

# GDHDER *International* JOURNAL



Young  
Dentistry  
Association

JANUARY 2025 | FIRST ISSUE



**What if?**  
Infectious Diseases  
and Dentistry

**Dr. Uzma**  
*Syed*

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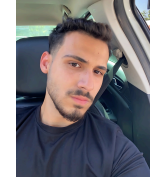
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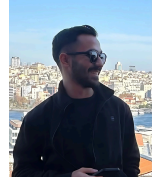
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**Burhan Bölükbaşı**

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**Sıla Yıldız**

"DON'T BE SELFISH, BE UNITED!"

## Letter from the *President*

Dear Readers,

Since the day we were founded on August 26, 2019, as the Young Dentistry Association, we have been striving to address and resolve the challenges faced during our profession and education. Our mission is to ensure that dentistry students in our country have access to equal educational opportunities on both national and international platforms. We aim to achieve this by acting together and working in unison.

In today's world, the dentistry profession goes beyond treatment. It also plays a crucial role in raising awareness, educating society, and promoting healthy lifestyles. Having a healthy smile is not only an aesthetic concern but also a significant factor for physical and psychological well-being. As the Young Dentistry Association, our goal is to adopt an approach that prioritizes public health, operates with this awareness, and provides our young colleagues with diverse perspectives on the field.

In this context, we hope that this issue of our magazine will offer you insights into the field of dentistry both in our country and globally, from various perspectives, and provide you with enjoyable and informative content. We extend our heartfelt gratitude to all our friends who contributed to its content and design and look forward to meeting you in our next issue.

DON'T BE SELFISH, BE UNITED.

**Caner Çelik**

President of the Young Dentistry Association





## Letter from the *Editor-in-Chief*

Dear Readers,

For the past three years, our International Relations Committee has made significant progress, successfully reaching dentists and dental students from various countries across Africa, Asia, America, and Europe. The committee continues to work tirelessly toward the global expansion of our organization, aiming to create a more accessible platform for dental students to connect academically and socially.

Throughout these efforts, we have maintained a purely voluntary working principle. This dedication has transformed our professional collaboration into a close-knit family, allowing us to move beyond being "many" and instead become "one." We take great pride in this achievement.

At the same time, I would like to extend my heartfelt gratitude to all my colleagues who contributed to this magazine, which we are proud to present with its first issue, aiming to add value to dentistry both academically and socially and to benefit dental students. My deepest thanks go to the #gençdişek family, our esteemed professors who have always supported us, and the student associations we collaborate with, who never hesitate to walk this journey with us.

As we always say, "If you're not here, we're incomplete. Don't be selfish, be united!"

**Süleyman Pülat**  
Editor-in-Chief



# Upcoming Events

## 3RD ANKARA CONGRESS

- February 15-16, 2021/ 1012 Participant

### PRESENTERS:

- Prof. Dr. Uğur Erdemir
- Prof. Dr. Ezher Dayısoğlu
- Prof. Dr. Serdar Polat
- Assoc. Prof. Dr. Fehmi Gönüldaş
- Dr. Sinan Emre Şekerci
- Dr. Gökçe Akbulut
- Dr. Kaan Ilıcalı
- Dr. Ural Karaduman
- Dr. Bora Akat
- Dr. Kuddusi Akbulut



# SocialEvents

## TRADITIONAL SUMMER CAMPS



## ORAL CARE EDUCATIONS



*What if?*

# INFECTIOUS DISEASES AND DENTISTRY

Interviewed by Süleyman Pülüt, Bilge Polat



TEDX SPEAKER

UNICEF, GLOBAL YOUTH COUNCIL, AND UNITED NATIONS VOLUNTEER

COVID-19 TASK FORCE CHAIR

HEAD OF INFECTIOUS DISEASES AT SOUTHSORE HEALTH INSTITUTION, USA

FOUNDER AND EXECUTIVE DIRECTOR OF ALIGN US, USA

Dr. Uzma  
*Syed*





## What do you think about infectious disease and dentistry?

That is quite a broad question, and an important one, as there is considerable overlap between the fields of dentistry and infectious diseases. Numerous infections exist in our world, each with distinct modes of transmission, including direct contact, indirect contact, bloodstream infections, and respiratory infections. These can further be classified based on their transmission mechanisms, such as droplet or airborne transmission.

In dentistry, understanding the range of infectious diseases that may impact both patients and practitioners is essential. For instance, dental professionals frequently encounter bacterial infections. Oral bacteria, such as various strains of *Streptococcus*, can predispose patients to infections, particularly in cases of poor oral hygiene. Left untreated, such infections can worsen and lead to systemic health issues. Similarly, viral infections, including herpesviruses and, more recently, COVID-19, require attention due to the potential risks of transmission during dental procedures.

The COVID-19 pandemic underscored the heightened risk of exposure faced by dental professionals, who operate on the front lines of patient care. As such, practitioners must remain vigilant about respiratory illnesses that patients may carry, including highly contagious diseases like varicella (chickenpox), measles, and tuberculosis. During oral examinations, signs of underlying systemic or infectious diseases, such as ulcers indicative of herpesvirus, must also be carefully assessed.

Bloodborne infections represent another critical area of concern in dentistry. Diseases such as hepatitis and HIV pose transmission risks, requiring strict adherence to infection control protocols. The intersection of dentistry and infectious diseases is, indeed, a vast and complex field, and dental practitioners must constantly evaluate these risks while providing care.

## What should dentists do to protect against infectious diseases?

That is an excellent question and one that every dentist should prioritize early in their career. Much of your training will prepare you for these practices, but as you transition into real-world clinical settings, it is crucial to establish robust infection prevention and control strategies. These measures not only protect you but also safeguard your staff, your patients, and others who visit your practice.

Effective infection control starts with proper disinfection of all tools, adherence to hand hygiene protocols, and consistent use of personal protective equipment (PPE). Given the nature of dental work, which often involves close contact in confined spaces, ensuring eye protection, masks, and other protective measures is essential. Handling sharps properly is also critical, as the risk of injuries such as needle sticks can expose practitioners and staff to bloodborne infections.

Surface disinfection, safe injection practices (e.g., avoiding needle reuse, using single-use vials), and thorough sterilization of all instruments are foundational practices for maintaining a safe clinical environment. These protocols must be implemented consistently to protect everyone involved, including future patients.

Another essential component of infection control is patient screening, a practice that has become increasingly routine since the COVID-19 pandemic. Screening measures, such as pre-appointment questionnaires, can help identify patients who may pose a risk due to symptoms of illness. For example, confirming that patients are free of fever, cough, or other signs of respiratory illness can help reduce the likelihood of spreading infections within your practice.

## Some dentists voluntarily go to the field to provide free dental treatments in areas where poverty prevails, such as Africa. So what preparations should, should these dentists make to protect themselves from infectious disease before going to the places where such poverty and opportunities are limited?

That is an excellent question, and it highlights one of the most admirable aspects of dentistry and medicine. Many professionals travel abroad to provide relief work and healthcare in underserved areas. This dedication to aiding those in need is truly noble and aligns with the fundamental purpose of entering these fields: to help people. However, it is essential to ensure that such efforts are conducted in the safest manner possible for healthcare providers. Proper preparation is key to achieving this.

First and foremost, it is crucial to verify that all routine immunizations are up to date. Healthcare professionals often face higher risks of exposure to infectious diseases, making vaccination a fundamental safety measure. Common requirements include childhood and adult immunizations such as MMR (measles, mumps, rubella) and varicella. Hepatitis vaccinations are particularly critical due to the exposure to bloodborne pathogens in our field.

When traveling abroad, additional vaccines may be necessary. For example, hepatitis A, a preventable disease, is strongly recommended not only for travelers but increasingly for the general population. Typhoid fever, prevalent in many parts of the world, can also be prevented through a well-tolerated vaccine. Other important immunizations include tetanus, diphtheria, and pertussis.

It is also vital to consider the specific region where relief work will be conducted. In sub-Saharan Africa or Southeast Asia, for instance, particular infectious diseases may be more common. Malaria prophylaxis may be required, and travelers should begin and continue taking appropriate medications while in the region. Maintaining one's health is critical to ensuring the ability to effectively assist others. Illness or unpreparedness can hinder the relief efforts one intends to provide.

Other preventative measures should also be prioritized. For example, carrying prophylactic antibiotics for traveler's diarrhea can address gastrointestinal issues that may arise. Clean drinking water is another essential consideration. While those in developed countries may take clean water for granted, this is not always the case elsewhere. Travelers should ensure they consume only purified water and avoid raw fruits or vegetables that might have been washed in contaminated water. Such precautions can significantly reduce the risk of waterborne illnesses.

Before embarking on international travel, seeking professional travel medicine counseling is highly advisable. As a travel medicine practitioner, I frequently advise individuals—whether for work or leisure—on how to protect themselves during their journeys. This includes assessing the specific health risks in the destination region, addressing current disease outbreaks, and ensuring all necessary vaccines are administered. Additionally, I provide guidance on appropriate medications, such as antibiotics or malaria prophylaxis, and offer practical tips for staying healthy abroad.

## What is the role of dentists in What equipment should a clinic be equipped with? Or how should it be organized to combat infectious diseases? vaccination? Which vaccinations should they administer and when should they do so?

In terms of equipment and protocols for combating infectious diseases, it is paramount to ensure that all tools and materials are sterilized to prevent the transmission of pathogens. As I previously mentioned, the use of single-use syringes, vials, and other disposable equipment is critical in reducing the risk of spreading infections among patients and staff. Standard practices for the safe handling of sharps and adherence to infection prevention protocols further minimize these risks.

In light of the recent pandemic, additional measures such as the use of air purifiers have become increasingly prominent. These devices not only improve overall air quality but also reduce the presence of airborne viruses, enhancing the safety and health of dental environments.

For situations where a patient presents with symptoms of a communicable disease or develops them while in the clinic, isolation is key. Having an isolation room—such as a single room with a closed door—provides a safe space to contain the patient, whether they are suspected to have measles, COVID-19, or another infectious condition. This precaution allows the practice to minimize exposure to others, including vulnerable populations such as children, elderly individuals, and staff. Following isolation, steps should be taken to clear the space of other individuals and determine the next course of action, whether that involves transferring the patient to a hospital or another appropriate facility.

In summary, maintaining proper infection prevention protocols, including the use of personal protective equipment (PPE), sterilization practices, and hygiene protocols, is crucial in dentistry. These measures collectively ensure the safety of both patients and staff.

To address the final question regarding the relationship between infectious diseases and dentistry, the two fields are deeply interconnected. Infectious diseases and pathogens—whether bacterial, viral, parasitic, or fungal—are ubiquitous and a constant consideration in dental practice. Dentists regularly encounter conditions such as dental abscesses, oral infections, and sores that may be indicative of underlying systemic illnesses or viral infections. For instance, viral pathogens such as Epstein-Barr virus may manifest as precancerous or cancerous lesions in the oral cavity.

Moreover, dentists play a pivotal role in preventing and managing infections. Routine procedures involve precautions against hepatitis and other bloodborne pathogens, while patient counseling extends to overall health and hygiene practices that mitigate the risk of infections. In many cases, dentists serve as primary healthcare touchpoints for patients, as individuals may prioritize dental visits over medical consultations for acute issues. This unique

position enables dentists to act as gatekeepers, promoting holistic health and addressing potential systemic concerns identified through oral examinations. Ultimately, the importance of infectious disease awareness and prevention in dentistry cannot be overstated. By employing rigorous infection control measures and remaining vigilant about potential disease presentations, dental professionals contribute significantly to the overall health and well-being of their patients.

### **What is the role of dentists in vaccination? Which vaccinations should they administer and when should they do so?**

As allied health professionals, it is our responsibility to promote good health and well-being for all patients. One way to do this is by routinely discussing immunization status with patients, whether they are children, adults, or caretakers of pediatric patients. Dentists should ask whether patients are up to date on their vaccinations, as this not only protects individual patients but also helps prevent the spread of communicable diseases that could affect the dental practice, staff, and broader community.

For example, diseases such as measles, which have resurged due to declining vaccination rates, pose significant public health challenges. Dental visits provide a valuable opportunity to encourage patients to adhere to vaccination schedules, including childhood immunizations and age-appropriate adult vaccinations, such as those for influenza, pneumonia, shingles, and COVID-19. These conversations can also help foster community-wide immunity, thereby protecting vulnerable populations such as the immunocompromised.

Dentists are often the first healthcare professionals to detect oral infections that could be linked to systemic health concerns. For instance, a patient presenting with a dental abscess may not realize that untreated infections can lead to severe complications, such as sinus infections, endocarditis, or even sepsis. By addressing these issues early—through proper diagnosis, treatment (e.g., antibiotics, root canals), and follow-up care—dentists can prevent these conditions from escalating. This proactive approach underscores the pivotal role of dentists as gatekeepers of oral and systemic health.

In the context of global pandemics, such as COVID-19, dentists were among the most exposed professionals due to their close contact with patients. The pandemic emphasized the need for stringent infection control measures, such as personal protective equipment (PPE), patient screening, and disinfection protocols. These measures not only protect healthcare workers but also safeguard patients and staff within the practice. Lessons learned from the pandemic, including the importance of maintaining sufficient PPE stock and implementing health screenings, should remain integral to future preparedness plans.

For example, pre-appointment screenings can identify patients with symptoms of highly contagious diseases, such as measles, before they enter the practice.

This simple measure can protect other patients, including those who are unvaccinated, immunocompromised, or otherwise vulnerable, from exposure to serious illnesses. It also allows dentists to adapt quickly and effectively to emerging public health threats.

As the world faces dynamic and evolving health challenges, it is imperative for dental professionals to remain adaptable and prepared. Continued adherence to robust infection control protocols, investment in PPE, and the implementation of screening procedures will ensure that dentists can provide safe and effective care while minimizing risks during future pandemics or outbreaks. By learning from past experiences and prioritizing prevention, the dental profession can remain resilient in the face of unforeseen challenges.





# OUR PREVIOUS *Conferences*

Written by Sıla Yıldız, Süleyman Pülüt

## 1ST NATIONAL CONGRESS OF THE YOUNG DENTISTRY ASSOCIATION

- February 5-7, 2020 / 3,185 Participant (Online)

## SOCIAL SESSION

- May 1-2, 2021 / 3,857 Participant (Online)

## SPRING SYMPOSIUM

- May 29-30, 2021 / 2325 Participant (Online)

## SUMMER SYMPOSIUM

- June 12-13, 2021 / 1720 Participant (Online)

## YOUTH SYMPOSIUM

- July 2-4, 2021 / 1452 Participant (Online)

## 2ND NATIONAL CONGRESS OF THE YOUNG DENTISTRY ASSOCIATION

- November 5-7, 2021 / 1136 Participant

## ANKARA SPRING CONGRESS

- March 5, 2022 / 850 Participant

## NOTHERN CYPRUS SPRING CONGRESS

- May 15, 2022 / 350 Participant

## SAMSUN MAY 19TH CONGRESS

- May 28-29, 2022 / 350 Participant

## 3RD NATIONAL CONGRESS OF THE YOUNG DENTISTRY ASSOCIATION

- November 4-6, 2022 / 934 Participant

## ISTANBUL CONGRESS

- December 17-18, 2022 / 850 Participant

## 2ND ANKARA SPRING CONGRESS

- April 29, 2023 / 800 Participant

## 4TH NATIONAL YOUNG DENTISTRY ASSOCIATION GENÇUP CONGRESS

- November 3-5, 2023 / 854 Participant

## ERZURUM / ANATOLIA CONGRESS

- March 2-3, 2024 / 798 Participant

### PRESENTERS:

- Assoc. Prof. Dr. Mustafa Gündoğar
- Prof. Dr. Recep Orbak
- Prof. Dr. Cenk Fatih Çanakçı
- Prof. Dr. Metin Çalışır
- Dr. Alaz Şimşek
- Dr. Merve Erdoğan Özgür
- Dr. Fatih Taşkesen
- Dr. Seçil Karakoca Nemli
- Dr. Cem Taşkın
- Dr. Oğuzhan Arda Yalın

In this congress, where the most up-to-date information in dentistry was shared with participants, our professors conveyed their knowledge and expertise through both theoretical sessions and practical hands-on courses. The participants consisted not only of students and recent graduate dentists from Erzurum, where the congress took place, but also from surrounding provinces. It was a joy for us to be part of a congress that aims to reach rural areas, where such events are rare in Türkiye, and support students studying in those regions. We are happy to continue reaching out to these areas with similar events every year.



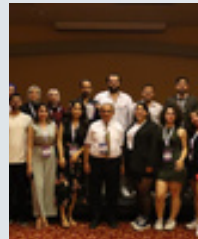
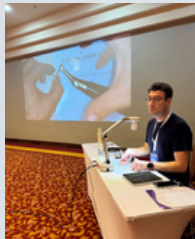
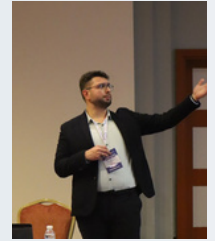
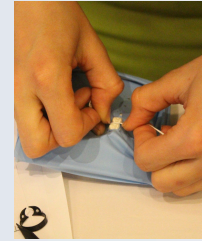
## 5TH NATIONAL YOUNG DENTISTRY ASSOCIATION GENÇUP CONGRESS

- November 1-3, 2024 / 750 Participant

### REPRESENTERS:

- Assoc. Prof. Dr. Mustafa Gündoğar
- Prof. Dr. Taha Özyürek
- Prof. Dr. Recep Orbak
- Dr. Özgür Baydemir
- Dr. Merve Erdoğan Özgür
- Dr. Tuba Develi
- Dr. Ahmet Zeren
- Dr. Erdal Pehlivanoğlu
- Dr. Cem Taşkın
- Dr. Fatih Rasim
- Dr. Sancar Şimşek

In November, we came together with dental students and recent graduate dentists at the 5th National GençUp Congress, held at the Selectum Family Resort Side Hotel in Antalya under the honorary presidency of Assoc. Prof. Dr. Mustafa Gündoğar. In addition to high-level education, courses, and workshops, participants had the opportunity to enjoy ultra-luxury vacation experiences and receive training from top experts. Congress attendees stayed for 2 nights and 3 days in a 5-star hotel with all-inclusive accommodations, while also meeting with sponsors in the foyer area to see, learn about, and try the latest materials in dentistry. On Saturday evening, we had the chance to relax and unwind at the DJ party, taking a brief break from dentistry. "The congress in November is something special with #gdhder," we say, and we look forward to being together again at the next GençUp Congress.





# A LIFETIME DEDICATED TO PROVIDING DENTAL TREATMENT FOR CHILDREN WITH DISABILITIES

Interviewed by Bilge Polat



PROF. DR. ERTUĞRUL SABAH  
PhD IN PEDIATRIC DENTISTRY  
FOUNDER AND PRESIDENT OF ASSOCIATION OF  
DENTISTRY WITHOUT BARRIERS

**You have participated in and organized many volunteer projects aimed at providing dental treatment to disabled children and boarding school students. When did you decide to pursue this, and what motivated you to continue on this path?**

In 1977, I went to Germany. I started working as an assistant at a dental clinic in Herborn, a town about 80 kilometers north of Frankfurt. There was a psychiatric hospital in the area, and only private dentists provided treatment for the children in that hospital. Countries like Germany handle this matter correctly. Preventive dentistry services are provided by the government or schools, and other dental services are outsourced to private practitioners.

Treating a healthy child might take 10 minutes, but treating a disabled child might take 13 or 14 minutes—they need more time. Unfortunately, many of my colleagues didn't show the necessary dedication. I realized I was capable and efficient, so I began treating these patients, and things progressed very well. I told them to send the patients my way, and I continued treating them.

Later, I started my PhD in Germany around 1978 or 1979, completing it in 1982, and returned to Turkey. I joined the faculty from which I graduated and began working in dental diseases and treatment. At one point, I noticed a bus within the faculty grounds. It had two large gas cylinders and was in poor condition. With the help of resources from the Bornova Municipality, I had it repaired.

With that bus, I started visiting nearby disability education centers. Later, I had smaller equipment built to fit in my car and began making visits that way. However, working alone meant I could only see 13 or 14 patients in a day. In 2001, my colleague and I established a non-governmental organization (NGO) for a Disabled Oral and Dental Health Center. We began visiting disability centers in neighboring cities.

As we gained traction, the government started providing funding, allowing us to expand our services to disabled children and their families. Initially, my focus was on disabled children. My second focus was on orphans, for whom we organized school visits and treatments in coordination with school principals and chief physicians. Over the years, while the number of children has decreased, neither we nor other professionals can reach every child, nor can the problem of disabled children needing treatment be completely resolved.

We initially established this NGO to elevate dentistry, which had suffered significant erosion in recent years. Dentists weren't even considered healthcare providers in this country. The Ministry of Health's Oral and Dental Health Directorate was established much later.

As we worked, we saw that we were on the right track, and the initiative grew. Eventually, we developed protocols with organizations like the Izmir Governorship and Dokuz Eylül University. We reached approximately 230 centers across Turkey, and my colleagues contributed to the care of around 150,000 children. Most recently, we worked in earthquake-affected areas, doing everything we could. We studied at our country's schools at minimal cost, and we felt it was our duty to give back. We believe we have fulfilled that responsibility.



**How should disabled children be approached? Is knowledge of sign language essential for communication? What measures should be taken to ensure safety for both the practitioner and the patient?**

Disabled children are not much different from healthy children, but they do require a personal touch. When dealing with the unknown, you may feel fear or hesitation, or you may choose to avoid treating a disabled patient altogether. However, once you treat one or two disabled children during your internship, you'll likely start saying, "Bring them to me; I'll treat them."

What matters is making that initial contact. After that, there's no significant difference between treating healthy and disabled children. No special treatment is needed—just experience. We didn't provide our interns with specialized training for this; we simply told them to be attentive and to involve the parents or teachers. Having a parent or teacher present increases the likelihood of successful treatment. Without them, the child might act out.

You need to take the time to explain things to children, whether they are healthy or disabled. Explain everything, even if they don't fully understand it. It's not about how much they understand; what matters is that when they look into your eyes, they will grasp what's necessary.

Disabled children are often more sensitive and have more developed emotions compared to healthy children. If you establish trust, there won't be any problems. Knowing sign language is not necessary; children can understand what you're saying by reading your lips. However, learning sign language can be beneficial.

**When treating disabled children, is the ART (Atraumatic Restorative Treatment) approach or modern treatment methods more appropriate? How should the treatment approach vary based on the patient?**

ART is used in remote areas where there is no water, electricity, or equipment such as excavators or battery-powered micromotors. It is essentially a modified version of traditional excavation methods. While it can be applied in underdeveloped or developing countries, it is often a costly solution sold to us by Western countries, which I believe is unnecessary.

Every patient requires a personalized treatment approach. You should explain to the child how the equipment works, demonstrate what will happen, and ensure they understand it won't cause harm. Only then can you proceed with the treatment. Ultimately, whether the treatment is completed or not depends on the child's comfort level.

I ask the children, "Would you like to sit alone or on your mother's lap?" For those who prefer their mother's lap—whether they are disabled or healthy—I treat them while they sit there. I also instruct them on signals like raising a hand, blinking, or moving a finger to indicate if they're uncomfortable, giving them control to pause the treatment.

It's also essential to be honest with children. For example, I would never say, "It won't hurt at all," because there might be some discomfort. If the pain becomes too intense, I let them know they can signal me. Additionally, it's crucial to demonstrate how the equipment will be used and what its purpose is.

**How should oral hygiene be maintained in disabled children, and how frequently should check-ups be scheduled?**

When you teach oral hygiene to a mother and her disabled child, around 4 or 5 out of 10 disabled children will follow the instructions. In contrast, only 1 out of 10 healthy children and none of the 10 healthy adults will maintain proper oral hygiene. Adults who didn't develop the habit as children rarely start later in life.

That's why education must begin early. Municipalities should offer prenatal courses for pregnant women and their partners. During these courses, everything should be taught and demonstrated. Additionally, mothers should be provided with a small toothbrush and toothpaste in their maternity kit.

After breastfeeding, the milk residue should not be left on the baby's teeth; it needs to be cleaned. As for check-ups, starting from birth and continuing into adulthood, visits should be scheduled every six months.

**What can we do, as healthcare professionals, and what can families with disabled children do to facilitate easier access to dental treatment?**

First and foremost, educate the mothers. Additionally, there should be facilities where mothers can leave their disabled children while they handle their responsibilities. Caring for a disabled child is an incredibly challenging task, and families of these children need more support from those around them.

**You were involved in establishing the Ege Oral Health and Dentists Association. What was your goal in founding the organization, and what has been achieved since then?**

We changed our name to "Dentistry Without Barriers." Our goal has been to provide treatment to those in need directly at their location. However, despite our extensive efforts, I believe we haven't set a strong enough example or achieved sufficient success in this area.

That said, we were successful with our interns. A total of 1,480 interns trained with us and are now spread across Turkey, courageously providing treatment for disabled patients.

**You have been providing dental treatment for disabled children for many years. What has been the most impactful moment for you, and what message would you like to share with fellow dentists?**

The most impactful moments have been the reactions of mothers. For example, one of my colleagues performed a filling for a child with autism, and the mother began crying. When asked why she was crying, she replied, "I'm crying out of joy because no one else was able to perform this filling."

It's heartbreaking that in a country with 20,000 dentists and numerous hospitals, a mother has to express this sentiment. My message to fellow dentists is to join us and work alongside us. We are always open to collaborating with anyone willing to contribute.





# END OF AN ERA, DENTAL amalgam

Written by Nur Sena Balsak

Amalgam fillings are one of the oldest filling materials in dentistry, with a history of approximately 200 years. The foundations of amalgam were established in 1816 by French dentists Auguste and Louis Regnart. During this period, amalgam was prepared as a mixture of mercury and silver powder. Later, it was introduced to America; however, this early amalgam, known as Royal Mineral Succedaneum, received criticism due to issues such as insufficient quality control and toxicity concerns. Over time, it became a focal point for criticism due to fears of mercury poisoning and filling failures. These issues led to polarization and debates among dentists. Amalgam fillings are one of the oldest filling materials in dentistry, with a history of approximately 200 years. The foundations of amalgam were established in 1816 by French dentists Auguste and Louis Regnart. During this period, amalgam was prepared as a mixture of mercury and silver powder. Later, it was introduced to America; however, this early amalgam, known as Royal Mineral Succedaneum, received criticism due to issues such as insufficient quality control and toxicity concerns. Over time, it became a focal point for criticism due to fears of mercury poisoning and filling failures. These issues led to polarization and debates among dentists.

Within a few years, these discussions began to diminish with the development of more refined amalgam formulas. Modern amalgam was created in 1895 when G.V. Black developed the first scientific formulation. His formula contains 50% mercury, 35-45% silver, and 15-20% tin, along with small amounts of copper and zinc. Additionally, the standardization of amalgam preparation methods improved both ease of use and durability, which significantly reduced toxicity concerns. Amalgam became the most widely used filling material in the 20th century due to its affordability, durability, and ease of application. High-copper amalgams were developed, which were resistant to corrosion and provided long-lasting results.

As time progressed, the use of amalgam declined with the development of alternative filling materials. Moreover, as alternative filling materials (composite resins, glass ionomer, porcelain, gold) became more biocompatible and had less environmental impact, amalgam gradually faded into the background. There was no evidence proving that amalgam fillings caused immunological and neurological issues, but it was concluded that it indirectly contributed to them. As a result, the sale of mercury for amalgam was officially banned in Denmark in 1994. In addition, due to the existence of less risky alternatives, bans were also implemented in Norway and Sweden.



Most European countries still do not have restrictions on amalgam fillings, and although it is not available in the United States, dentists tend to avoid using it. The European Union introduced new regulations in 2018 to limit the use of amalgam fillings. These regulations prohibit the use of amalgam fillings in children, pregnant women, and breastfeeding mothers. Additionally, stricter controls were introduced to prevent amalgam waste from harming the environment. The European Union also stated that the export of amalgam fillings would be banned on January 1, 2025, and production and import would be prohibited by July 1, 2026.

In the United States, some states have limited the use of amalgam or encouraged the transition to alternative treatment methods. These bans have developed as a response to the adverse health and environmental effects of mercury-containing fillings. The increasing criticisms and bans on amalgam fillings worldwide may trigger similar changes in Turkey. As health, environmental, and aesthetic concerns grow, it is expected that the demand for alternative fillings will increase in Turkey. The use of aesthetic and biocompatible materials such as composite and ceramic fillings is becoming increasingly common.

Moreover, the development of environmentally friendly alternatives and recycling methods will accelerate efforts to reduce the environmental impact of amalgam fillings. However, the continued use of amalgam fillings in Turkey is mainly a result of economic reasons and traditional dental practices. Nevertheless, with the increasing awareness of the public in recent years, composite fillings have almost entirely replaced amalgam due to aesthetic concerns.

In conclusion, while amalgam fillings raise various health and environmental concerns globally due to their mercury content, they are still used by some dentists in Turkey, although they are not as widespread. With the declining use of amalgam worldwide and the latest steps taken by the European Union, it is likely that amalgam fillings will be banned or restricted globally in the coming years.





# INTERVIEW ON ENDODONTICS

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Interviewed by Bilge Polat, Natavan Yagubova, Ahmet Yücel

**As a clinical professor at the University of Manchester, how do you combine your academic and clinical experience to guide your students?**

I believe the best teachers for students are those who actively engage in both academic and clinical work. Relying solely on academic pursuits without clinical involvement disconnects you from the realities of everyday practice and the challenges it presents. This disconnection can limit your ability to address practical problems effectively. For this reason, I have always aspired to balance both roles—to be a clinician and an academic simultaneously.

On the other hand, focusing only on clinical practice while neglecting academic engagement can also be problematic. While it's not impossible to stay updated on advancements, it becomes significantly more challenging. The demands of clinical practice can easily overshadow the need to stay informed about the latest research and evidence. Hence, I believe the ideal approach is to integrate the two disciplines, combining academic rigor with clinical application.

For example, in evidence-based dentistry, there is a hierarchy of evidence represented by a pyramid. At the top of this pyramid are systematic reviews, which provide the strongest evidence for guiding practice and teaching. Below that are randomized controlled trials, followed by cohort studies, case-control studies, case series or reports, and finally, expert opinions at the bottom. While expert opinions are valuable, offering insights from personal experience that may not be found in textbooks, they are still considered the weakest form of evidence within this hierarchy.

As both an academic and a clinician, I can draw from every level of this evidence hierarchy. This allows me to ensure my teaching and clinical guidance are not only evidence-based but also enriched by my own practical experiences. By doing so, I aim to provide my students with a well-rounded perspective that prepares them for both academic excellence and real-world challenges.

**In your career, we have read that you established different systems for education, where students can receive both face-to-face and online education in endodontics. What motivated you to embark on this path, and what inspired you to continue this journey?**

At the University of Manchester and UCLan, much of my teaching is face-to-face because I am often in the clinic supervising students with their patients. This allows me to address real-time issues directly and guide students through practical challenges. In addition to face-to-face interaction, I've also developed a virtual educational platform that extends beyond my immediate students. This platform is accessible internationally, providing a broader audience with access to the content I share.

My journey in virtual education began with Instagram, which quickly became my primary platform due to its accessibility and interactive features. Over time, it grew into a global resource, allowing me to share knowledge and insights with practitioners and students worldwide. I've also started exploring other platforms like Facebook, though time constraints have limited my ability to expand further, such as creating content for YouTube. Despite these challenges, I continue to engage with my audience through webinars, live Instagram sessions, and interactive posts where I answer questions, often sharing these as stories for broader learning.

What motivates me is the transformative potential of combining traditional and digital education. When I was a student, we relied solely on textbooks, with limited access to diverse resources. Today, we have unprecedented tools and platforms to enhance learning and bridge gaps in education globally. This evolution inspires me to continue innovating in how I teach and share knowledge.

**What do you think are the most important considerations in endodontic treatment approaches that you currently use in practice? How do these techniques impact the process or outcomes differently?**

In day-to-day practice, the most crucial aspect at the start is diagnosis. Unfortunately, I often observe that not enough emphasis is placed on this part, which leads to unnecessary treatments or incorrect procedures being performed, leaving the patient's problem unresolved. Personally, I place a significant amount of focus on diagnosis in my courses, as it is one of the most important steps in the treatment process. It's something that requires time and careful attention.

In most cases, I prefer to have a consultation with my patients, during which I focus entirely on understanding the true problem. Once the diagnosis is clear, I develop a treatment plan. Importantly, the treatment plan is not always root canal therapy. Sometimes, surgery might be more beneficial for the patient, or it might be better to extract the tooth altogether. In some cases, even if the tooth has a poor prognosis, I may still attempt to preserve it for as long as possible.

For instance, if I have a 25-year-old patient with a tooth that has a poor prognosis, I would try to save the tooth for another 10-20 years, as it is too early for an implant. I would try to delay the need for an implant in this patient's life. However, if a 55-year-old patient has a similar prognosis, I might opt for extraction, as it is a suitable time to place an implant, which may fail after 20-25 years. In such cases, implant failure is less of an issue because the patient is further along in life.

These considerations highlight the importance of individualized treatment plans based on a clear diagnosis. I always tell my students that it is essential to be familiar with all treatment

options. Performing a root canal treatment well is not sufficient on its own; you also need to be skilled in surgical procedures, as surgery might serve the patient better in some instances.

When root canal treatment is the chosen approach, there is one aspect I particularly emphasize in both my teaching and practice: enhanced infection control. Infection control is critical in endodontics, as studies, such as those at King's College, show that it can significantly improve treatment outcomes. This includes meticulous isolation, asking patients to maintain excellent oral hygiene before treatment, and ensuring thorough disinfection of the rubber dam, instruments, and any other tools that will come into contact with the treatment area. The procedure is essentially surgical in nature, as it directly accesses the periapical area, making infection control protocols even more critical.

In addition to infection control, choosing the right irrigation protocol and understanding whether the tooth has an open apex or not are vital considerations. The materials selected for filling the tooth also play a significant role in the outcome of the treatment.

There are certainly many more factors to consider in endodontic treatment, and these are just a few key points that come to mind. The approach to diagnosis, treatment planning, infection control, and procedural techniques is what ultimately leads to the best possible outcomes for patients.

**What's the most recent and unique treatment method or technology that emerged in the field of endodontics this year? Have these developments been implemented in practice yet?**

That's a brilliant question, and I'm truly excited to discuss this! There are some groundbreaking advancements in endodontics that have emerged recently, and while many of them are still being refined or have yet to be widely implemented, they are poised to have a significant impact on the field.

Let me start with something that's not exactly brand new but is being increasingly used in different cases: calcium silicate materials, such as bioceramic sealers and putties. These materials have been around for a while now, but we're learning to apply them in new ways. I'm particularly passionate about vital pulp therapy, which has been a part of endodontics for quite some time, but unfortunately, it's still underutilized by many practitioners. Vital pulp therapy is an alternative to root canal treatment in some cases, and when it's done correctly—by carefully selecting the right cases—it can be highly successful. It allows us to preserve the vitality of the pulp, which is a better option than unnecessary root canal treatments. By preserving the tooth's natural structures and vitality, we avoid overtreatment and potential long-term issues for the patient. Many practitioners are not utilizing this method to its full potential, which leads to avoidable root canal treatments. I'm passionate about teaching this technique, and I will even be hosting a webinar on this topic soon. When done correctly, vital pulp therapy is a very effective way to manage tooth vitality.

Another area of endodontics that is rapidly gaining traction is regenerative endodontics, which is an exciting development. We've been using bioceramic materials in regenerative procedures, which is a great step forward in treating cases of open apices in younger patients. These are often the result of trauma, infection, or other factors that cause necrosis. For years, we relied on apexification or apical plugs to treat these cases, but regenerative endodontics offers a more promising solution. It focuses on revitalizing the pulp tissue and stimulating the continuation of root development, which not only strengthens the tooth but also makes it more durable in the long term. With regenerative treatments, we can essentially give the patient a second chance to preserve the function of the tooth. For example, if a patient is a young child or teenager with an open apex, their tooth structure may not have fully developed, and the walls of the tooth may be too thin to withstand future stress. Regenerative endodontics can encourage the root to continue growing, which makes the tooth stronger and more resistant to fracture. This is a great advantage compared to traditional apexification, where the root development stops, and the tooth remains at risk of fracture for the rest of the patient's life.

In my practice and at the university where I teach, I am encouraging students to try more regenerative endodontic treatments. The results so far have been excellent, and the success rate is very promising. Not only does this approach restore vitality to the tooth, but it also helps promote the continued development of the root structure, which is critical for long-term tooth stability. There are also many other indications for regenerative endodontics, such as internal resorption, where regenerative techniques have shown success in saving the tooth.

Moving on to another innovative technique in the field, guided endodontics is an emerging trend. Although I personally haven't tried it yet, I believe it has a lot of potential. Guided endodontics uses advanced technology, including CBCT (cone beam computed tomography) and 3D printing, to create a splint that precisely guides instruments to the root canal system, especially in calcified teeth. This technique is especially useful in challenging cases where the root canals are hard to locate or access. Guided endodontics helps avoid errors such as perforation and ensures that the procedure is done as accurately as possible. There are two types of guided endodontics: static, where a printed splint is used, and dynamic, where the

instrument is guided in real-time by a digital navigation system. The dynamic version of guided endodontics essentially acts as a navigator, helping the clinician follow the correct path while avoiding damage to surrounding structures. This could be a game-changer for cases where minimal bone removal is required, as it ensures precision in accessing periapical pathology.

Another area that has become indispensable in modern endodontics is CBCT. The detailed 3D imaging provided by CBCT has revolutionized the diagnostic process, allowing us to assess cases more accurately and plan treatments with much greater precision. I personally rely on CBCT scans for most of my cases, as they provide crucial information about the root canal system and surrounding structures. CBCT has become an essential tool in diagnosing complex cases and determining the most appropriate course of action.

Now, the truly groundbreaking technology that I'm most excited about, though, is something that's still in development but is expected to be available soon. It's called the Indicator, created by Dr. Randolph Cross. This device is designed to quantify the cleanliness of the root canal system. Currently, we rely on protocols that include canal instrumentation and irrigation, but we cannot always be sure if the canal is truly clean. The Indicator provides a way to assess the bacterial load in the canal, offering a real-time measurement of cleanliness. It allows us to sample the canal's contents and determine whether the bacterial load has been sufficiently reduced. This could have a major impact on treatment outcomes, as it will give us more confidence when proceeding with obturation. If the bacterial load is still too high, we'll know we need to take additional steps, like extra irrigation or placing calcium hydroxide, before proceeding. This technology is still in the testing phase, but it is expected to hit the market in 2025, and I'm eagerly awaiting its release. Dr. Cross has been kind enough to offer me some samples to try in my practice, and I look forward to sharing my experiences on social media once I begin using it.

In conclusion, while technologies like CBCT and guided endodontics are already being utilized, the Indicator device is a highly anticipated breakthrough that could revolutionize our approach to assessing canal cleanliness. It's an exciting development, and I can't wait to incorporate it into my practice once it becomes available. Endodontics is constantly evolving, and with these advancements, we are more equipped than ever to provide better outcomes for our patients.

**What is the most important piece of advice you would give to a newly graduated dentist or endodontic specialist?**

Firstly, clinical skills and improving them over time: The most important thing I would advise is to have grit and resilience. Don't ever think you've mastered it all, because you never will. Dentistry, and especially endodontics, is an evolving field, and every case presents new challenges. You'll experience moments where you feel really confident, thinking, "I've got this now," only to be knocked down by a more difficult case that humbles you. Even after 21 years of experience, I still encounter situations that teach me something new. That's why it's so crucial to stay humble and never stop learning. Always be open to learning from your own experiences, from your colleagues, and from your mistakes. There will be days when you feel like you haven't learned anything new, but it's important to make an effort to continue growing. Even if you have to look something up at the end of the day, add something new to your knowledge base. Continuous education is the key to improving your clinical skills and staying up to date with new advancements in the field.

Additionally, you need to know yourself. Understand your strengths and weaknesses. Focus on improving the areas where you feel less confident. This is especially important in the early years of your career, as it helps you grow as a clinician. But it also goes both ways: If you want to be an artist, a true specialist in endodontics, it's essential to develop skills in all areas, including the ones you're not as strong at. However, if you're a general dentist who doesn't want to become an endodontist but still wants to offer good endodontic care, you must know your limits. Recognize when a case is beyond your expertise and refer it to a specialist. Doing this will not only ensure better outcomes for your patients but will also save you time, effort, and potentially more complicated or even unsuccessful treatments.

The second part of my advice is about personal development and mindset: It's important to maintain good mental health. Dentistry, especially endodontics, can be tough and sometimes stressful. There will be times when you make mistakes—whether it's perforating a tooth, fracturing an instrument, or dealing with difficult cases that don't go as planned. The key is not to be too hard on yourself. Failure is a part of the learning process. When things go wrong, take a step back, learn from the experience, and move forward. Don't let one failure define you. We all make mistakes, and the important part is recognizing them, learning from them, and becoming better as a result. As much as we focus on clinical excellence, you must also take care of your mental well-being, recognizing that you're human and it's okay to have setbacks.

So, my overall advice is to be resilient, continue learning, know your limits, and always make sure you're taking care of yourself mentally and emotionally. The journey in dentistry is long, and the more you commit to constant improvement—both in skill and mindset—the better you'll become over time.





## I BRUSH MY TEETH

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY

I BRUSH MY TEETH TWICE A DAY, PAINTING THE TOOTH THAT IS ABOVE AFTER EACH BRUSHING.



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## TEETH BRUSHING CALENDAR

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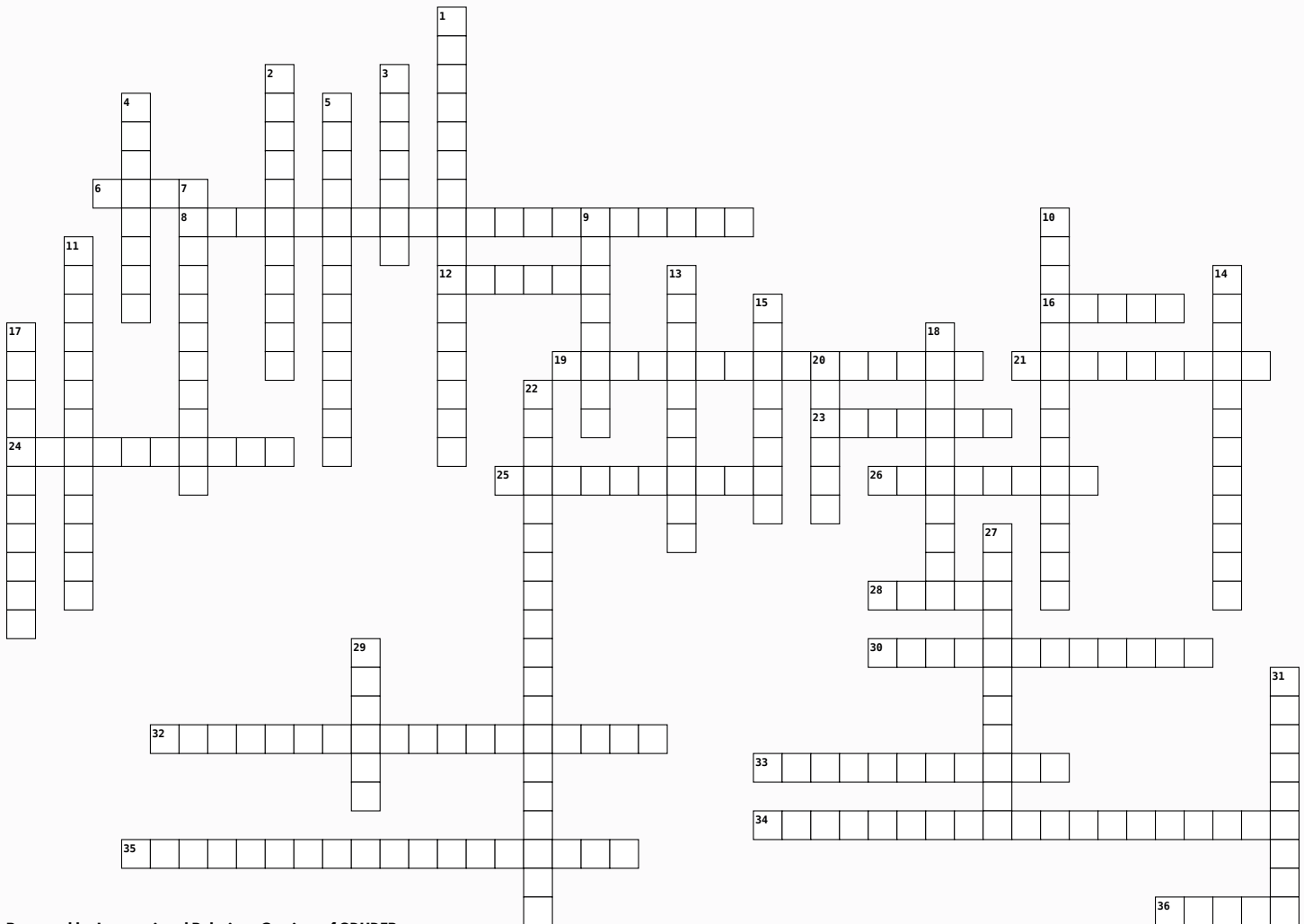




# GDHDER Dental Crossword



SOLVE IT ONLINE



Prepared by International Relations Comitee of GDHDER

## Across

6. What is the name of the tooth development stage where enamel and dentin are first formed?
8. What is the most common type of caries in primary teeth?
12. What is the hardest substance in the human body?
16. Which cement is commonly used for luting ceramic crowns?
19. Which bacteria are associated with localized aggressive periodontitis?
21. What is the radiographic term for dense bone growth within the alveolar process?
23. What is the primary nutrient for *Streptococcus mutans*?
24. Which cranial nerve controls the muscles of mastication?
25. What is the name of the dental anomaly characterized by fusion of two adjacent teeth?
26. Which classification system is used for furcation involvement?
28. The tendency of amalgam to deform under mechanical stress over time?
30. Which microorganism is most commonly associated with endodontic infections?
32. What is the most common cause of tooth loss in adults?
33. Which cranial nerve controls the tongue's motor functions?
34. An inflammatory tissue mass caused by pulp necrosis.
35. A pulp canal narrow due to mineral deposition.
36. Which instrument is used to measure periodontal pocket depth?

## Down

1. What is the most common material used for temporary restorations?
2. What is the gold standard for sterilizing dental instruments?
3. What is the most common cause of malocclusion?
4. What is the most common site for a mucocele?
5. What is the most common form of lichen planus?
7. White, non-removable lesions on the oral mucosa with a risk of malignant transformation.
9. What is the most abundant protein in dentin?
10. What is the primary mineral in enamel?
11. What is the primary cause of periodontal diseases?
13. A painful condition caused by the loss or dissolution of the blood clot after extraction.
14. What is the main radiographic feature of periapical cyst?
15. Which radiographic technique is most commonly used for detecting interproximal caries?
17. Which hormone plays a key role in bone resorption?
18. Which enzyme is responsible for breaking down hydrogen peroxide in saliva?
20. What is the main organic matrix used in composite resins?
22. Which bacteria is most associated with dental caries?
27. What is the term for excessive growth of gingival tissues?
29. How many primary teeth are there in humans?
31. What is the most commonly used local anesthetic in dentistry?

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