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Bölüm 1

DEĞİŞİMİN DİŞ HEKİMLİĞİNE YANSIMASI: GELENEKSELDEN DİJİTALE ÇOCUK DİŞ HEKİMLİĞİ

İrem NACAKGEDİĞİ TURGAY[1]
Güler Burcu SENİRKENTLİ[2]

GİRİŞ

Günümüzde hızla ilerleyen teknolojik gelişmeler, sağlık alanında olduğu gibi diş hekimliği pratiğinde de önemli dönüşümlere yol açmıştır. Bu gelişmeler, yeni tanı ve tedavi yöntemlerinin uygulanmasını mümkün kılmakta; gelişmiş cihaz ve yazılımların entegrasyonu ile dijital iş akışı dönemi başlamış ve tedavi süreleri önemli ölçüde kısalmıştır (1, 2).

Bilgisayarlı tomografi sistemlerinin 1970'li yılların sonlarında tanıtılması, dijital diş hekimliği çağının ilk adımı olarak değerlendirilmektedir. Bununla birlikte, bilgisayar destekli tasarım/bilgisayar destekli üretim (Computer-Aided Design/Computer-Aided Manufacturing; CAD/CAM) sistemlerinin diş hekimliğine kazandırılması 1980'li yıllarda gerçekleşmiştir (3). Ağız içi tarayıcıların (Intraoral Scanner; IOS) temelleri de aynı dönemde atılmış (4) ve günümüzde birçok farklı ağız içi tarayıcı (IOS) sistemi klinik iş akışlarına entegre edilmiştir. Eş zamanlı görüntüleme, gelişmiş analiz imkânları, kullanım kolaylığı ve hasta-hekim konforunu artırması gibi avantajlar (5–8) dijital teknolojilerin tercih edilmesinde etkili olurken; yüksek maliyet gibi sınırlayıcı unsurlar kullanım alanlarını kısıtlamaktadır (6).

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değildir. YZ destekli sistemler, davranış yönetimine katkıda bulunabilse de, çocukların sözel olmayan ipuçlarını anlama ve güven ilişkisi kurma gibi konular yalnızca klinisyenlerin yetkinliğindedir. Çocuk ve ebeveynlerin duygusal refahını gözetmek, teknolojinin etkinliğini artıracak temel bir koşuldur. Bu nedenle, YZ'nin pediatrik diş hekimliğinde kullanımının hekimlerin empatik ve klinik becerileriyle dengeli bir biçimde harmanlanması gerektiği vurgulanmaktadır. Teknolojinin sunduğu olanaklar, diş hekimlerinin uzmanlığıyla birleştiğinde çocuk hastalar için en iyi sonuçların elde edilmesi mümkün olacaktır (198).

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Bölüm 2

ÖZEL BAKIM İHTİYACI OLAN BİREYLERDE AĞIZ VE DİŞ SAĞLIĞI

Ezgi DEMİR[1]
Didem ATABEK[2]

GİRİŞ

Engelli bireyler, ağız ve diş sağlığı açısından özel bakım gereksinimi bulunan bir gruptur. Amerikan Pediatrik Diş Hekimliği Akademisi (AAPD), özel sağlık bakım gereksinimini; tıbbi tedavi, sağlık müdahalesi ve/veya özel hizmet ya da programların kullanımını zorunlu kılan fiziksel, gelişimsel, zihinsel, duyusal, davranışsal, bilişsel veya duygusal bir engel ya da kısıtlılık durumu olarak tanımlamaktadır. Bu durumlar doğuştan gelebileceği gibi, gelişim sürecinde ya da hastalık, travma veya çevresel etkenler sonucu da ortaya çıkabilir. Söz konusu engeller, bireyin günlük yaşam aktivitelerini yerine getirmesini veya temel yaşam işlevlerini sürdürmesini önemli ölçüde zorlaştırabilir [1].

Günümüzde engelli bireylerin ağız ve diş sağlığı hizmetlerine olan gereksinimlerinin giderek arttığı, ancak bu gereksinimlerin karşılanmasında çeşitli güçlüklerle karşılaşıldığı bildirilmektedir. Bu durum, yalnızca ağız sağlığı değil, bireylerin genel sağlık durumunu ve yaşam kalitelerini de olumsuz yönde etkilemektedir. Engelli bireylerde görülen ağız sağlığı sorunları, ağrı ve fonksiyon kaybına yol açmanın yanı sıra, potansiyel enfeksiyon odakları oluşturarak sistemik sağlık üzerinde de olumsuz etkiler yaratabilmektedir. Bu nedenle, tedavi edici yaklaşımların yanı sıra koruyucu uygulamalara öncelik verilmesi, bireylere uygun oral hijyen alışkanlıklarının kazandırılması, düzenli diş hekimi kontrollerinin sağlanması ve beslenme alışkanlıklarının düzenlenmesi büyük önem taşımaktadır [2].

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5.6. Robotik Destekli Davranış Yönlendirme

Sosyal robotlar (ör. NAO, Pepper) çocuklarla etkileşime geçerek diş muayenesi öncesi duygusal bağ kurma ve güven oluşturma amacıyla kullanılmaktadır. Özellikle otizmli çocuklarda, robotla iletişimin insana kıyasla daha düşük kaygı yarattığı **ve** tedaviye katılım oranını artırdığı gösterilmiştir. Robotlar, işlem öncesinde basit açıklamalar, nefes egzersizleri veya oyunlaştırılmış etkinliklerle çocuğu hazırlayabilir [60].

5.7. Nörogeribildirim (Neurofeedback) ve Biyo-Geribildirim Sistemleri

Bu teknolojiler, çocuğun tedavi sırasındaki anksiyete düzeyini gerçek zamanlı olarak ölçmek ve düzenlemek amacıyla kullanılmaktadır. EEG, kalp hızı değişkenliği (HRV) ve deri iletkenliği sensörleri ile alınan veriler, çocuğun fizyolojik stres yanıtlarını gösterir. Bu veriler doğrultusunda, ortam uyaranları (ışık, ses, müzik) dinamik biçimde ayarlanabilir. Çalışmalar, bu sistemlerin fizyolojik stres yanıtını azalttığını ve çocukta öngörülebilir bir gevşeme sağladığını ortaya koymuştur [61].

SONUÇ

Tüm bu yenilikçi yaklaşımlar, özel gereksinimli bireylerde dental tedavinin sadece klinik değil, nöropsikolojik ve duyusal açıdan bütüncül bir süreç olarak ele alınması gerektiğini göstermektedir. Duyusal uyaranların kontrolü, dijital teknolojilerin entegrasyonu ve multidisipliner iş birliği, geleceğin pedodontik uygulamalarında hasta merkezli, bireyselleştirilmiş ve güven temelli bir bakım modeli oluşturma potansiyeline sahiptir.

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Bölüm 3

ÇOCUKLARDA İNTRAORAL DİJİTAL TARAYICILARIN KULLANIM ALANLARI

Merve AKAR[1]
Hasibe Elif KURU[2]

GİRİŞ

Teknoloji çağında her alanda ilerlemeler, değişimler olduğu gibi diş hekimliğinde ölçü alma, restorasyon tasarım /üretim aşamalarında da devrim niteliğinde ilerlemeler kaydedilmiştir. Bunlardan biri de dijital tarayıcı sistemlerdir. Dijital tarayıcılar 1950-1960' lı yıllarda bilgisayar destekli üretim ve tasarım prosedürleri (CAD/CAM, Computer Aided Manufacturer And Design) farklı alanlarda kullanılmaya başlanmıştır. Bu sistemler geliştirilerek diş hekimliği alanında da gelişme kaydedilmiştir. Dr. Duret ilk kez 1970' li yıllarda CAD/CAM sistemini kullanarak ağız içerisinden ölçü almış, tasarım ve üretim yapmıştır. Gelişen teknolojiyle birlikte diş hekimliği alanına da bilgisayar destekli sistemler girmiştir. (1)

DİŞ HEKİMLİĞİNDE DİJİTAL TARAYICI TEKNOLOJİLERİ VE TARAMA SİSTEMLERİ

CAD/CAM sistemleri veri kaydetme, tasarım ve üretim olmak üzere üç temel bölümden oluşmaktadır. Veri kaydetme aşamasında dijital tarayıcılar aracılığıyla intraoral yapıların ve dişlerin üç boyutlu görüntüleri elde edilmektedir.(2)

Dijital tarayıcı sistemler mekanik veya optik olmak üzere iki farklı şekilde görüntü oluşumunu sağlar. Mekanik tarayıcılarda bir küre veya pin vasıtasıyla mekanik olarak okunarak üç boyutlu yapı taranırken, Optik tarama sistemlerinde ise üç boyutlu görüntü alma işlemi 'üçgenleştirme tekniği' denilen yöntem

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yöntemlerle hazırlanan apareylerin yarık genişliğini azalttığı ve maksiller ark gelişimini desteklediği gösterilmiştir. Dijital PSIO'nun, cerrahi öncesi tedavi sürecinde etkili ve hasta konforunu artırıcı bir yaklaşım olduğu sonucuna varılmıştır.(47)

SONUÇ

Artan konfor ve estetik beklentilerinin yönlendirdiği teknolojik gelişmeler, pedodonti uygulamalarını önemli ölçüde etkilemiştir. Bu gelişmeler arasında dijital tarayıcılar ile CAD/CAM destekli tasarım ve üretim sistemlerinin entegrasyonu dönüştürücü bir rol oynamaktadır. Bu teknolojiler, özellikle küçük yaş gruplarında veya anksiyete düzeyi yüksek, kooperasyonu sınırlı çocuklarda daha hızlı, daha konforlu ve estetik açıdan daha başarılı tedavi olanakları sunmaktadır. Bu doğrultuda, pedodontik tedavilerde hem hasta hem de klinisyen memnuniyetinin arttığı bildirilmektedir.

İntraoral dijital tarayıcıların pedodontide kullanımı, ölçü alma ve tam kaplama restorasyonlardan ortodontik değerlendirmelere ve özel gereksinimli bireylerde protetik rehabilitasyona kadar geniş bir uygulama alanında klinik etkinliklerini ortaya koyan güncel çalışmalarla birlikte giderek artmaktadır. Dijital sistemler, hasta konforunun artırılması ve klinik iş akışının optimize edilmesi açısından konvansiyonel yöntemlere kıyasla belirgin üstünlükler sunmakla birlikte, bazı sınırlılıklara da sahiptir. Yüksek maliyetler, klinisyen deneyimi gereksinimi ve subgingival bölgelerin taranmasındaki teknik güçlükler, bu sistemlerin yaygın kullanımını kısıtlayan faktörler arasında yer almaktadır. Ayrıca, bazı tanısal işlemlerde dijital araçların, konvansiyonel yöntemlerin yerine tamamen geçmekten ziyade yardımcı araçlar olarak kullanılması önerilmektedir.

Sonuç olarak, intraoral dijital tarayıcılar pedodonti pratiğinde hızla gelişen ve umut vaat eden bir bileşen olarak değerlendirilmektedir. Bu teknolojilerin kullanım alanlarının gelecekte daha da genişlemesiyle birlikte, daha etkin, hassas ve hasta dostu tedavi yaklaşımlarına önemli katkılar sağlaması beklenmektedir.

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Bölüm 4

ÇOCUK DİŞ HEKİMLİĞİNDE ANTİBİYOTİK KULLANIMI VE ANTİMİKROBİYAL DİRENÇ

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GİRİŞ

Antibiyotikler, büyük ölçüde toprak kökenli mikroorganizmalar tarafından sentezlenen doğal bileşikler olarak ortaya çıkan, daha sonra yarı sentetik ya da sentetik biçimleri geliştirilen, bakteriyel enfeksiyonların tedavisinde temel rol oynayan farmakolojik ajanlardır. **1, 2**

Mikroorganizmaların yaşam süreçleri sırasında ürettikleri bu maddeler, patojen bakterilerin çoğalmasını ve metabolik faaliyetlerini konak organizmaya zarar vermeden baskılayabilme özellikleri sayesinde modern tıbbın gelişiminde kritik bir rol üstlenmiştir.**3** Antibiyotiklerin klinik kullanıma girmesiyle birlikte enfeksiyon hastalıklarına bağlı mortalite oranlarında belirgin bir azalma sağlanmış ve ortalama yaşam süresi anlamlı ölçüde uzamıştır**. 4**

Amoksisilin 1970'lerden beri en sık kullanılan antibiyotik ajanlardan biridir; hem tek başına hem de bir β-laktamaz olan klavulanik asit ile kombinasyon halinde en yaygın kullanılan penisilin türüdür. Amoksisilin ve klavulanik asidin yarı ömürleri benzerlik gösterse de, klavulanik asit amoksisiline göre daha fazla proteine bağlanır ve ısıya dayanıklılığı daha azdır; esas olarak karaciğerde metabolize edilir. Ayrıca, *Clostridium difficile* enfeksiyonu da dahil olmak üzere gastrointestinal yan etkilerle çok güçlü şekilde ilişkilidir. Bu nedenle, oral kombinasyon formülasyonlarında verilebilecek maksimum günlük amoksisilin dozunu sınırlar. Amoksisilin-klavulanik asit, Dünya Sağlık Örgütü'nün Öncelikli Bulaşıcı Sendromlarının birçoğunda yetişkinlerde ve çocuklarda çoğunlukla ampirik tedavilerde olarak kullanılmaktadır; bu da bazı sendromların gecikmeli

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Bölüm 5

ÇOCUK İSTİSMARI VE İHMAL: AĞIZ BULGULARI VE ÇOCUK DİŞ HEKİMİNİN ROLÜ

Dilan ALTUN[1]

GİRİŞ

Çocuk istismarı, çok boyutlu etiyolojiye sahip, ciddi ve çoğu zaman geri dönüşü olmayan sonuçlar doğurabilen; hukuki, tıbbi, psiko-sosyal ve gelişimsel yönleri bulunan önemli bir halk sağlığı problemidir. Çocuk istismarına ilişkin bilimsel farkındalık, 19. yüzyılın ikinci yarısında artmaya başlamıştır. Bu alanda öncü çalışmalardan biri, Tardieu'nun 1860 yılında Paris Tıp Akademisi'nde çocuklarda cinsel ve fiziksel istismara dikkat çekmesiyle ortaya konmuştur (1). Daha sonraki yıllarda Caffey, 1946 yılında tanımladığı sendrom ile çocuklardaki açıklanamayan travmatik bulguların istismar ile ilişkisine vurgu yapmış (2); Kempe ve arkadaşları ise 1961 yılında "Hırpalanmış Çocuk Sendromu" kavramını literatüre kazandırarak çocuk istismarının tıbbi açıdan tanınmasında önemli bir dönüm noktası oluşturmuştur (3).

Çocuk istismarına ilişkin tanımlar zaman içinde genişlemiş ve kapsamı netleşmiştir. Helfer ve Kempe, 1972 yılında çocuk istismarını; ebeveynlerin ya da çocuğun bakımından sorumlu diğer bireylerin kasıtlı davranışları veya ihmalleri sonucu, kazalar dışındaki nedenlerle çocuğun zarar görmesi şeklinde tanımlamışlardır (4). Günümüzde, Dünya Sağlık Örgütü (DSÖ) çocuk istismarını, bir yetişkin tarafından bilerek ya da bilmeyerek gerçekleştirilen ve çocuğun fiziksel, ruhsal veya sosyal gelişimini ve sağlığını olumsuz yönde etkileyen tüm davranışları kapsayan bir olgu olarak tanımlamaktadır (5). Bu tanım, çocuğun kendisi tarafından istismar olarak algılanmayan ya da erişkinlerce istismar olarak değerlendirilmeyen tutum ve davranışları da içermektedir. Ayrıca, istismarın mutlaka kasıtlı olması ya da çocuk tarafından fark edilmesi gerekmediği vurgulanmakta; çocuğun zarar görmesiyle sonuçlanan her türlü eylem veya

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- Acil bir durum bulunmayan olgularda, mümkünse çocuk sağlığı ve hastalıkları uzmanı gibi ilgili bir sağlık profesyonelinden ikinci görüş alınabilir.
- Türkiye'de istismar ve ihmal şüphesinin bildirilmesinde, Aile ve Sosyal Hizmetler Bakanlığı bünyesinde hizmet veren Alo 183 Sosyal Destek Hattı ilk başvuru noktalarından biridir. Bu hat üzerinden yapılan bildirimler kayıt altına alınmakta ve gerekli durumlarda kolluk kuvvetleriyle koordinasyon sağlanmaktadır.
- Ayrıca, istismar veya ihmal şüphesi durumunda doğrudan Cumhuriyet Savcılığına bildirimde bulunulması da mümkündür ve yasal bir yükümlülüktür.

SONUÇ

Fiziksel ve cinsel istismar, çocuklarda oral ve dental yaralanmalar ya da patolojik bulgularla ortaya çıkabilmektedir. Bu nedenle pediatristler, diş hekimleri ve diğer sağlık profesyonellerinin şüpheli orofasiyal bulguları tanıyabilmesi, gerekli durumlarda klinik kayıtları ayrıntılı biçimde belgelemesi, fotografik kanıtlar ve laboratuvar kanıtları toplaması ve uygun uzman görüşlerine başvurması önem taşımaktadır. Dental ihmal ise uzun süredir çocuk sağlığını etkileyen önemli bir sorun olarak kabul edilmekte olup, bazı çocuk gruplarının dental ihmal açısından daha yüksek risk altında olabileceği bildirilmektedir. Türkiye'de de özel sağlık gereksinimi olan çocuklar, obezite gibi kronik sağlık sorunları bulunanlar, sosyal açıdan dezavantajlı gruplar ve ayrımcılığa maruz kalma riski yüksek olan çocuk ve ergenler bu açıdan dikkatle değerlendirilmelidir. Çocuk istismarı ve ihmalinin önlenmesi ve erken tanısında, tıp ve diş hekimliği disiplinleri arasında etkin bir iş birliği büyük önem taşımaktadır. Pedodonti ile ağız, diş ve çene cerrahisi alanlarında çocuk istismarı ve ihmaline yönelik eğitim almış uzmanların, diğer sağlık profesyonellerine danışmanlık sağlaması; ayrıca çocuk istismarı konusunda deneyimli hekimlerin de diş hekimleriyle iş birliği içinde çalışması, multidisipliner yaklaşımı güçlendirmektedir. Bu tür iş birlikleri, çocuk istismarı ve ihmalinin önlenmesi, erken saptanması ve çocukların korunmasına yönelik sağlık hizmetlerinin etkinliğini artıracaktır.

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Bölüm 6

SÜT DİŞLENMEDEN DAİMÎ DİŞLENMEYE GEÇİŞTE DENTAL OKLÜZYONUN YÖNETİMİ VE ERKEN ORTODONTİK YAKLAŞIMLAR

İrem OKUMUŞ[1]

GİRİŞ

Çocuklarda süt, karışık ve daimî dişlenmede sürme ve diş gelişiminin yönetimi ağız ve diş sağlığının sürdürülmesi için önemli bir faktör olarak bilinmektedir. [1] İlk süt dişinin sürmesiyle birlikte diş hekimi kontrollerinin başlaması önemlidir. Büyüme gelişme döneminde çocukların yakından izlenmesi olası diş- çene bozukluklarının erken tespiti açısından kritiktir. Özellikle başlangıç düzeyindeki problemlerin belirlenip müdahale edilmesi ya da sürmenin yönlendirilmesi de gelecekteki ortodontik tedavi ihtiyacını ortadan kaldırabilir, çözümünü kolaylaştırabilir ya da tedavi maliyetini düşürebilir.[2] Pedodontistler ya da çocuk hasta bakan hekimler, çocuğun büyüme-gelişimin özellikleri, oral alışkanlıkları ve çenelerin fonksiyonel durumunun değerlendirmede ve erken tanı ve yönlendirmede kritik rol bir üstlenmektedirler.[3]

Pedodonti pratiğinde erken dönemde saptanan çapraz kapanışlar, fonksiyonel kaymalar, alışkanlıklara bağlı maloklüzyonlar ve erken diş kayıpları gibi durumlar, uygun zamanda yapılan ortodontik müdahalelerle düzeltilebilmekte veya ilerlemesi engellenmesi mümkün olmaktadır. [4] Bu nedenle pedodonti ve ortodonti arasındaki etkin iş birliği, yalnızca estetik ve fonksiyonel sonuçların iyileştirilmesine değil, aynı zamanda daha kısa, daha az invaziv ve daha öngörülebilir tedavi süreçlerinin planlanmasına da olanak sağlayabilir. Erken teşhis ve yönlendirme açısından çocuk diş hekimleri ve çocuk hasta bakan hekimler tarafından hem normal oklüzyonun hem de maloklüzyonların iyi bilinmesi gerekir.

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3.1.5. Diş Boyut Uyuşmazlığı

Dizilim problemlerine neden olabilir. Küçük boyutlu oldukları ve kama şekilli oldukları için maksiller lateral kesiciler yaygın olarak bu sorunlara yol açarlar. Bazen lateral kompozitle restore edilir; başka tedavi gerektirmez.[24] Diğer seçenek lateralin santral dişe temas edene kadar hareket ettirilip distalde boşluk bırakmaktır. Estetik sonuç memnuniyet verici değildir. Retansiyon gerektirir. Küçük kesiciler için planlanan diğer bir seçenek ortodontik diş hareketi ve rezin yapıştırıcı ile kronun yeniden şekillendirilmesi kombinasyonudur.[8]

3.1.6. Süpernümere Dişler

Süt ve daimî dentisyonun her ikisini de etkileyen dental bir anomalidir.[57] Yer darlığı ve sürme problemlerine neden olabilir. Hemen çekim/ takip sonrası çekimi ile etkiler en aza indirilmelidir.[58] Erken dönemde panoramik film/ anterior oklüzal film ile tespit edilir.[59] Süpernümere diş konikse ve ters dönmemişse sürme şansı vardır ve sürmesi beklenir sonrasında çekilir.

4. SONUÇ

Çocukluk döneminde dişsel ve iskeletsel düzensizliklerin erken tanınması, daimî dişlenmede gelişebilecek maloklüzyonların önlenmesi ve daha etkili tedavi stratejilerinin planlanması açısından kritik öneme sahiptir. Süt ve karışık dişlenme dönemleri, büyüme potansiyelinin değerlendirilmesine ve uygun olgularda ortodontik yaklaşımların uygulanmasına olanak tanır. Ektopik sürmeler, gömülü dişler, diş eksiklikleri ve diş boyut uyuşmazlıkları gibi anomaliler sıralanma ve yer darlığının başlıca nedenleri olup, özellikle maksiller lateral kesici anomalilerinde multidisipliner tedavi yaklaşımları daha başarılı sonuçlar sağlamaktadır. Erken dönemde doğru tanı ve bireyselleştirilmiş tedavi planlaması, tedavi süresini kısaltmakta ve estetik, fonksiyonel ve stabil sonuçların elde edilmesine katkıda bulunmaktadır.

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Bölüm 7

ÇOCUK DİŞ HEKİMLİĞİNDE HALL TEKNİK

Beyza Ecem ALKAÇ EKİCİ[1]

GİRİŞ

Ağız sağlığı, bireyin genel sağlığı ve iyi olma hâline katkı sağlayan kritik bileşenlerdendir (1). Hayat kalitesi, büyüme ve gelişim dinamikleri ile genel sağlığın tamamlayıcısı olarak kabul edilen ağız sağlığının, çocuklar için özel bir öneme sahip olduğu kabul edilmektedir..

Çocuklarda ağız sağlığını değerlendirmek bütüncül bir yaklaşım gerektirmektedir (2, 3). Süt ve daimi dişlerde gözlenen tedavi edilmemiş çürük lezyonları, mevcut restorasyonlar, diş kayıpları, periodontal hastalıklar, maloklüzyonlar ve oral patolojiler; ağız sağlığını değerlendirirken kapsamlı bir değerlendirme yapabilmek için hekimlerin göz önünde bulundurması gereken başlıca parametrelerdir. Bu parametreler arasından özellikle diş çürüğü, küresel çapta çocukların önemli bir kısmını ilgilendiren ve basit halk sağlığı müdahaleleriyle büyük ölçüde önlenebilir bir hastalıktır (4).

Çürük hastalığının klinik bulgusu olan çürük lezyonu, zaman içinde diyetle alınan fermente olabilen karbonhidratlar, oral floranın karyojenik bakterileri ve konağın diş dokusu arasındaki etkileşim sonucu ortaya çıkan multifaktöriyel bir durumdur (5, 6). Süt dişlerinde gözlenen çürük lezyonları, çocuklarda ağrı ve rahatsızlığın sık gözlenen kaynaklarındandır ve ortaya çıktığında hem çocuk hem de ebeveynler için oldukça rahatsız edici bir tabloya sebep olabilmektedir. Ayrıca bu durum kronik hal aldığında, fonksiyonel sorunlara yol açabilmekte ve çocuklarda beslenme, konuşma ve yaşam kalitesini olumsuz etkileyebilmektedir; dolayısıyla süt dişlerinin uygun tekniklerle tedavi edilmesi, çocuklar açısından oldukça önemlidir (7).

Çocuklarda diş çürüğü lezyonlarının tedavisi, erişkinlere göre daha karmaşık bir süreçtir. Bu durumun başlıca nedenleri arasında çocuk hastalarda dental

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Öte yandan, tekniğin yüksek klinik başarısı ve uygulayan hekimlerin büyük çoğunluğunun prosedürü kolay, pratik ve zaman açısından avantajlı olarak değerlendirmesi, tekniğin gelecekteki klinik potansiyelinin yüksek olduğunu ortaya koymaktadır.

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Bölüm 8

FLORÜR ALTERNATİFİ REMİNERALİZASYON AJANLARINA GÜNCEL BİR BAKIŞ

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Diş sert dokuları, oral mikrobiyal biyofilm ve fermente karbonhidratlar arasındaki dinamik bir etkileşim sonucunda meydana gelen diş çürüğü; devam eden mineral denge bozukluğunun sonucudur (1, 2). Bu doğrultuda çağdaş çürük yönetimi yaklaşımları, hastalık sürecinin biyolojik olarak kontrol altına alınmasını hedefleyerek, restoratif tedavilerden ziyade mine dokusunun korunmasına ve doğal iyileşme kapasitesinin desteklenmesine odaklanmaktadır (2).

Süt dişleri ve genç daimi dişlerde mine tabakasının daha ince olması ve mineralizasyon derecesinin görece düşük seyretmesi, asidik ataklara karşı direnci azaltabilmekte ve mineral kaybının daha kısa sürede ortaya çıkmasına zemin hazırlayabilmektedir. Erken evrede görülen non-kaviteli lezyonlar çoğunlukla klinikte beyaz nokta lezyonu aşamasında fark edilir, bu aşamada uygun koruyucu ve biyolojik yaklaşımlar benimsendiğinde lezyon ilerlemesinin durdurulması ve mineral kaybının geri kazanılması mümkündür (1, 3). Mineral kaybının geri kazanılması yani remineralizasyon; *tükürük proteinlerinin* yardımıyla kalsiyum, fosfat ve diğer iyonların demineralize mine boşluklarına birikmesiyle meydana gelen doğal onarım sürecidir (4).

Flor, uzun yıllardır diş çürüğünün önlenmesinde temel koruyucu ajanlardan biri olarak kabul edilmekte ve klinik uygulamalarda yaygın biçimde kullanılmaktadır. Florun çürük önleyici etkisi, mine yüzeyinde mineral kaybını sınırlaması, düşük pH koşullarında remineralizasyonu desteklemesi ve diş sert dokularının asidik ortama karşı direncini artırması ile ilişkilidir (5). Ayrıca flor, oral biyofilm içerisindeki bakteriyel metabolik aktiviteleri baskılayarak

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Bölüm 9

ANNE VE ÇOCUK AĞIZ VE DİŞ SAĞLIĞI: HAMİLELİK ÖNCESİ VE SONRASI DÖNEMDE BÜTÜNCÜL YAKLAŞIM

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GİRİŞ

Hamilelik, kadının biyolojik ve fizyolojik sistemlerinde anne ve fetüsün artan gereksinimlerine bağlı olarak çok sayıda değişimin görüldüğü doğal bir süreçtir. [1, 2] Hamilelik hastalık durumu olmamakla birlikte, bu dönemde diş çürükleri ve periodontal hastalık riskinin artması nedeniyle ağız ve diş sağlığının idame edilmesi büyük önem taşır.[3]

Diş hekimliği uygulamaları açısından en güvenli dönem ikinci trimester olup, acil durumlar dışında birinci ve üçüncü trimesterlerde tedavi önerilmemektedir. Annedeki yetersiz ağız sağlığı, çocukta olumsuz ağız sağlığı sonuçlarıyla ilişkili olup, *Streptococcus mutans*'ın anne–bebek arasında dikey geçişinin önlenmesinde koruyucu ağız bakımının rolü büyüktür.[4, 5] Bu nedenle gebelik sürecinin iyi bilinmesi, dental girişimlerin doğru planlanması ve güvenli biçimde yönetilmesi açısından büyük önem taşımaktadır.

1. HAMİLELİK ÖNCESİ DÖNEMDE AĞIZ VE DİŞ SAĞLIĞININ KORUNMASI

Prekonsepsiyonel bakım, hamilelik planlayan kadınlarda gebeliği etkileyebilecek biyomedikal, sosyal ve davranışsal risklerin belirlenmesini, bu risklerin olumsuz etkilerini azaltmaya yönelik bilgilendirme ve tıbbi desteğin sağlanmasını ve riskler kontrol altına alındıktan sonra hamileliğin başlatılmasını amaçlayan

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Bölüm 10

ÇOCUK DİŞ HEKİMLİĞİNDE LABİAL VE LİNGUAL FRENULUMLARIN DEĞERLENDİRİLMESİ VE YÖNETİMİ

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GİRİŞ

Frenulum, ağız boşluğunda dudak, yanak ve dil gibi yapıları; alveolar mukoza, diş eti veya ağız tabanına bağlayan, embriyolojik gelişim sırasında oluşan, kas ve bağ dokusu içeren anatomik bir yapıdır. Çeşitli varyasyonlar gösterebilen frenulumlar, ağızda fonksiyonel hareketlere izin verecek esneklikte ve uygun lokalizasyonda bulunduğunda fizyolojik kabul edilir. Ancak bazı durumlarda frenulumun anormal kalınlıkta, kısa veya düşük yerleşimli olması durumunda oral fonksiyonları kısıtlayabilen patolojik bir yapı haline gelebilir (1).

Ağız içinde toplamda 7 frenulum bulunur; bunlardan en belirgin olanları maksiller labial frenulum, mandibular labial frenulum, lingual frenulum ve 4 bukkal (yanak) frenulumdur. Frenulumların birincil işlevleri üst ve alt dudak ile dilin stabilitesini sağlamaktır. Dudak frenulumları, üst dudağın orbicularis oris kasından kaynaklanan ve dudaklarda alveolar mukoza ve altındaki periosteuma bağlanan, kas lifleri içeren ince mukoza kıvrımlarıdır. İnfant döneminde alveolar kret boyunca uzanarak palatinal papillaya kadar ulaşabilen bu yapı, dişlerin sürmesiyle birlikte alveolar kretin büyümesine bağlı olarak genellikle erişkin konfigürasyonuna dönüşür (2).

Özellikle pediatrik hastalarda bu yapıların morfolojisi ve fonksiyonel etkileri; emzirme, konuşma, oral hijyenin sürdürülebilirliği, periodontal sağlık ve dentofasiyal gelişim açısından klinik önem taşımaktadır. Frenulum bağları

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yönelmesine izin verilmesi, emme ve memeye tutunma fonksiyonunun gelişimine katkı sağlamaktadır. Tüm germe egzersizleri ve bakım protokollerinin en az 6 gün boyunca düzenli olarak sürdürülmesi önerilmektedir. Cerrahiden yaklaşık 4 gün sonra yapılacak kontrol muayenesinde, gerekli görülen durumlarda, cerrahi alan tam iyileşme gerçekleşmeden yeniden açılabilir (37).

Postoperatif dönemde ağrı kontrolü de bakım protokolünün önemli bir bileşenidir. Cerrahi alana pansuman yapılması veya antibiyotik kullanımı gerekli değildir ancak cerrahiye bağlı rahatsızlığın önlenmesi veya azaltılması amacıyla, uygun dozda parasetamol (asetaminofen) veya ibuprofen tavsiye edilebilir (1, 38).

SONUÇ

Frenulum anomalilerinin değerlendirilmesi ve yönetimi, özellikle çocuk hastalarda, yalnızca anatomik görünüme değil fonksiyonel etkilenim düzeyine bağlı olarak ele alınmalıdır. Mevcut kanıtlar, her anormal görünümlü frenulumun cerrahi müdahale gerektirmediğini; tedavi kararının emme, konuşma, periodontal sağlık ve ortodontik stabilite gibi klinik parametreler doğrultusunda bireyselleştirilmesi gerektiğini göstermektedir. Gereksiz cerrahi müdahalelerin önlenmesi ve uygun olguların zamanında tedavi edilmesi, hem fonksiyonel hem de estetik sonuçların sağlanması açısından önem taşımaktadır.

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Bölüm 11

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Elif Nur BEYAZ[1]

GİRİŞ

Dental erozyon; bakteriyel bir süreçten bağımsız olarak, dışsal veya içsel kaynaklı asitlerin yol açtığı kimyasal etkiler sonucu diş sert dokularında gelişen geri dönüşümsüz ve ilerleyici doku kaybı ile karakterizedir (1-2). Çürükten farklı olarak mineral kaybının temel belirleyicisi dental plak ve bakteriler değil, diş yüzeyinin asitlerle tekrarlayan temasıdır. Bu nedenle dental erozyon, erken dönemde belirgin semptom vermeden ilerleyebilen ve klinikte çoğu zaman sessiz seyreden bir durum olarak kabul edilir (3).

Çocukluk döneminde dental erozyon, estetik ve fonksiyonel etkilerinin yanı sıra ileri olgularda dentin ekspozisyonu ve pulpa dokusuna yaklaşan kayıplar nedeniyle daha invaziv tedavilere ihtiyaç doğurabilmesi açısından ayrı bir önem taşır (4). Süt dişlerinde mine yapısının kalıcı dişlere göre daha az mineralize ve daha ince olması, eroziv süreçlerin daha hızlı ilerlemesine ve bazı olgularda pulpal komplikasyon riskinin artmasına zemin hazırlayabilir (3-4). Bu bağlamda erozyon, yalnızca mevcut yakınmalarla sınırlı olmayan; uzun vadede çiğneme fonksiyonu, oklüzal bütünlük ve restoratif ihtiyaçlar üzerinde etkileri olabilen bir klinik problem olarak ele alınmalıdır.

Dental erozyonun gelişiminde çok sayıda etken rol oynar. Dış kaynaklı faktörler arasında asidik yiyecek ve içecek tüketimi, belirli çalışma/çevre koşulları, yüzme havuzu suyu ve bazı ilaçlar sayılabilir. İç kaynaklı faktörler ise kusma ile ilişkili endojen asit teması, gastroözofageal reflü hastalığı ve yeme bozuklukları gibi durumlarla ilişkilidir. Bunun yanında maruziyetin sıklığı ve süresi, beslenme örüntüsü, yaşam tarzı ve ağız hijyeni uygulamaları gibi davranışsal bileşenler erozyon riskini belirgin biçimde etkileyebilir (3). Dolayısıyla dental erozyon, etiyolojisinde çoklu faktörlerin etkileştiği bir tablo olarak değerlendirilmelidir.

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EK 1. 3 Günlük Pediatrik Diyet ve Asit Maruziyeti Analiz Formu

Ebeveyn/Hasta İçin Doldurma Talimatı: Lütfen çocuğunuzun gün içinde tükettiği tüm yiyecek, içecek, ilaç ve takviyeleri saatiyle birlikte kaydedin. Kayıt işlemi biri hafta sonu olmak üzere art arda 3 gün boyunca yapılmalıdır. Özellikle içeceklerin nasıl tüketildiği (biberonla, uzun süre yudumlayarak, pipetle vb.) erozyon riskini belirlemede büyük önem taşır.

Bölüm 12

ÇOCUKLARDA DENTAL KAYGININ YÖNETİMİNDE BİLİŞSEL DAVRANIŞÇI TERAPİ

Elif Nur BEYAZ[1]

GİRİŞ

Dental kaygı; diş tedavisi ya da diş tedavisi beklentisiyle ilişkili, belirgin düzeyde güçlü olumsuz duygulanımın eşlik ettiği bir durum olarak tanımlanmaktadır (1). Çoğu olguda başlangıcın çocukluk ve ergenlik dönemine uzanması, dental kaygının erken dönemde tanınmasını ve yönetilmesini özellikle önemli kılar. Dental kaygı arttıkça diş hekimi başvurularında kaçınma ve tedaviyi erteleme eğilimi gelişebilmekte; bunun sonucunda tedavi edilemeyen çürükler, diş kayıpları ve periodontal sorunlar gibi olumsuz ağız sağlığı sonuçları ortaya çıkabilmektedir. Bu olumsuzluklar yalnızca fiziksel sağlıkla sınırlı kalmayıp utanma, öz saygıda azalma gibi psikososyal sonuçlara da yol açabilmektedir (2). Öte yandan, dental kaygısı yüksek hastaların klinik yönetimi diş hekimleri açısından da daha zorlayıcı olabilmekte; endişeli hasta oranı arttıkça diş hekimlerinde tükenmişlik riskinin yükseldiğini bildiren veriler bulunmaktadır (3). Bu nedenlerle, dental kaygının etkili biçimde ele alınması ağız ve diş sağlığı hizmetlerinde öncelikli bir hedef olarak değerlendirilmelidir.

Dental kaygının çocukluk çağındaki yaygınlığına ilişkin çalışmalar, prevalansın farklı popülasyonlarda oldukça geniş bir aralıkta (%3–43) değişebildiğini göstermekte; bu çeşitliliğin yöntemsel farklılıklar ve kültürel etmenlerle ilişkili olabileceği düşünülmektedir (4). Dental kaygı, çoğu zaman kaçınmayı besleyen ve ağız sağlığını daha da kötüleştirerek kaygıyı pekiştiren bir kısır döngü içinde süreklilik kazanabilir (5). Bu klinik tablo karşısında pediatrik diş hekimliğinde geleneksel olarak "söyle-göster-yap" gibi davranış yönlendirme teknikleri ile sedasyon (örn. midazolam, nitröz oksit) ve genel anestezi gibi yaklaşımlar yaygın biçimde kullanılmaktadır. Ancak farmakolojik yöntemler gerekli diş

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Bu noktada Bilişsel Davranışçı Terapi (BDT), çocuğa hem davranışsal hem de bilişsel başa çıkma becerileri kazandırmayı hedefleyen yapılandırılmış yapısıyla öne çıkmaktadır (45, 49). Güncel randomize kontrollü çalışmalar, BDT'nin çocuklarda dental kaygıyı azaltmada etkili olduğunu, kooperasyonu artırdığını ve sedasyona kıyasla daha düşük risk profiliyle güvenli bir alternatif sunduğunu göstermektedir (58). Ayrıca teknoloji destekli ve internet tabanlı uygulamalar, bu etkili yöntemin klinikte daha erişilebilir olmasının önünü açmaktadır (63, 68).

Sonuç olarak, dental kaygının yönetiminde BDT tekniklerinin kullanımı, sadece o anki ağız sağlığı sorununu çözmekle kalmayıp, çocuğun yaşam boyu sürecek olumlu bir diş hekimi algısı geliştirmesine katkı sunmaktadır. Gelecekte yapılacak çalışmaların ve geliştirilecek kısa müdahalelerin yaygınlaşması (69); BDT'nin yalnızca psikologların uyguladığı özelleşmiş bir yöntem olmaktan çıkıp, diş hekimlerinin günlük pratiğinde hastalarını kaygıdan korumak için kullandığı temel ve sürdürülebilir bir yaklaşım haline gelmesini sağlayacaktır.

KAYNAKÇA

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Bölüm 13

PEDİATRİK DİŞ HEKİMLİĞİNDE ÜÇ BOYUTLU (3B) BASKI TEKNOLOJİLERİNİN GÜNCEL UYGULAMALARI VE KLİNİK KULLANIM ALANLARI

Enes BARDAKÇI[1]

GİRİŞ

Dijital teknolojilerin sağlık bilimlerine entegrasyonu, son otuz yılda tanı, tedavi planlaması ve üretim süreçlerinde köklü bir dönüşüm yaratmıştır. Diş hekimliğinde bilgisayar destekli tasarım (Computer-Aided Design, CAD) ve bilgisayar destekli üretim (Computer-Aided Manufacturing, CAM) sistemlerinin yaygınlaşması, klinik iş akışlarında dijitalleşme ve otomasyonu mümkün kılmıştır. Uzun yıllar boyunca diş hekimliğinde CAM uygulamaları büyük ölçüde çıkarımsal üretim (subtractive manufacturing) teknikleri ile özdeşleşmiş; bu yöntemde restorasyonlar veya protetik yapılar, katı bir bloktan frezeleme, aşındırma veya delme işlemleriyle elde edilmiştir. Ancak çıkarımsal üretim; yüksek materyal kaybı, karmaşık geometrilerin üretiminde sınırlılıklar ve üretim kapasitesindeki kısıtlılıklar gibi önemli dezavantajlara sahiptir (1, 2).

Bu sınırlılıkların aşılmasında eklemeli üretim (additive manufacturing) teknolojileri önemli bir alternatif olarak ortaya çıkmıştır. Yaygın olarak "üç boyutlu (3B) baskı" veya "hızlı prototipleme" olarak adlandırılan bu yaklaşımda, dijital ortamda tasarlanan bir nesne, materyalin katmanlar hâlinde ardışık olarak biriktirilmesiyle oluşturulmaktadır. Geleneksel üretim yöntemlerinden farklı olarak, 3B baskı teknolojileri minimum materyal kaybı ile karmaşık ve yüksek çözünürlüklü yapılar üretebilme kapasitesine sahiptir. Katman kalınlıklarının mikrometre düzeyinde (genellikle 10–20 μm aralığında) olması, yüzey detayının daha hassas biçimde elde edilmesini mümkün kılmaktadır. Bu özellikleri sayesinde eklemeli üretim, çıkarımsal tekniklerin teknik ve ekonomik sınırlamalarını önemli ölçüde azaltmaktadır (3, 4).

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hazırlanabilmektedir. Bununla birlikte, baskı materyallerinin biyouyumluluğu ve biyostabilitesi, uzun dönem klinik dayanıklılık, yazılım entegrasyonu, validasyon süreçleri ve maliyet etkinlik gibi konularda hâlen geliştirilmesi gereken alanlar bulunmaktadır.

Mevcut bulgular, 3B baskının sunduğu avantajların sınırlılıklarına kıyasla daha ağır bastığını göstermektedir; ancak bu teknolojilerin rutin klinik uygulamalara güvenli ve sürdürülebilir biçimde entegre edilebilmesi için daha fazla uzun dönem klinik çalışma ve bilimsel kanıta ihtiyaç vardır. Gelecekte, dijital görüntüleme sistemleri ve yapay zekâ destekli tasarım yazılımları ile birlikte gelişen 3B baskı teknolojilerinin, pediatrik diş hekimliğinde daha hassas, hasta odaklı ve yenilikçi bir tedavi anlayışının temel unsurlarından biri olması beklenmektedir.

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Bölüm 14

PEDODONTİ EĞİTİMİNDE YAPAY ZEKA DESTEKLİ MODERN YAKLAŞIMLAR

Betül TAŞKAYA[1]

1. GİRİŞ

Bilim her zaman kendi kendine düşünebilen makineyle ilgilenmiştir. 1947'de Alan Turing, "İhtiyacımız olan şey, deneyimden öğrenebilen bir makinedir" demiştir (1). O zamandan beri yapay zeka, tıp ve diş hekimliği de dahil olmak üzere çeşitli sektörlerde yaygın uygulamalara sahip, hızla gelişen bir teknolojiye dönüşmüştür. Günümüzde yapay zeka; normalde insan zekası gerektiren görevleri (problem çözme, karar verme, dil anlama ve örüntü tanıma gibi) yerine getirebilen bilgisayar sistemlerinin geliştirilmesi olarak anlaşılmaktadır. Diş hekimliğinde, yapay zekanın bu yetenekleri tanısal radyoloji (2,3), tedavi planlaması (4,5) ve sanal gerçeklik aracılı davranış yönetimi (6) gibi çeşitli alanlarda kullanılmıştır. Ek olarak, yapay zeka aynı zamanda bir eğitim aracı olarak da tanınmakta ve diş hekimliği stajyerleri arasında öğrenmeyi geliştirmek, geri bildirimi kişiselleştirmek ve kanıta dayalı karar vermeyi desteklemek için yeni yollar sunmaktadır (7,8) . Bu ilerlemelere rağmen, yapay zekanın diş hekimliği müfredatına entegrasyonu tutarsız kalmaktadır (8) ve etik, veri gizliliği, önyargı ve mevcut kanıtların sağlamlığı hakkındaki endişeler devam etmektedir (4,5,8,9). Yapay zekanın şu anda nasıl kullanıldığını, pediatrik diş hekimliği eğitimine ne gibi faydalar sağlayabileceğini, güvenli ve etkili bir şekilde benimsenmesini sağlamak için nelere dikkat edilmesi gerektiğini değerlendirmek gerekmektedir. Bu bölüm, pediatrik diş hekimliği eğitiminde yapay zeka uygulamalarının mevcut durumunu incelemeyi amaçlamaktadır.

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Haptik eğitiminin daha fazla pedodontik eğitime özgü prosedürü içerecek şekilde genişletilmesi faydalı olacaktır. Büyük dil modelleri anlık ve kişiselleştirilmiş geri bildirim sunar ancak yanlışlık, önyargı, veri gizliliği endişeleri ve öğrencilerin bağımsız klinik akıl yürütme becerisini geliştirmek pahasına yapay zekaya aşırı bağımlı hale gelme tehlikesi gibi riskler taşır. Bu sınırlamalar, yapay zeka araçlarının sağlam bir şekilde doğrulanması, veri kümelerinin daha iyi kullanılabilirliği ve yapay zekanın geleneksel öğretimin yerine değil, tamamlayıcısı olarak entegre edilmesini sağlamak için net yönergeler ihtiyacını vurgulamaktadır; insan gözetimi ve eleştirel düşünme merkezde kalmalıdır. Yapay zeka öğrenmeyi ve geri bildirimi hızlandırabilirken; kontrolsüz kullanım, akıl yürütmeyi bozma, önyargıyı sürdürme ve yanlış bilgiyi yayma riskini taşır. Gelecekteki araştırmalar, güvenli, kanıta dayalı uygulamayı sağlamak için pediatrik odaklı denemelere, standartlaştırılmış değerlendirmeye ve etik gözetime öncelik vermelidir.

5. SONUÇ

Yapay zeka pediatrik diş hekimliği eğitiminde heyecan verici yeni bir çağı temsil etmekte olup, öğrencilerde öğrenmeyi geliştirmede ve diş hekimliği müfredatını zenginleştirmede benzersiz fırsatlar sunma potansiyeline sahiptir. Yapay zekâ, özellikle öğrenciler arasında özgüven ve hassasiyeti artırmada anlamlı eğitimsel faydalar göstermiştir. Bununla birlikte kanıtlar henüz öncül niteliktedir, genellikle metodolojik ve bağlamsal kısıtlamalarla sınırlıdır. Yapay zekânın faydalarını tam olarak gerçekleştirirken riskleri azaltmak için yapay zekâyı geleneksel öğretim ve iletişim yöntemlerinin yerine değil, tamamlayıcısı olarak yerleştirmeye odaklanılmalıdır. Gelecekte pedodonti eğitimine özgü veri kümelerini genişletmeye yönelik çalışmalar yapılmalıdır. Yapay zekânın müfredata entegrasyonunun standardizasyonu, eğitimciler ve düzenleyici kurumlar tarafından tartışılmalı ve geliştirilmelidir. Dikkatli entegrasyon ve sürekli değerlendirme ile yapay zekâ, eğitim stratejilerini güçlendirmede ve çocuklarda ağız sağlığının iyileştirilmesinde daha etkili katkıda bulunma kapasitesine sahiptir.

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Bölüm 15

PEDODONTİDE AROMATERAPİ DESTEKLİ DAVRANIŞ YÖNETİMİ

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Şeyda Merve YABAŞ[2]

GİRİŞ

Bitkiler, hastalıkların önlenmesi ya da kontrol altında tutulması amacıyla insanlık tarihi boyunca çeşitli biçimlerde yararlanılan doğal kaynaklardandır. Aromaterapi ise; bitkilerden elde edilen uçucu yağlar ile aromatik bileşenlerin soluma (inhalasyon) veya deri yoluyla (topikal) uygulanması esasına dayanan tamamlayıcı bir tedavi yöntemi olarak tanımlanmaktadır (1-3).

Terapötik özelliklere sahip olan ve esansiyel yağ olarak da adlandırılan uçucu yağlar; aromatik bitkilerin yaprak, gövde, çiçek, meyve, kabuk veya tohum gibi farklı kısımlarından genellikle damıtma (distilasyon) metoduyla çıkarılmaktadır. Bu geleneksel yöntem, buharın etkisiyle bitkisel hammaddenin bileşenlerinden uçucu yağ fraksiyonlarının ayrıştırılması esasına dayanmaktadır ve yüzyıllardır bitkisel özlerin saflaştırılmasında kullanılmaktadır (4, 5) (Şekil 1).

Aromaterapi, Tamamlayıcı ve Alternatif Tıp (TAT) uygulamaları içinde en sık tercih edilen yöntemlerden biri olarak kabul edilmektedir (6, 7) .Uçucu yağlar antibakteriyel, antiviral, antiinflamatuar, ağrı kesici, yatıştırıcı ve bağışıklık sistemini destekleyici özellikleri nedeniyle çeşitli terapötik amaçlarla kullanılmaktadır (8). Aromaterapinin ciddi komplikasyonlara yol açmadığının bilinmesi ve uygulanmasının basit olması, bu yöntemi kanser dâhil çeşitli hastalıkların tedavisinde destekleyici bir seçenek olmasını sağlamıştır. Uçucu yağlar; yanık, mantar enfeksiyonları, soğuk algınlığı ve postoperatif ağrı gibi akut durumların yanı sıra hipertansiyon, inme, multiple myelom (MM) ve

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ile müzik temelli dikkat dağıtma yönteminin dental anksiyete üzerindeki etkileri karşılaştırılmıştır. Bulgular, her iki nonfarmakolojik yaklaşımın da çocuk hastalarda dental kaygıyı anlamlı düzeyde azalttığını; ancak müzikle dikkat dağıtma yönteminin portakal yağı aromaterapisine kıyasla daha yüksek etkinlik gösterdiğini ortaya koymuştur. Bununla birlikte müzikle dikkat dağıtma, aromaterapi ya da bu iki yöntemin birlikte kullanımı; çocuk hastaların anksiyetesini hafifletmek ve diş hekimi ziyaretini hasta, ebeveyn ve klinisyen açısından daha olumlu bir deneyime dönüştürmek amacıyla pedodonti kliniklerinde davranış yönetimi stratejileri kapsamında önerilmektedir (59).

4. SONUÇ

Bitkisel uçucu yağların, hastalıkların önlenmesi ve tedavi süreçlerinde uzun yıllardır topikal ya da inhalasyon yoluyla kullanılabildiği bilinmektedir. Diş hekimliğinde kullanımı önerilen bu yağların; antiinflamatuvar, antibakteriyel, antiviral, antifungal, anksiyolitik, antiseptik, hemostatik, antikaryojenik, remineralizasyonu destekleyici, sedatif ve anestezik etkiler gösterebildiği bildirilmektedir.

Rahatlatıcı ve anksiyete giderici özellik taşıyan esansiyel yağlarla gerçekleştirilen aromaterapi uygulamalarını içeren çalışmalar incelendiğinde, özellikle çocuk hastalarda dental anksiyete üzerinde olumlu etkiler sağlandığı açık biçimde görülmektedir. Aromaterapinin düşük maliyetli ve kolay uygulanabilir bir yöntem olması nedeniyle, özellikle operasyon öncesi anksiyete durumlarında çocuk hastalarda kullanılabileceği; uygulama sonrasında da pozitif sonuçlar elde edilebildiği araştırmalarla ortaya konmuştur.

Bununla birlikte, aromaterapinin çocuk diş hekimliğinde nonfarmakolojik yöntemlerden biri olarak daha yaygın biçimde kullanılabilmesi için farklı yaş gruplarını ve çeşitli dental tedavi türlerini kapsayan daha kapsamlı klinik çalışmaların gerçekleştirilmesi gerekmektedir.

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Bölüm 16

PEDODONTİDE NON-FARMAKOLOJİK DAVRANIŞ YÖNETİMİ: HİPNOZ, DİJİTAL DİSTRAKSİYON VE SANAL GERÇEKLİK YAKLAŞIMLARI

Banu Çiçek TEZ YAŞAR[1]

GİRİŞ

Dental anksiyete, çocukların yaklaşık %36,5'ini etkileyen, tedaviye karşı direnç ve kontrol kaybı hissiyle karakterize yaygın bir sorundur (1,2). Sedasyon gibi farmakolojik yöntemlerin yan etkileri ve maliyetleri, geleneksel davranış yöntemi tekniklerinin ise dijital çağ çocuklarında bazen yetersiz kalması, klinisyenleri modern ve teknoloji temelli yaklaşımlara yöneltmiştir (3-6). Pedodonti literatüründe "davranış yönetimi", "davranış yönlendirme" ve "davranış rehberliği" terimleri zaman zaman birbirinin yerine kullanılmaktadır. Bu bölümde "davranış yönetimi" terimi, çocuğun tedavi sürecine uyumunu artırmaya yönelik tüm iletişimsel, psikolojik ve teknoloji destekli non-farmakolojik yaklaşımları kapsayan üst bir kavram olarak kullanılmıştır (30).

Bu kapsamda öne çıkan dijital distraksiyon ve Sanal Gerçeklik (VR), çocuğu üç boyutlu sanal bir dünyaya hapsederek klinik ortamın anksiyojenik uyaranlarını (ses, iğne görüntüsü vb.) tamamen bloke eder (7,8). 'Dikkat-Ağrı Modeli' 'ne dayanan bu süreç, bilişsel kaynakları dental işlemden uzaklaştırarak ağrı ve kaygı algısını anlamlı düzeyde azaltır (9).

Tıbbi hipnoz ise çocukların gelişmiş hayal güçlerinden yararlanarak duyarlılığını arttıran ve dış dünyadan kopuş sağlayan bir yöntemdir. Güncel yaklaşımlar, VR teknolojisinin hipnoz senaryolarıyla birleştirilmesinin (VR Hipnozu) her iki tekniğin sinerjik etkisinden yararlanarak daha derin bir terapötik deneyim sunduğunu savunmaktadır (10).

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dental deneyimini korku odaklı bir süreçten pozitif bir sağlık deneyimine dönüştürme potansiyeline sahiptir.

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Bölüm 17

SPOR DİŞ HEKİMLİĞİ VE AĞIZ KORUYUCULAR

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1.GİRİŞ

Spor diş hekimliği, bireylerin katıldığı fiziksel aktiviteler sırasında meydana gelebilecek ağız ve çene yapısına ilişkin travmaların ve patolojik durumların önlenmesi, tanılanması ve tedavi edilmesiyle ilgilenen disiplinler arası bir diş hekimliği alanıdır. Uluslararası Diş Hekimliği Federasyonu (FDI), bu alanı spor etkinlikleri sırasında oluşabilecek oral kavite ve stomatognatik sistemle ilişkili lezyonlara yönelik koruyucu ve terapötik yaklaşımlar geliştirmeyi amaçlayan bir uzmanlık sahası olarak tanımlamaktadır (1). Elit düzeyde sporcuların ağız sağlığına ilişkin sorunlar, literatürde 1968 Olimpiyat Oyunları'ndan bu yana rapor edilmektedir. 2013 yılında yayımlanan kapsamlı bir sistematik derleme, dental çürük, periodontal hastalık, diş erozyonu ve gömülü üçüncü molar gibi sorunların profesyonel sporcularda yaygın olduğunu göstermiştir. Bu bulgular, ağız sağlığının sporcularda sıklıkla ihmal edilen ancak genel sağlık ve sportif performans açısından önemli bir bileşen olduğunu ortaya koymaktadır (2). 2019 yılında FDI tarafından yayımlanan ilk spor diş hekimliği kılavuzu ve araç seti, sporculara ve ilgili sağlık profesyonellerine yönelik küresel düzeyde farkındalık ve standartlaşma sağlamayı amaçlamıştır (1). Spor diş hekimliği yalnızca orofasiyal travmaların önlenmesiyle sınırlı olmayıp, sporcuların genel ağız sağlığının korunması yoluyla sistemik sağlık, antrenman sürekliliği ve performans üzerinde dolaylı etkiler gösterebilmektedir (3). 2019 yılında Avrupa Spor Diş Hekimliği Derneği ile Spor Diş Hekimliği Akademisi arasında imzalanan Mutabakat Zaptı (MoU), spor diş hekimliğinin gelişimini desteklemeyi ve bu alanın spor tıbbıyla entegrasyonunu güçlendirmeyi amaçlamış; bu tarihe kadar sporcuların ağız ve diş

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çocuk/adölesan grupta gelişimsel özellikler nedeniyle farklı klinik yaklaşımlar gerektirmesi, koruyucu uygulamaların önceliğini artırmaktadır. Bu kapsamda ağız koruyucuları, dentoalveolar yaralanmaların şiddetini azaltmaya katkı sağlayan koruyucu ekipmanlar arasında yer almaktadır. Ağız koruyucuların koruyucu etkinliği; koruyucu tipinin uygunluğu, materyal özellikleri ile kalınlık ve adaptasyonun yeterliliğine bağlıdır. Bununla birlikte, düzenli kullanımın sürdürülmesi ile bakım ve hijyen uygulamalarının sağlanması, ağız koruyucunun hijyenik ve yapısal bütünlüğünün korunması açısından önem taşımaktadır. Sporcuların bilgilendirilmesi, riskli spor dallarında kullanımın yaygınlaştırılması ve ağız koruyucuların belirli aralıklarla değerlendirilmesi, spor kaynaklı orofasiyal travmaların azaltılmasına yönelik temel yaklaşımlar arasında değerlendirilebilir.

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Bölüm 18

OTİZM SPEKTRUM BOZUKLUĞU OLAN ÇOCUKLARDA DENTAL YÖNETİM

Semih Ercan AKGÜN[1]

GİRİŞ

Otizm Spektrum Bozukluğu (OSB), yaşamın ilk üç yılında belirti veren, sosyal etkileşim ve iletişimde niteliksel bozulmaların yanı sıra sınırlı, tekrarlayıcı ve basmakalıp davranış örüntüleri, ilgi alanları veya etkinliklerle karakterize nörogelişimsel bir bozukluktur (1,2). OSB multifaktöriyel bir etiyolojiye sahiptir ve genetik yatkınlıklar ile çevresel faktörlerin karmaşık etkileşimi sonucu ortaya çıktığı kabul edilmektedir (3). Çevresel risk faktörleri arasında ileri anne-baba yaşı, düşük doğum ağırlığı, hamilelik sırasında geçirilen enfeksiyonlar, fetal distres, valproik asit ve talidomid gibi teratojenlere maruziyet sayılmaktadır (2,4). Ayrıca, bazı güncel çalışmalarda çevre kirliliği ve çevresel toksin maruziyetlerinin de potansiyel risk faktörleri arasında olabileceği tartışılmaktadır (4).

Epidemiyolojik veriler, OSB prevalansında küresel bir artış olduğunu net bir şekilde ortaya koymaktadır (1,4). Hastalık Kontrol ve Korunma Merkezleri (CDC) verileri, Amerika Birleşik Devletleri'nde prevalansın 1/44'e kadar yükseldiğini ortaya koyarken bu oran İtalya'da 1/87, küresel ölçekte ise prevelans 1/100 olarak rapor edilmiştir (1,3). Erkek çocuklarda kızlara kıyasla yaklaşık 4 kat daha sık görülen bu tablodaki artışın temel nedenleri arasında; tanı kriterlerinin genişletilmesi, toplumsal farkındalığın yükselmesi ve çevresel risk faktörlerinin birikimli etkisi gösterilmektedir (1,2). Bu tablo, diş hekimliği pratiğinde özel ilgi gerektiren OSB'li çocuk hasta sayısının giderek artacağını ve çocuk diş hekimlerinin bu popülasyona özgü yönetim stratejilerinde yetkinleşmesinin gerekliliğini ortaya koymaktadır (5).

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Komut: 'Şimdi ödül.' / 'Sonra eve.'

Aileye çok kısa ve net post-op. öneriler verilir, uzun konuşmalar çocuğun yanında yapılmamalıdır. Böylece çocuk, dental ziyaret deneyimini **başlangıcı ve sonu net olan, görsel olarak yapılandırılmış, tahmin edilebilir bir süreç** olarak deneyimlemektedir.

SONUÇ

Otizm Spektrum Bozukluğu olan çocukların dental yönetimi, tek tip protokolle sınırlandırılamayacak kadar dinamik ve çok boyutludur. Başarı; çocuğun duyusal profilinin analiz edildiği, görsel pedagoji araçlarının etkin kullanıldığı, ailenin sürece aktif katıldığı ve gerektiğinde farmakolojik desteğin sağlandığı multidisipliner bir yaklaşımla mümkündür. Erken yaşta hayata geçirilen kapsamlı ve koruyucu takip protokolleri, radikal tedavi endikasyonlarını önleyerek genel anesteziye duyulan ihtiyacı azaltacak ve çocuğun oral sağlık kalitesini yükseltecektir.

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Bölüm 19

ÇOCUKLARDA GASTROÖZOFAGEAL REFLÜ VE DENTAL EROZYON

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GİRİŞ

Dental erozyon, bakteriyel süreçlerden bağımsız olarak, kimyasal etkiyle diş sert dokularında meydana gelen geri dönüşümsüz madde kaybı şeklinde ele alınmaktadır (1). Eroziv aşınma olgularının çocukluk çağında daha sık raporlanması, konunun pedodonti pratiğinde artan klinik dikkat gerektirdiğini göstermektedir (2, 3).

Erken çocukluk dönemini kapsayan bir sistematik derleme ve meta-analiz çalışmasında, eroziv aşınma prevalansının çalışmalar arasında değişkenlik göstermekle birlikte, klinik açıdan dikkate değer düzeylere işaret ettiğini bildirmektedir (3). Çocuk ve ergen gruplarında yürütülen epidemiyolojik çalışmalar da dental erozyon bulgularının; diyet, ağız sağlığı davranışları, sosyodemografik değişkenler ve sistemik/medikal durumlar gibi çok sayıda faktörle ilişkilendirilebileceğini ortaya koymuştur (2, 4). Bu doğrultuda dental erozyon; yalnızca beslenme ile ilişkili ekstrensek asit maruziyetiyle değil, gastroözofageal reflü (GÖR) ve kusma gibi durumlara bağlı intrensek asit maruziyetiyle de bağlantılı olabilen, multifaktöriyel bir klinik tablo olarak değerlendirilmelidir (5, 6).

Gastroözofageal reflü, mide içeriğinin özofagusa geri kaçışıyla tanımlanan bir olgudur (6). Bu olgunun belirli yaş gruplarında fizyolojik sınırlar içinde görülebileceği, ancak semptomların klinik açıdan sorun oluşturması ve komplikasyon gelişmesi durumunda gastroözofageal reflü hastalığı (GÖRH) düzeyine geçtiği vurgulanmaktadır (6, 7).

Diş hekimliği açısından kritik nokta, reflünün yalnızca gastrointestinal yakınmalarla sınırlı kalmayıp ekstraözofageal bulgularla da ilişkili olabilmesidir.

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gelişim durumu, parafonksiyonel alışkanlıklar ve etiyolojik kontrol düzeyi tedavi planını belirleyen değişkenlerdir (6, 10, 14).

SONUÇ

Çocuk diş hekimi, klinik muayenede eroziv sert doku kaybını saptayarak reflü ile ilişkili olası intrensek asit maruziyetini ilk fark eden sağlık profesyoneli konumunda olabilmektedir. Bu nedenle erken tanı, yalnızca mine-dentin kaybının geri dönüşümsüz ilerlemesini sınırlamak açısından değil, aynı zamanda çocuğun olası gastroözofageal reflü/reflü hastalığı bağlamında sistemik değerlendirmeye yönlendirilmesi açısından da kritik öneme sahiptir. Erozyonun medikal etiyolojiyle ilişkili olabileceği olgularda pedodontist, gastroenterolog ve pediatrist iş birliği; tanısal doğruluğu artıran, etiyolojik kontrolü hızlandıran ve koruyucu programların etkinliğini güçlendiren temel bir yönetim yaklaşımı olarak öne çıkmaktadır. Eroziv diş aşınmasının yönetiminde ana hedef, asit maruziyetinin sıklık ve süresini azaltmak, risk etmenlerini kontrol etmek ve klinik şiddete göre koruyucu–restoratif müdahaleleri gerçekleştirmektir. Etiyolojik kontrol ile birlikte uygun koruyucu ajanların kullanımı, düzenli takip ve gerektiğinde minimal invaziv restoratif yaklaşımlar sayesinde mine kaybının ilerlemesi yavaşlatılabilir ve fonksiyon/estetiğin idamesi sağlanabilir. Bu doğrultuda, erken tanı ve multidisipliner yönetim, çocuklarda reflü ile ilişkili dental erozyonun başarılı biçimde kontrol altına alınmasının temelini oluşturmaktadır.

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Bölüm 20

PEDODONTİDE GENEL ANESTEZİ

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GİRİŞ

Bir çocuğun dental işlemler sırasında iş birliği gösterebilme ve kendi davranışlarını yönetebilmesinin yalnızca kronolojik yaşıyla değil; bilişsel ve duygusal gelişim düzeyiyle de yakından ilişkili olduğu bildirilmektedir (1). Pediatrik hastalarda diş tedavilerinin klinik ortamda korku ve rahatsızlık düzeyi en aza indirilerek gerçekleştirilebilmesi amacıyla, çeşitli temel davranış yönlendirme tekniklerinden yararlanılmakla birlikte yaş veya sistemik durumlarla ilgili bilişsel düzey yetersizliği gözlenen hastalarda yeterli kooperasyon sağlanamayabilmekte ve ileri davranış yönlendirme tekniklerine başvurulabilmektedir. Özellikle ileri düzey davranış yönlendirme tekniklerinin uygulanabilmesi; hastanın tıbbi, dental ve sosyal anamnezinin yanı sıra bireysel mizacının ayrıntılı biçimde değerlendirilmesini gerekli kılmaktadır. Bu yöntemlere karar verilmeden önce, bilgilendirilmiş onam süreci kapsamında olası riskler, beklenen yararlar ve alternatif tedavi seçenekleri dikkatle ele alınmalıdır. İleri davranış yönlendirme tekniklerinin güvenli ve etkin bir biçimde uygulanması, temel diş hekimliği eğitiminin ötesinde özel bilgi ve klinik deneyim gerektirmekte olup, Amerikan Pediatrik Diş Hekimliği Akademisi (AAPD) bu konuda lisansüstü düzeyde eğitim alınmasını önermektedir (2).

Özellikle altı yaşından küçük, anksiyete ve korku düzeyi yüksek olabilen çocuklar ile sistemik hastalığı bulunan ve/veya özel gereksinimi olan çocuklar, dental işlemlerin klinik ortamda iş birliği içinde gerçekleştirilebilmesi açısından yönetimi güç hasta grupları arasında yer almaktadır (3). Pediatrik diş hekimliğinde, temel davranış yönlendirme teknikleriyle klinik uygulamaların gerçekleştirilemediği durumlarda; koruyucu stabilizasyon, sedasyon ve genel

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donanımlı sağlık ekibi ihtiyacı, ameliyathane ve hastane ortamı gereksinimi, anesteziye bağlı potansiyel solunum ve kardiyovasküler komplikasyon riskleri ile sağlık sistemi üzerindeki yükü önemli kısıtlılıklar oluşturmaktadır. Buna karşılık temel davranış yönlendirme teknikleri (anlat-göster-uygula, modelleme, dikkat dağıtma, ebeveyn varlığı vb.) düşük maliyetli, invaziv olmayan ve fizyolojik risk taşımayan yaklaşımlar olup hafif ve orta düzey anksiyetesi olan çocuklarda etkili bir alternatif oluşturmaktadır. Bu yöntemelerin, ileri derecede anksiyete, hasta yaşının küçük olmasına bağlı kooperasyon kurma güçlüğü veya kapsamlı ve invaziv dental tedavi gereksinimi olan hastalarda yetersiz kalabilmesi nedeniyle genel anesteziye başvurulabilmektedir. Bu nedenle karar verme sürecinde; çocuğun yaşı, anksiyete düzeyi, sistemik durumu, tedavi kapsamı, klinik koşullar ve maliyet-etkinlik dengesi birlikte değerlendirilmeli; en az invaziv ancak en güvenli ve etkili yaklaşım tercih edilmelidir.

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Bölüm 21

SÜT ANTERİOR DİŞLERDE STRİP KRON RESTORASYONLARI

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GİRİŞ

Erken çocukluk çağı çürüğü (EÇÇ); gelişiminde birçok etkenin rol oynadığı, kronik ve enfeksiyöz bir hastalıktır. Bu hastalığın gelişiminde yalnızca dişe ve bireye ait biyolojik özellikler değil; aynı zamanda ailenin sosyoekonomik düzeyi, kültürel yapısı ve yaşam tarzı da belirleyici olmaktadır. Özellikle beslenme davranışları (biberonla uykuya dalma, şekere batırılmış emzik kullanımı vb), çocuk ve ebeveynlerin ağız hijyen alışkanlıkları ile çocuğun sistemik sağlık durumu EÇÇ riskini önemli ölçüde etkilemektedir. (1, 2).

Koruyucu diş hekimliği uygulamalarındaki gelişmelere ve ailelerin artan farkındalığına karşın özellikle düşük sosyoekonomik gruplarda EÇÇ prevalansı yüksek seyretmeye devam etmektedir (3).

Süt dişleri; çiğneme, fonasyon, estetik ve daimi dişler için yer tutuculuk işlevlerinin yanı sıra daimi okluzyonun oluşumuna rehberlik eder. Bu yaş aralığı, büyüme ve gelişmenin oldukça hızlı gerçekleştiği kritik bir süreçtir. Bu nedenle süt dişlerinde ortaya çıkan ağrı, enfeksiyon ya da erken diş kaybı; beslenme yetersizliğine, büyüme ve gelişimin olumsuz etkilenmesine yol açabilmektedir (4, 5).

Ayrıca erken süt dişi kayıpları; maloklüzyon, çene ve çevre kas dokusunun gelişiminde bozulma ile birçok probleme neden olabilmektedir. Başta dil itimi ve dil emme gibi parafonksiyonel alışkanlıklar olmak üzere, daha nadir olarak perioral kas tonusunun azalması ve alt yüz yüksekliğinde meydana gelen

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seviyesinde kaldığı belirtilmektedir (21). Yüksek başarı için nem kontrolü, kanama kontrolü ve hassas adeziv aşamaları kritiktir. Bu teknik hassasiyet, uygulamanın başarısını doğrudan etkileyen en önemli faktördür (21).

Klinik başarısızlıklara rağmen, ebeveyn memnuniyeti genel olarak yüksek (%80-88) seyretmektedir (43, 44).

I) Yeni Materyal Arayışları

Geleneksel kompozit rezinlerin yanı sıra farklı materyaller de klinik çalışmalara konu olmuştur:

RCIS Kullanımı: Bazı araştırmacılar (Margolis, Nelson), uygulama kolaylığı ve florür salınımı nedeniyle rezin modifiye cam iyonomer (RCIS) kullanımını önermiştir (45, 46). Ancak RCIS materyallerin gerekli mekanik mukavemete sahip olmadığı bildirilmiştir (4, 15).

Alternatif Simanlar: Literatürde self-adeziv rezin simanlar (RelyX Unicem) (30) ve bis-akril kompozit bazlı geçici materyallerin (Luxatemp Star) (47) kullanımı da rapor edilmiştir; ancak bu materyallerin uzun dönem başarısı hakkında henüz yeterli veri bulunmamaktadır.

SONUÇ

Sonuç olarak, süt anterior dişlerde strip kron uygulamaları; doğru vaka seçimi ve hassas bir teknikle birleştirildiğinde, hem estetik hem de fonksiyonel açıdan oldukça tatmin edici sonuçlar vermektedir. Uygulama esnasında karşılaşılan en büyük zorluk izolasyon ve kanama kontrolü olsa da, bu yöntem geniş yıkımlı dişlerin rehabilitasyonunda vazgeçilmez bir seçenek olmaya devam etmektedir. Zirkonyum kronlara kıyasla en büyük üstünlüğü, diş dokusundan çok daha az aşındırma gerektirmesi ve klinik ortamında tek seansta, laboratuvar sürecine ihtiyaç duymadan ekonomik bir şekilde tamamlanabilmesidir.

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