Genetic condition characterized by bones that break easily, often without apparent cause

Characterized by opalescent and brittle dentin

High-resolution peripheral quantitative computed tomography (HR-pQCT) offers detailed analysis of bone microarchitecture

Leads to either a quantitative or qualitative defect in collagen

Spinal fusion may be required for scoliosis

Important for dental professionals to understand nuances of OI

Exhibits a spectrum of clinical manifestations, from mild to severe forms

Patients with OI often present with specific dental challenges, necessitating tailored dental care strategies

Bisphosphonates are the cornerstone of pharmacotherapy, improving bone density and reducing fracture incidence

Type I represents the mildest form, while Type II is the most severe, often leading to perinatal mortality

Presents unique challenges and considerations in dental care

Management of DI focuses on preserving tooth structure and aesthetics

Rehabilitation focuses on muscle strengthening, improving mobility, and maximizing independence

Neurological: hydrocephalus, macrocephalus, cerebral atrophy, Idiopathic seizures, hypoacusia

DI is diagnosed through a combination of clinical examination, dental radiographs, and family history

Encode the alpha-1 and alpha-2 chains of type I collagen

Classified into three types:

- OI type I
- OI type II
- OI type III

Ongoing dental care and regular check-ups are essential to address potential issues and maintain oral health in individuals with Dentinogenesis Imperfecta

Involves genetic connective tissue disorders

Most prominent being bone fragility and frequent fractures

OSTEONECROSIS IMPERFECTA: A COMPREHENSIVE OVERVIEW AND TWO CASE REPORTS

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ABSTRACT

Osteogenesis imperfecta (OI) is a genetic disorder characterized by bone fragility, joint hyperlaxity, and connective tissue abnormalities. This disorder, resulting from mutations in collagen-related genes, manifests in various types and severities, dental implications on the presentation and treatment of OI. This article reviews the clinical manifestations of OI and its dental implications, highlighting the importance of understanding the nuances of OI for dental professionals.

CASE REPORT 1

Chart Review

- Medical history
- Osteogenesis imperfecta type II confirmed
- Medications:
  - Bisphosphonates
  - Proton pump inhibitors
- Family history:
  - Mother and sister diagnosed with osteogenesis imperfecta
- Clinical Presentation

- Both family members have multiple minor fractures
- Social history:
  - Both family members have multiple minor fractures

Pathological Findings

- Osteogenesis imperfecta type II confirmed
- Histopathological examination of bone tissue
- Histopathological examination of bone tissue

Discussion

- The role of dental care in the management of OI
- The importance of early diagnosis and intervention
- The impact of dental care on the quality of life of individuals with OI

References


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