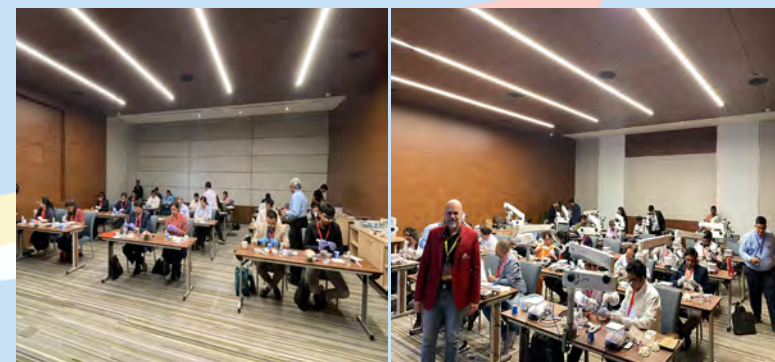


One of our confidential partners, Himed and Meta Biomed joined forces to host a workshop and lecture that was nothing short of inspirational. Dr. Dany Naoum Kazzi and the team captivated attendees with a lecture brimming with expertise, complemented by hands-on courses. Let's continue to move forward together, lighter and brighter, led by Himed's inspiring commitment to innovation and excellence.



In India

2nd STYLE ITALIANO Endodontics Conference in INDIA
 "Teach me how to"
Dr Filippo Cardinali
 Lecture Topic: Premixed Bioceramic Sealers in the Daily Practice: Features, Tips and Outcome
 The Hands-on conference (Where everyone does at least 1 Hands-on Workshop)
 Jio World Convention Centre - MUMBAI | +91-93267 68194 | www.steinda.com



The 2nd Style Italiano Endodontics Conference in India was held in February. Meta Biomed also participated as a silver sponsor. Dr. Filippo Cardinali, the key opinion leader of Meta Biomed, led 3rd times of workshops regarding Bioceramic and delivered its features and tips with great outcomes. About 70 people attracted by CeraSeal!

In Bulgaria

Sofia, 17th February 2024
Mastering the obturation in Endodontics: Warm Gutta Percha or Cold Gutta Percha with Bioceramic sealer? Why not both?
Filippo Cardinali
 @cardinali_endodontics | filocardinali@gmail.com



First time in Sofia! The XIII Scientific Conference of the Sofia Dental Association was held in Sofia, Bulgaria. Dr. Filippo Cardinali and the Meta Biomed Europe team delivered a lecture full of expertise and hands-on courses, all seats were sold out, concluding with enthusiastic responses. Go, Meta Europe, Go!

IDEX CAIRO EGYPT 2024
 8th EDITION
Mostafa Anwar
 21 - 22 - 23 February 2024 | Intercontinental Citystars Hotel
 King's Move Now... | META BIOMED | Alex Dent

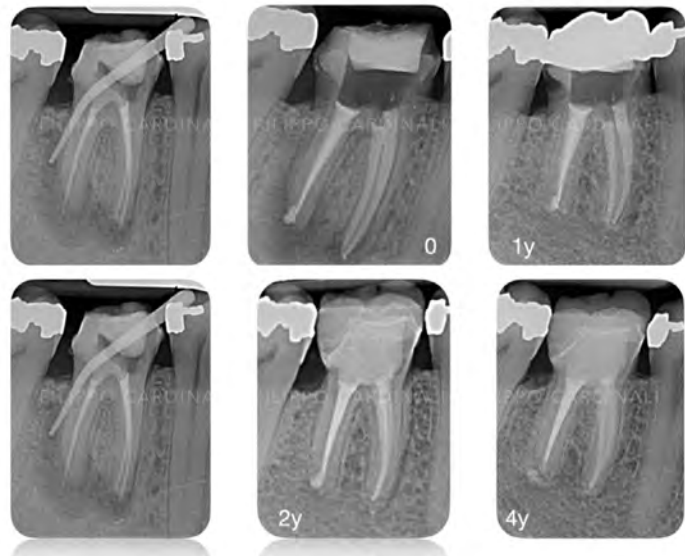


In Egypt

IDEX Egypt 2024 was successfully held in Egypt from February 21st to 23rd. Dr. Mostafa Anwar conducted a mind-blowing lecture on the morning of the 23rd, which drew tons of attention from dentists and students to CeraSeal. Hundreds of people stood everywhere to attend the lecture, all filled with enthusiasm!

CeraSeal Clinical Case

Courtesy of
Dr. Filippo Cardinali



Retreatment of 4.6 with L.E.O. and Sinus Tract 4 years follow-up. The tooth was obturated with a carrier based technique system, the plastic core in the distal root is beyond the apex. The case was faced in a multiple visits for the presence of exudate in the canals, a dressing with Calcium Hydroxide was placed for 4 weeks. Despite the sizes of the foramina were bigger than 50, the canals were obturated using the Cold Hydraulic Condensation Technique with CeraSeal bioceramic sealer; single cone and bio ceramic were placed in the mesial canals, whilst in the oval shaped distal canal other cones were passively added to the master cone. 2 years follow-up with complete healing of the lesion. 📺

[Click to watch video](#)

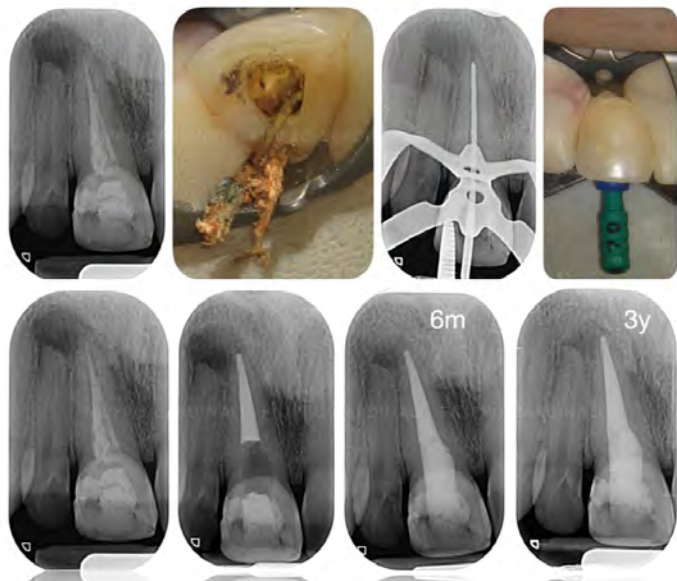
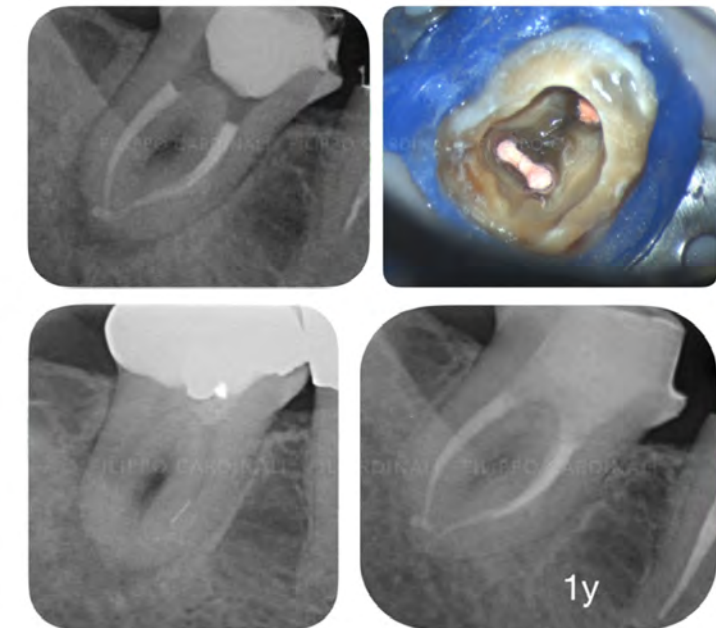
Retreatment of 4.6 with L.E.O. and Broken Lentulo 4 years follow-up. Tooth 4.6 presents a low quality obturation with a broken lentulo in the mesial root; in booth roots a periapical lesion is present. The angled radiograph shows that the broken lentulo is located in the MB canal. Once secured the orifices of the ML and D canals, the broken lentulo was removed and all the canals were re-shaped, deeply cleaned and obturated using the Cold Hydraulic Condensation Technique with CeraSeal bioceramic sealer. Recalls at 12 months and 4 years show the complete healing of the lesions. 📺

[Click to watch video](#)



Retreatment of 4.8 with L.E.O: File removal and obturation with bioceramic sealer - 1 year follow-up Referred patient for the removal of the broken file in the MB canal of 4.8 with periapical lesion. The file broke after the flaring. First with US tip I prepared the isthmus and cleaned the isthmus and the coronal third. Then I prepared the ML and D canals, I did the cone fit and I left the cones in the canals to secure them during the retrieval of the broken file. The broken file was removed activating EDTA with US tip and it came out during the irrigation with an Endodontics needle. The MB canal merges with ML so it was shaped up to the merging point. After a deep cleaning, CeraSeal was delivered in the ML canal and the sealer was spread in apical direction and in the isthmus thanks the action of the tip of the EQ-S. ML was obturated with a single cone technique searing the cone off with EQ-V Pack. The MB canal was obturated with the Squirting Technique delivering already melted gutta-percha thanks the EQ-V Fill. At the end of the procedure the EQ-V Fill was used to completely seal MB, ML and isthmus in order to isolate the CeraSeal inside the canal. The recall at 1 year show the healing of the lesion. 📺

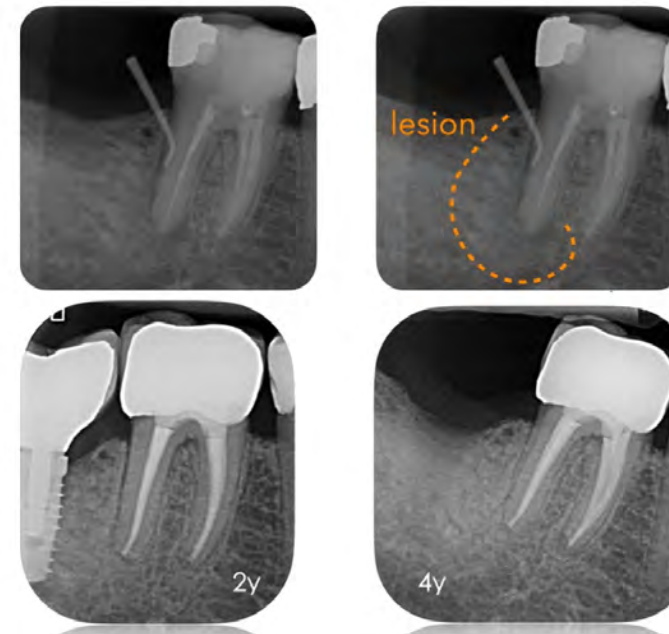
[Click to watch video](#)



Retreatment of 1.1 with L.E.O: Management of oval canal and foramen 70 with bioceramic sealer - 3 years follow-up Many challenges in this pretreatment of a central maxillary incisor wit periapical lesion: how to completely fill the oval shape canal using CeraSeal with Cold Hydraulic Condensation and how to control the overfilling in a 70 size foramen at the same time? In the video you see step by step the tips to get the solution. Recall at 3 years shows the complete healing of the lesion. 📺

[Click to watch video](#)

CeraSeal Clinical Case Dr. Filippo Cardinali



Retreatment of 4.6 with L.E.O and Sinus Tract: a conflicting treatment plan - 4 years follow-up. The patient was scheduled for implant placement to replace the 4.7, but a big lesion and sinus tract was present in the 4.6. The surgeon suggested the patient to extract the 4.6 and to replace it with an implant. The patient refused and was sent for the retreatment: implant placement on 4.7 was postponed waiting for the healing of the lesion on 4.6. After 4 weeks dressing with Calcium Hydroxide the 4.6 was obturated using CeraSeal with Cold Hydraulic Condensation Technique, basically single cones in the mesial canals and master cone with accessory cone in the distal canal with an oval shape. After 2 years the 4.6 was evaluated healed 100% and implant on 4.7 was place. After 4 year s the 4.6 is still working whilst the implant failed: this time endo won!!!!!! 📺

[Click to watch video](#)



Dr. Filippo Cardinali DDS (Italy)

Graduated summa cum laude in Dentistry in 1992. Active Member and Vice-President of the Italian Society of Endodontics. Certified Member of the European Society of Endodontology. Associate Member American Association of Endodontists. Gold Member of Style italiano Endodontics. Private practice, concentrating mainly in Endodontics and Restorative Dentistry, author of publications on journals of national and international sector, speaker at national and international congresses and workshops. Instagram @cardinali_endodontics Facebook @filippo.cardinali.5

CERASEAL CASE REPORT

@drvishalgandhi_endoride



Dr. Vishal Gandhi

*BDS Fellow Microendo
Champion of the Saving the Natural Tooth Contest*

Case Introduction

28 years old male patient referred to my practice with intraoral sinus in lower front buccal region. Radiographic & Clinical examination revealed a large periapical lesion in relation to both lower central incisors.

Diagnosis

Chronic apical abscess with necrosed pulp (As per vitality test) in relation to #31, #41

Treatment

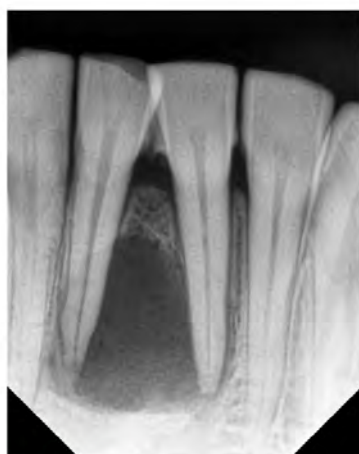
Non surgical root canal treatment in relation to #31, #41

Clinical Procedure With Materials

The Root canal treatment for both teeth planned as single visit treatment. INCISAL RCO Access cavity prepared for both teeth and both BUCCAL and LINGUAL canals shaped till 25 04 rotary files in both teeth. Canals irrigated with 5.25% Sodium Hypochlorite, activated with **EQ-S**, intracanal heating done (3d cleaning protocol) & 17% EDTA for smear layer removal. On getting dry canal, obturation was done with **CeraSeal Bioceramic Sealer** & Gutta percha cones.

Case Discussion and Conclusion

Keeping in mind. The main aim of Endodontic Treatment is to stop the spread of lesion of endodontic origin and provide environment for faster healing. One can achieve maximum canal disinfection with 3D Cleaning protocol and HIGHEST obturation standard possible with **CeraSeal** 3D OBTURATION. The use of **CeraSeal Bioceramic Sealer** in infected cases with periapical lesion has lots of advantages like Non toxicity, Antimicrobial effect with high PH 12.73, excellent healing effect with high bioactive ingredients (50%) which promotes osteoblastic differentiation to achieve better apical healing and faster tissue repair. [Follow up x rays at various stages shows a good Sign of healing at 15 months of follow up.](#)



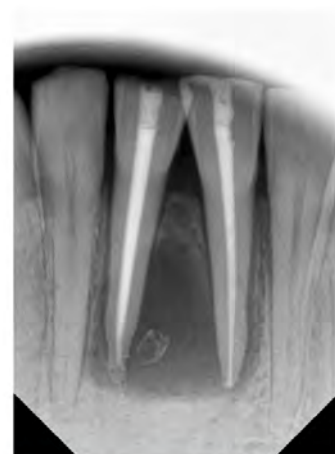
PRE-OP



4 MONTH FOLLOW-UP



12 MONTH FOLLOW-UP



POST-OP (OBTURATION)



8 MONTH FOLLOW-UP



15 MONTH FOLLOW-UP

Saving the Natural Tooth Contest 2022 Case Poster Replay



Dr. Yu-Hua Kuo

2nd prize of the Saving the Natural Tooth Contest



Dr. Mohd Nazrin Isa

3rd prize of the Saving the Natural Tooth Contest



Case Introduction

A 26-year-old woman was referred by a general dentist for evaluation of her left mandibular first molar (36). She requested a permanent restoration. Clinical and radiographic examination of tooth 36 revealed:

- 1. No painful response to percussion, palpation, and biting test
- 2. The periodontal condition was within normal limit.
- 3. Weak tooth structure combined with coronal leakage.

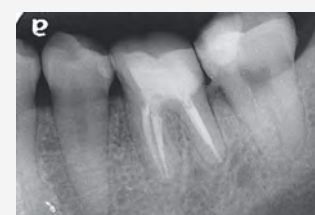
The diagnoses were Previously Treated and Asymptomatic Apical Periodontitis. The treatment plan was a nonsurgical root canal retreatment with onlay restoration.

Pre-OP



Tooth 36
- Two screw posts with fractured composite restoration.
- Previously filling material noted in the canal space with separated instrument in the distal root.
- Mild PDL widening in the apical area of the mesial root.
- Calcified root canal system.

Post-OP



Tooth 36
- Old filling material and separated instrument were replaced with new root canal filling.
- Six canals were successfully located and evenly filled.
- Coronal structure was built up with resin core material and restored with porcelain onlay.



STEP 1 Pre-operative picture showing two large screw posts and extensive caries. Resin wall built up after removal of posts and caries.
STEP 2 Removal of old gutta percha and negotiating calcified canals.
STEP 3 Attempted to remove separated instrument in the DL canal.



STEP 4 a. MB, MM, ML orifices; MB and MM fusing together. b. DB, DM, DL orifices. c. Main cone radiograph.
STEP 5 Root canal filling with gutta percha and CeraSeal sealer. Shifted radiograph revealing multiple root canals. The image shows sealer placed into canals (DB, DM, DL), implying confluent root canal system of distal root.
STEP 6 Four months follow-up radiograph. The tooth was restored with full coverage porcelain onlay and there were no signs of periapical pathology. The patient was satisfied with the treatment outcome.

Clinical Procedure with Materials

At the beginning, resin wall was built after removal of posts and caries under a microscope. Small-size files (#8,#10) were used to negotiate calcified canals with the aid of EDTA (MD-Cleaner). After cleaning and shaping canals with NiTi rotary files and NaOCl, ultrasonic device was employed to remove the broken instrument in DL canal. All six canals were located and well shaped. At the last appointment, canals were irrigated with EDTA and NaOCl, then dried out with Absorbent Paper Points. Hydraulic condensation was performed with CeraSeal sealer and GP. The chamber and coronal structure were restored with core material and then transferred the patient to general dentist.

Case Discussion and Conclusion

The preoperative condition of this case is exceptionally complicated due to several factors: extensive coronal destruction, previous treatment with separated instrument, and calcified and complex canals. Tooth extraction may be the alternative treatment. Though a challenging case, with aid of new materials and perseverance to save the nature tooth from both the patient and doctor, the tooth was able to survive with function. CeraSeal seal represents good flowability and sealing ability; these characteristics are especially important for cases with complex root canal systems (multi-confluent canals.) The biocompatibility and volume stability of the material also contributed to satisfactory result.

Case Introduction

35-year-old female with no known medical conditions or drug allergies has reported discomfort at the lower right posterior tooth for past 2 weeks. The pain was triggered by biting on the tooth and changes in temperature gave no effect. The clinical examination revealed that tooth 46 had a leaked amalgam filling. The tooth was tender to percussion. The EPT and cold test demonstrate no response. No isolated deep pocket or swelling was observed. A periapical radiograph revealed significant pulp canal calcification. The canal line was indistinct especially at the distal root and mesial root. There was 8mm x 7mm of periapical radiolucency at the distal root and 4mm x 4mm at the mesial root. The tooth 46 was diagnosed with pulp necrosis and symptomatic apical periodontitis. The treatment strategy consisted of nonsurgical root canal therapy of tooth 46 followed by a crown construction.

Pre-OP

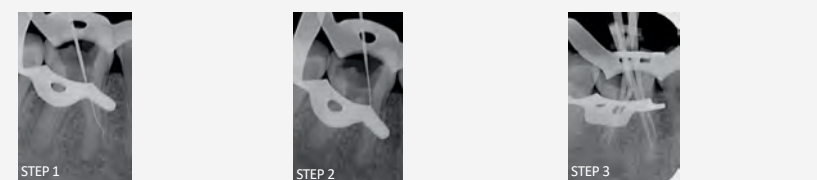


A perioperative radiograph revealed significant pulp canal calcification. The canal line was indistinct especially at distal and mesial root. There was 8mm x 7mm of periapical radiolucency at the distal root and 4mm x 4mm at the mesial root.

Post-OP



Post operative radiograph was taken. The removal of pulp stone was successful, and all four canals were located, negotiated, and shaped to their full working length. Radiographically, homogenous obturation was evident.



STEP 1 The situation was exacerbated further by an iatrogenic perforation that occurred in the middle third of the root during canal negotiation.
STEP 2 The sharp pre-curve C+ file was inserted into the canal with the curved tip facing the wall opposite the perforation site. The pre-curved file tip was advanced several mm after multiple attempts of picking motion. Size 08 K-File was negotiated to full working length.
STEP 3 Following cleaning and shaping, the canal was medicated with non-setting calcium hydroxide. After two weeks, the patient returns with no symptoms and signs. Gutta percha fit was verified radiographically.



STEP 4 Hydraulic condensation technique with matching gutta percha cone was done in all canal.
STEP 5 There was evidence of complete healing after one and two years of review. No periapical lesion appeared at the site of perforation.
STEP 6 Bone regeneration was noticed after 2 years. Sealer extrusion was visible, however the biocompatibility nature of the bioceramic sealer gave no detrimental affect towards surrounding tissue.

Clinical Procedure with Materials

The non-surgical root canal treatment was successfully performed. Cleaning and shaping was done using Aurum Blue (Metabiomed, Cheongju-si, Korea) until 25/06 in all canals. Calcium hydroxide (Metapaste, Metabiomed, Cheongju-si, Korea) was applied as intracanal medication for 2 weeks. Final irrigation with 5% sodium hypochlorite and 15% EDTA with passive ultrasonic activation. Canal was managed to dry. Obturation done by hydraulic condensation technique with matching cone gutta percha. CeraSeal (Metabiomed, Cheong-si, Korea) was used as a sealer.

Case Discussion and Conclusion

A communication between the outer tooth surface and the root canal system is a defining feature of root perforation.(1) The presence of pulp stones and calcification can complicate root canal access and increase the risk of root perforation.(2) Root perforation may result in an inflammatory response accompanied by deterioration of periodontal tissue and alveolar bone. (3) In addition, the occurrence of iatrogenic errors during endodontic therapy is connected with a reduction in treatment success and the persistence of apical periodontitis.(3) Ideally the material selected for root perforation should possess desirable physicochemical and biological qualities, enough sealing capacity, antibacterial activity, and osteogenic potential.(4) Correct clinical management of these iatrogenic procedural errors could aid in adequate preparation, enabling disinfection of root canal systems and a rise in the success rate of endodontic treatment.

References

(1) American Association of Endodontists, Division of Endodontics, 801 West Chicago Avenue, American Association of Endodontists, 2020.
(2) Hwang C, Yoon DS, Seemah DA, Castero DA, Chai H, Kim HC, Seong CH et al. Comparison of procedural errors and clinical factors associated with root perforation. *BioMed Res Int.* 2017; 2017 (4):393-396. <https://doi.org/10.10528/2016-0442393>
(3) Hwang C, Yoon DS, Seemah DA, Chai H, Kim HC, Seong CH, Kim JY, Kim M, Kim Y, Kim S, Kim S. A study of causes for perforation of mandibular premolars. *J Endod.* 2012; 38(2):233-236. <https://doi.org/10.1016/j.jen.2011.11.002>
(4) Hwang C, Seemah DA, Chai H, Kim HC, Seong CH. Factors affecting the periapical healing process of endodontically treated teeth. *J Appl Oral Sci.* 2017; 39:542-546. <https://doi.org/10.1590/s1678-7762-2017-00546>

What an honor!

Mr. Tony Oh, Chairman of Meta Biomed, has been awarded the 'Order of Industrial Service Merit (Gold)' (금탑산업훈장, Geumtapssanopunjang), which is the most honorable award in the Korean industrial field, by the President of the Republic of Korea on the 60th 'Trade Day' festival ceremony on 5th Dec 2023. This Order of Merit is awarded to persons who have made distinguished contributions to the development of the national industry this year. We appreciate our partners and customers worldwide, as we couldn't have presented this award without your dedicated support. We're also so proud of Chairman Oh and the company as well. Meta Biomed will grow further and higher so we hope you keep being with us on our successful journey and bright future. 🌟



Dr. Vishal Gandhi's

ENDO RIDE

Exclusive Endodontic Course with CeraSeal

April 6-7, 2024

Supported by **META BIOMED**

Dr. Vishal Gandhi
BDS Fellow Microendo
Champion of the Saving the Natural Tooth Contest

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dr. Marino Satesjo, Sp.KG

Dr. Filippo Cardinali

dr. Eroni Indas, Sp.Prof

RESPONDING TO

ENDODONTICS FAILURE

April, 27th - 28th, 2024

JS Luwansa Hotel

Jl. H. R. Rasuna Said No. 22, South Jakarta

Registration: <https://bit.ly/regEUFORIA> | Rony 0851-8682-8880

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It'd be lovely if we could share your BEST CeraSeal Cases with our tons of followers all around the world. Don't lock up the amazing cases you got in the drawer. Show it off!

For more inquiries: dental@meta-biomed.com

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Flossing is a newsletter made by Meta Biomed (Dental) in 2023, which means taking out various information and delivering it to you, as if you were flossing teeth. [Click to subscribe for Free.](#)

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Upcoming Events

Apr 17-20	AAE 24 APRIL 17-20, 2024 LOS ANGELES	AAE 2024 Los Angeles, USA
June 6-8	SIDEX 2024 Seoul International Dental Exhibition & Scientific Congress	SIDEX 2024 Seoul Coex, South Korea
June 28-30	I LOVE ENDO Konferencja z miłości do endodoncji	I LOVE ENDO Warsaw, Poland

META BIOMED

ADSEAL PLUS

Root Canal Sealer

- ✓ More economical with new type tips
-Provide Green-colored dispense tip
- ✓ The most appropriate flowability for RCT
-High flowability (26mm)
- ✓ Excellent Biocompatibility & Increased Safety
-Contain Calcium Phosphate

3 Advantages of CeraSeal !

Perfectly Suppressing the Bacteria in the Canal

- High pH level (12.73)

Excellent Healing Effect

- High-cell viability & Absolutely Non-Toxic

Great Accessibility even to the small Accessary Canal

- High Flowability (24mm)



Be Professional with

CeraSeal

Calcium Silicate-based Bioceramic Sealer



/Metabiomed.Endodontics



2g syringe 1EA, Disposable tips 10EA