فصل هفتم:

اطلس بیماری‌های پریودنتال

BOX 7.1 Gingival Diseases

Plaque-Induced Gingival Diseases

I. Gingivitis associated with dental plaque only
   A. Without local contributing factors
   B. With local contributing factors (eFigs. 7.1–7.32)
II. Gingival diseases modified by systemic factors
   A. Associated with endocrine system
      1. Puberty-associated gingivitis (eFig. 7.33)
      2. Menstrual cycle–associated gingivitis (eFig. 7.34)
      3. Pregnancy-associated gingivitis (eFigs. 7.35–7.37)
         a. Gingivitis
         b. Pyogenic granuloma
      4. Diabetes mellitus–associated gingivitis
   B. Associated with blood dyscrasias
      1. Leukemia-associated gingivitis (eFigs. 7.38–7.40)
      2. Other (eFigs. 7.41–7.46)
III. Gingival diseases modified by medications
   A. Drug-induced gingival diseases
      1. Drug-influenced gingival enlargement (eFigs. 7.47–7.51)
      2. Drug-influenced gingivitis
         a. Oral contraceptive–associated gingivitis
         b. Other
IV. Gingival diseases modified by malnutrition
   A. Ascorbic acid–deficiency gingivitis
   B. Other

Non–Plaque-Induced Gingival Lesions

I. Gingival diseases of specific bacterial origin
   A. *Neisseria gonorrhoeae*
   B. *Treponema pallidum*
   C. *Streptococcus* species (eFig. 7.52)
   D. Other
II. Gingival diseases of viral origin
   A. Herpesvirus infection (eFig. 7.53)
      1. Primary herpetic gingivostomatitis
      2. Recurrent oral herpesvirus infection
      3. Varicella zoster
   B. Other (eFig. 7.54)
III. Gingival diseases of fungal origin
   A. *Candida* species infections: generalized gingival candidiasis (eFigs. 7.55 and 7.56)
   B. Linear gingival erythema
   C. Histoplasmosis
   D. Other (eFigs. 7.57 and 7.58)

Continued

BOX 7.1 Gingival Diseases—cont'd

IV. Gingival lesions of genetic origin
  A. Hereditary gingival fibromatosis (eFigs. 7.59–7.61)
  B. Other
V. Gingival manifestations of systemic conditions
  A. Mucocutaneous lesions
    1. Lichen planus (eFigs. 7.62–7.65)
    2. Pemphigoid
    3. Pemphigus vulgaris (eFig. 7.66)
    4. Erythema multiforme
    5. Lupus erythematosus
    6. Drug induced
    7. Other (eFigs. 7.67–7.73)
  B. Allergic reactions
    1. Dental restorative materials
      a. Mercury
      b. Nickel
      c. Acrylic
      d. Other
    2. Reactions attributable to the following
      a. Toothpastes or dentifrices
      b. Mouthrinses or mouthwashes
      c. Chewing gum additives
      d. Foods and additives (eFig. 7.74)
    3. Other
VI. Traumatic lesions: factitious, iatrogenic, or accidental (eFigs. 7.75–7.92)
  A. Chemical injury
  B. Physical injury
  C. Thermal injury
VII. Foreign body reactions
VIII. Not otherwise specified
  A. Cysts and tumors (eFigs. 7.93–7.102)

Periodontitis (eFigs. 7.103–7.108)

I. Localized
II. Generalized
III. Periodontitis modified by systemic disorders
  A. Diabetes mellitus (eFigs. 7.109–7.113)

Periodontitis (eFigs. 7.114–7.119)

I. Localized
II. Generalized

Periodontitis as a Manifestation of Systemic Diseases

I. Hematologic disorders
  A. Acquired neutropenia
  B. Leukemias (see eFigs. 7.120–7.122)
  C. Other
II. Genetic disorders
  A. Familial and cyclic neutropenia (eFig. 7.123)
  B. Down syndrome
  C. Leukocyte adhesion deficiency syndromes (eFigs. 7.124 and 7.125)
  D. Papillon-Lefèvre syndrome (eFigs. 7.126 and 7.127)
  E. Chediak-Higashi syndrome
  F. Histiocytosis syndromes
  G. Glycogen storage disease
  H. Infantile genetic agranulocytosis
  I. Cohen syndrome
  J. Ehlers-Danlos syndrome (types 4 and 8)
  K. Hypophosphatasia (eFig. 7.128)
  L. Other
III. Not otherwise specified

Necrotizing Periodontal Diseases

I. Necrotizing ulcerative gingivitis (NUG) (eFigs. 7.129–7.131)
II. Necrotizing ulcerative periodontitis (NUP) (eFig. 7.132)
III. Bisphosphonate-related osteonecrosis (eFigs. 7.133 and 7.134)

Abscesses of the Periodontium

I. Gingival abscess
II. Periodontal abscess (eFigs. 7.135 to 7.137)
III. Pericoronal abscess (eFig. 7.138)

Periodontitis Associated With Endodontic Lesions

I. Endodontic-periodontal lesions (eFigs. 7.139 and 7.140)
II. Periodontal-endodontic lesions
III. Combined lesions

Developmental or Acquired Deformities and Conditions

I. Localized tooth-related factors
II. Mucogingival deformities around teeth
III. Mucogingival deformities on edentulous ridges
IV. Occlusal trauma

Plaque-Induced Gingival Diseases

Clinical Features of Gingivitis

- Bleeding
- Color Changes
- Consistency
- Surface Texture
- Position
- Contour

eFig. 7.1 In the healthy gingiva of a 17-year-old girl, notice the demarcation (mucogingival line) *(arrows)* between the attached gingiva and the darker alveolar mucosa.

eFig. 7.2 Two views show prominent stippling of healthy gingiva in a 21-year-old man.

eFig. 7.3 Bright-red color and loss of stippling of the gingiva is seen in a 21-year-old woman with gingivitis.

eFig. 7.4 Two views show bleeding on probing in a 24-year-old man with gingivitis and inflammatory enlargement.

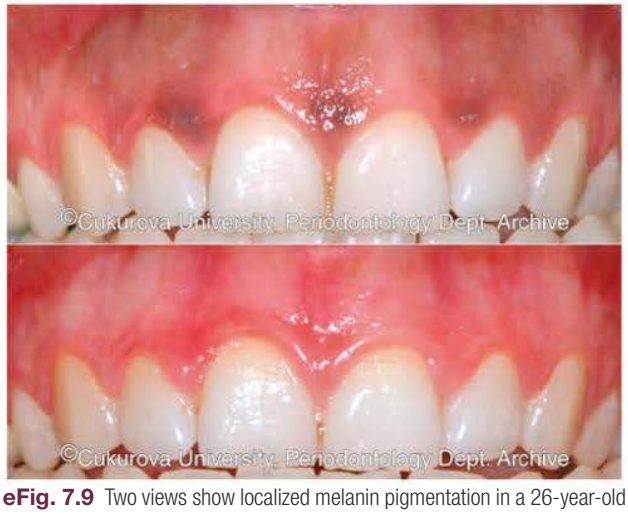
eFig. 7.5 Plaque accumulation and red color of the gingiva are seen in a 17-year-old girl with gingivitis.

eFig. 7.6 Bluish-red color of the gingiva is seen in a 46-year-old man with advanced periodontitis.

Melanin Pigmentation

eFig. 7.7 Two views show melanin pigmentation that caused aesthetic problems in a 21-year-old woman and the gums 6 months after treatment with a carbon dioxide laser.

eFig. 7.8 Two views show diffuse melanin pigmentation that caused aesthetic problems for a 34-year-old woman and the gums 2 months after treatment with conventional gingivectomy.



eFig. 7.9 Two views show localized melanin pigmentation in a 26-year-old woman and the result 1 month after treatment with a carbon dioxide laser.

eFig. 7.10 Two views show diffuse localized melanin pigmentation in a 33-year-old woman and the result 1 month after carbon dioxide laser treatment.

Causes of Periodontal Diseases

- Microbial Dental Plaque
- Calculus
- One-Sided Chewing
- Malocclusion
- Mouth Breathing

eFig. 7.11 Severe plaque accumulation and gingivitis occurred in a 13-year-old boy with neglected hygiene.

eFig. 7.12 Extensive plaque formed in a 46-year-old man with periodontitis. Darker shades of gingiva are seen in areas with subgingival calculus.

eFig. 7.13 Three views show extreme plaque formation and periodontitis in a 52-year-old woman with prolonged neglect of oral hygiene procedures.

eFig. 7.14 Plaque formation was caused by habitual one-sided chewing in a 9-year-old boy. The patient had avoided chewing on the right side because of the mobility of deciduous teeth.

eFig. 7.15 There is extensive plaque accumulation and severe inflammation in a 35-year-old male smoker.

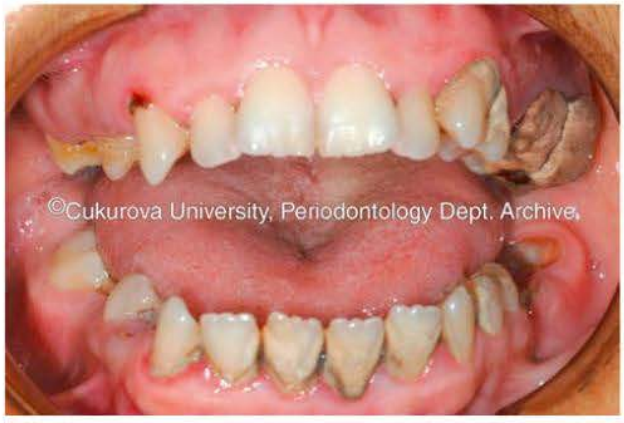
eFig. 7.16 Advanced plaque and calculus formed around implants in a 72-year-old woman.

eFig. 7.17 Plaque and calculus formed around implants in a 55-year-old man.

eFig. 7.18 Three views show calculus formation on teeth #26 and #27 where the parotid gland duct (i.e., Stensen duct) opens in a 47-year-old man. These teeth had lost their functional antagonists. Calculus also covered the occlusal surfaces.

eFig. 7.19 Calculus formed on upper molars adjacent to the Stensen duct in a 44-year-old man. Notice the divergence of the roots of the first molar.

eFig. 7.21 Bridge-like formations of calculus resulted from malocclusion, loss of an antagonist tooth, tilting of the remaining teeth, and avoidance of chewing on the affected site in a 49-year-old woman.

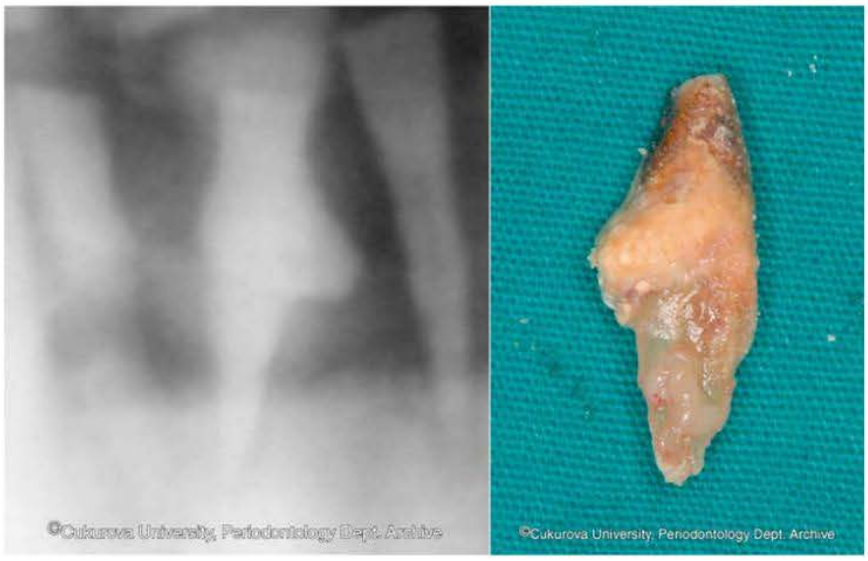


eFig. 7.20 Anterior open-bite malocclusion and the loss of functional antagonist teeth caused extensive calculus formation on the left maxillary teeth in this 35-year-old woman.

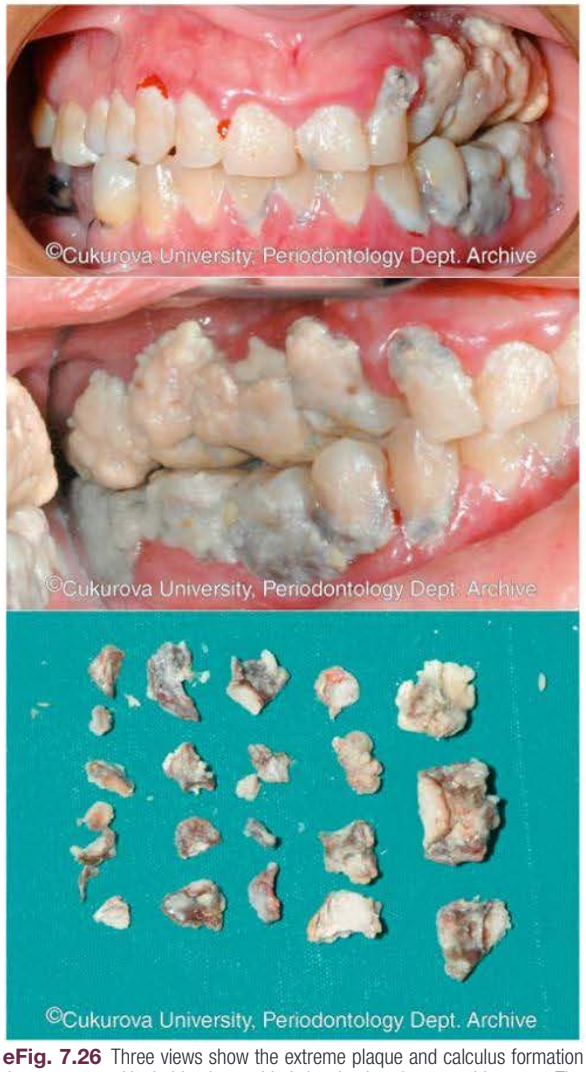
eFig. 7.22 Two views show extensive calculus that formed adjacent to the Stensen duct in a 53-year-old man.

eFig. 7.23 Extensive bridge-like calculus formed on the lingual surfaces of the lower anterior teeth where the Wharton and Bartholin ducts empty in a 36-year-old man.

eFig. 7.24 (A) Extensive bridge-like calculus formed on the lingual surfaces of the lower anterior teeth where the Wharton and Bartholin ducts empty in a 42-year-old woman. (B) In the same patient seen in (A) after extraction of the left central incisor, calculus has covered almost all surfaces of the tooth.



eFig. 7.25 A radiograph shows the radiopaque projection of extensive calculus, which is compared with its appearance after extraction in a 62-year-old man.



eFig. 7.26 Three views show the extreme plaque and calculus formation that was caused by habitual one-sided chewing in a 35-year-old woman. The patient had avoided chewing on the left side for 10 years.

eFig. 7.27 Extensive plaque and calculus formation was associated with crowding of the teeth in a 21-year-old woman.

eFig. 7.28 Periodontal destruction was associated with class III malocclusion in a 35-year-old man.

eFig. 7.29 Four views show extensive calculus formation in a 9-year-old child with an open bite and lack of hygiene.

eFig. 7.30 Two views show plaque formation and gingival inflammation with crowding and supernumerary teeth in a 14-year-old boy.

eFig. 7.31 Gingival inflammation and enlargement were associated with habitual mouth breathing in a 16-year-old boy. There is clear demarcation of the affected gingiva.

eFig. 7.32 Two views show extensive plaque and calculus formation in a 27-year-old woman and the same patient after 2 months of receiving initial debridement and oral hygiene instruction. Although the patient still has hygiene problems, the inflammation, redness, and contour of the gingiva are greatly reduced.

Gingival Diseases Modified by Systemic Factors

Endocrine System

Sex Hormones

eFig. 7.33 Puberty gingivitis in a 14-year-old girl was associated with poor hygiene, crowding of teeth, and mouth breathing. Gingival hyperplasia was confined to the anterior regions.

eFig. 7.34 Periodic localized color changes of the gingiva around maxillary anterior teeth were associated with menstruation in a 29-year-old woman.

eFig. 7.35 Localized gingival enlargement occurred in a 24-year-old woman who was in the seventh month of pregnancy. The lesion was first noticed in the fourth month by the patient.

e**Fig. 7.36** Severe gingival enlargement occurred in a 29-year-old woman who was 8 months pregnant.

eFig. 7.37 Gingival enlargement in a 32-year-old woman in the (A) seventh, (B) eighth, and (C) ninth months of pregnancy and (D) at 1 month after delivery. Notice the progression of the dimensions and the increase of the vascularization of the lesion. (E) The extraoral view shows the lesion interfering with occlusion and aesthetics.

Gingival Diseases Associated With Blood Dyscrasias

Leukemia

eFig. 7.38 Two views show gingival hyperplasia and spontaneous bleeding *(left)* in a 6-year-old boy with newly diagnosed acute myelogenous leukemia and after one course of chemotherapy and periodontal treatment *(right)*.

eFig. 7.39 Enlargement of the gingiva and floor of the mouth occurred in an 8-year-old boy with acute myelogenous leukemia.

eFig. 7.40 Severe gingival inflammation, hyperplasia, and the results of poor hygiene are seen in a 46-year-old man with myelogenous leukemia.

Anemia

eFig. 7.41 Pale gingiva and apparent vascular structures are seen in a 22-year-old woman with iron deficiency anemia.

eFig. 7.42 Severe malocclusion and gingival recession occurred in an 18-year-old boy with thalassemia.

eFig. 7.43 Skeletal disturbance of the thumb *(left)* and severe gingival inflammation with spontaneous bleeding *(right)* occurred in a 12-year-old boy with Fanconi anemia.

eFig. 7.44 Localized bleeding occurred in the tissue in a 24-year-old woman with Glanzmann thrombasthenia.

eFig. 7.45 Plaque accumulation and spontaneous bleeding occurred in a 28-year-old patient with hemophilia A who neglected oral hygiene procedures due to severe bleeding.

eFig. 7.46 Spontaneous bleeding and clot formation occurred in a 22-year-old man with von Willebrand disease.

eFig. 7.49 Gingival enlargement occurred in a 44-year-old man receiving cyclosporine after kidney transplantation.

Drug-Induced Gingival Diseases

eFig. 7.47 Gingival enlargement was associated with phenytoin use in a 20-year-old patient with epilepsy.

eFig. 7.48 Amlodipine-associated gingival enlargement was seen in a 47-year-old man with hypertension.

eFig. 7.50 (A) In a case of cyclosporine-associated gingival enlargement, the clinical crowns are covered and enlargement reaches up to the occlusal plane. (B) Intraoperative view of the enlargement. Views of the patient after (C) 6 and (D) 12 months. (*From Haytac CM, Ustun Y, Essen E, Ozcelik O. Combined treatment approach of gingivectomy and CO2 laser for cyclosporine-induced gingival overgrowth.* Quintessence Int. *2007;38[1]:e54–e59.*)

eFig. 7.51 Gingival thickening and hyperplasia occurred in a 25-year-old male bodybuilder who had been using steroid injections for 3 years.

Non–Plaque-Induced Gingival Lesions

Streptococcus Species Infections

eFig. 7.52 Lesions on the lip and gingiva are seen in a 7-year-old child with acute streptococcal gingivostomatitis.

Herpesvirus Infections

eFig. 7.53 Ruptured and unruptured herpetic vesicles *(arrows)* are seen in a 19-year-old male with herpetic gingivostomatitis.

eFig. 7.54 Two views show recurrent aphthous ulcers in a 27-year-old woman.

eFig. 7.55 Four views show severe mucositis on the gingiva, cheek, palatal mucosa, and tongue of a 7-year-old boy with acute myelogenous leukemia after remission induction chemotherapy. These lesions are very prone to candidal infections.

eFig. 7.56 Candidal infection of the oral cavity occurred after chemotherapy in a 3-year-old boy with acute myelogenous leukemia.

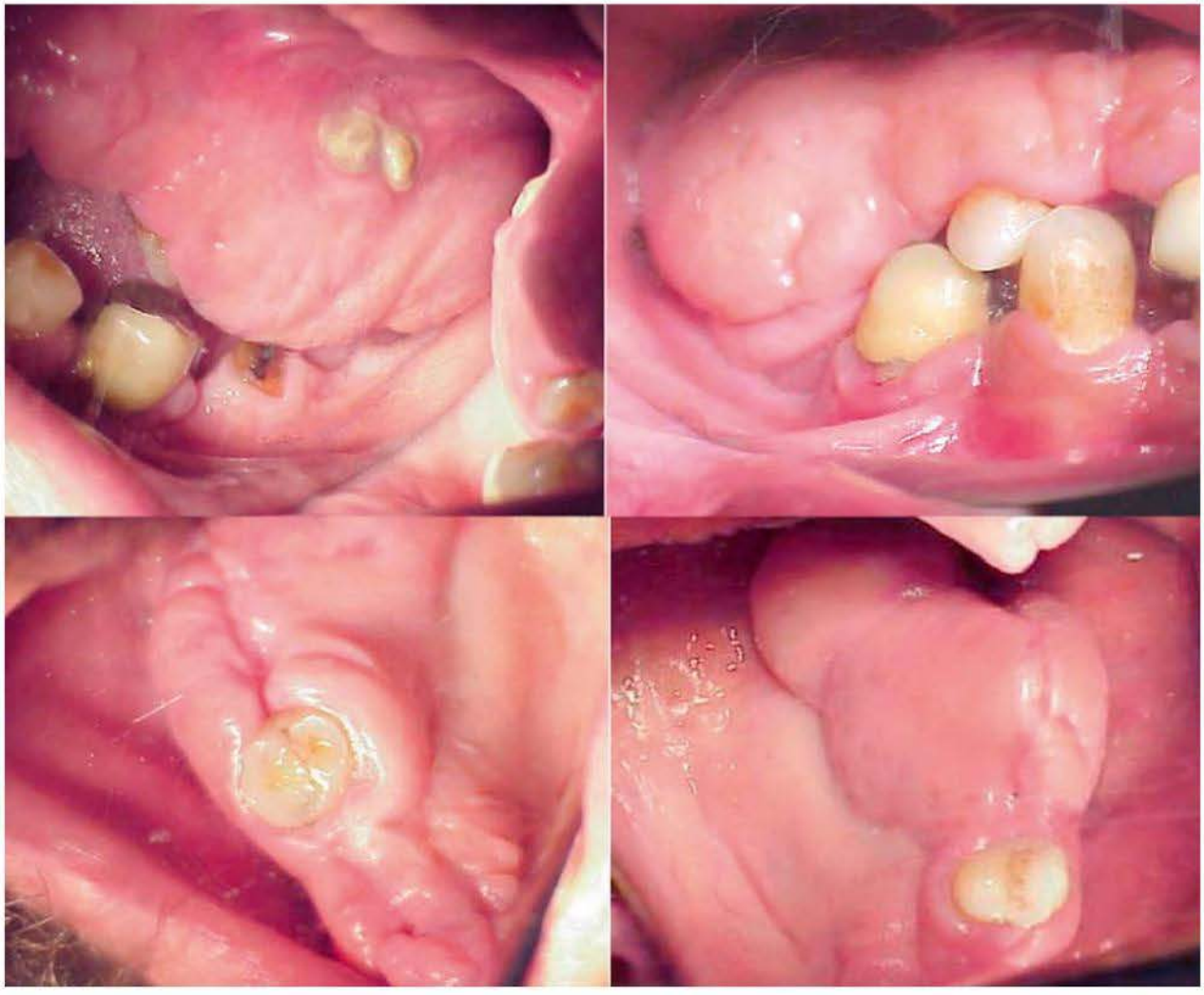
eFig. 7.57 Mucormycosis caused soft and hard tissue destruction in a 9-year-old patient with acute myelogenous leukemia.

eFig. 7.58 (A) Two views show rapid gingival and alveolar bone destruction caused by mucormycosis infection in a 14-year-old boy with acute myelogenous leukemia. The lesions started on the third day of chemotherapy, and breakdown occurred within 1 week. (B) Histologic analysis used Gomori methenamine silver staining, which showed fungal hyphae. (*Courtesy Dr. M. Cem Dogan and Dr. M. Cenk Haytac.*)

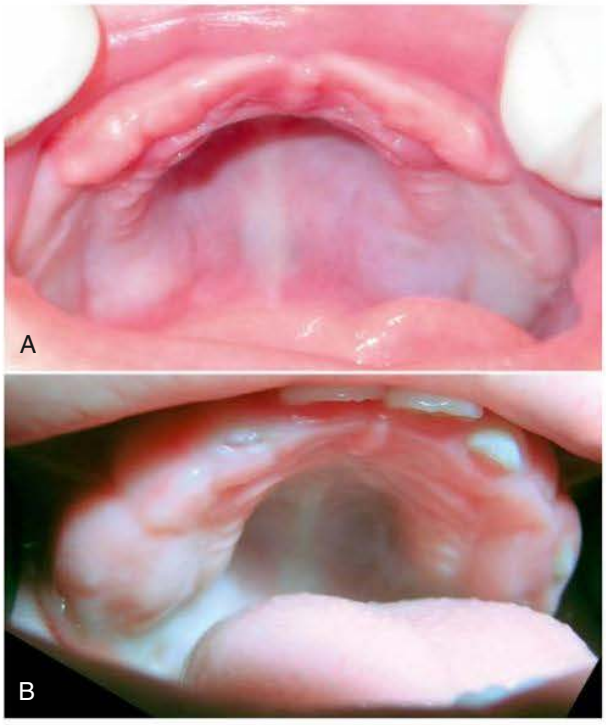
Gingival Lesions of Genetic Origin

Hereditary Gingival Fibromatosis

eFig. 7.59 Hereditary gingival fibromatosis occurred in a family. Intraoral views of the father were obtained in (A) 2000, (B) 2003, and (C) 2005.



eFig. 7.60 Hereditary gingival fibromatosis occurred in a family. In four views of the father in 2000, notice the severe enlargement of the tuberosities contacting the mandibular ridges and the root fragments in the overgrown tissue.



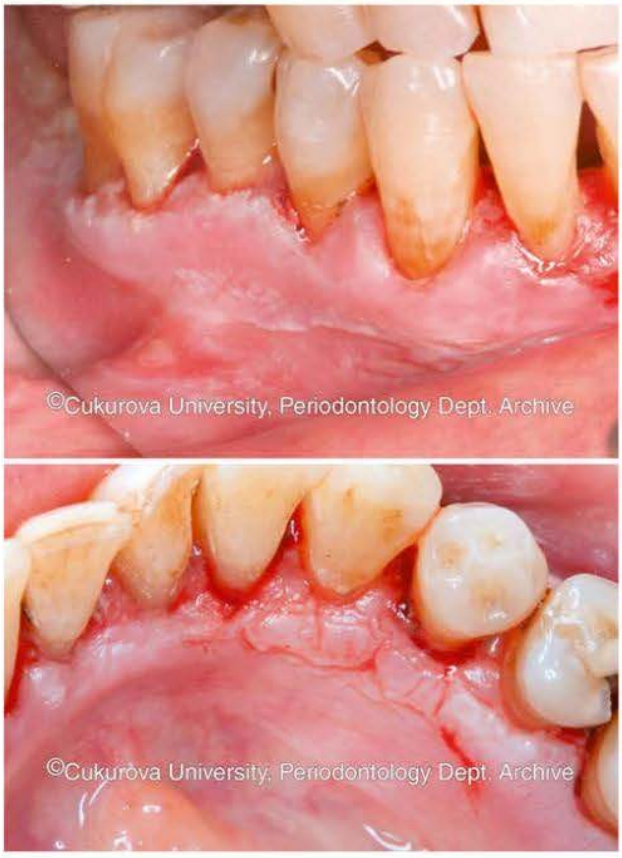
eFig. 7.61 Hereditary gingival fibromatosis occurred in a family. Intraoral views of the younger son show his condition when he was (A) 10 days and (B) 2 years old. (*From Haytac MC, Ozcelik O. The phenotypic overlap of syndromes associated with hereditary gingival fibromatosis: follow-up of a family for 5 years.* Oral Surg Oral Med Oral Pathol Oral Radiol Endodontol. *2007;103:521–527.*)

eFig. 7.63 Two views show reticular lichen planus in a 63-year-old woman who was referred because of a complaint of a burning sensation in her mouth.

Gingival Manifestations of Systemic Conditions

Mucocutaneous Lesions

eFig. 7.62 Severe desquamation and positive Nikolsky sign were seen in a 56-year-old woman with lichen planus. Desquamation leaves the connective tissue exposed and painful in response to stimulant agents.



eFig. 7.64 Two views show desquamation and spontaneous bleeding in a 62-year-old woman with erosive lichen planus. The patient was extremely sensitive to temperature changes and foods.

eFig. 7.65 Two views show atrophic lichen planus that exposed connective tissue in a 62-year-old man.

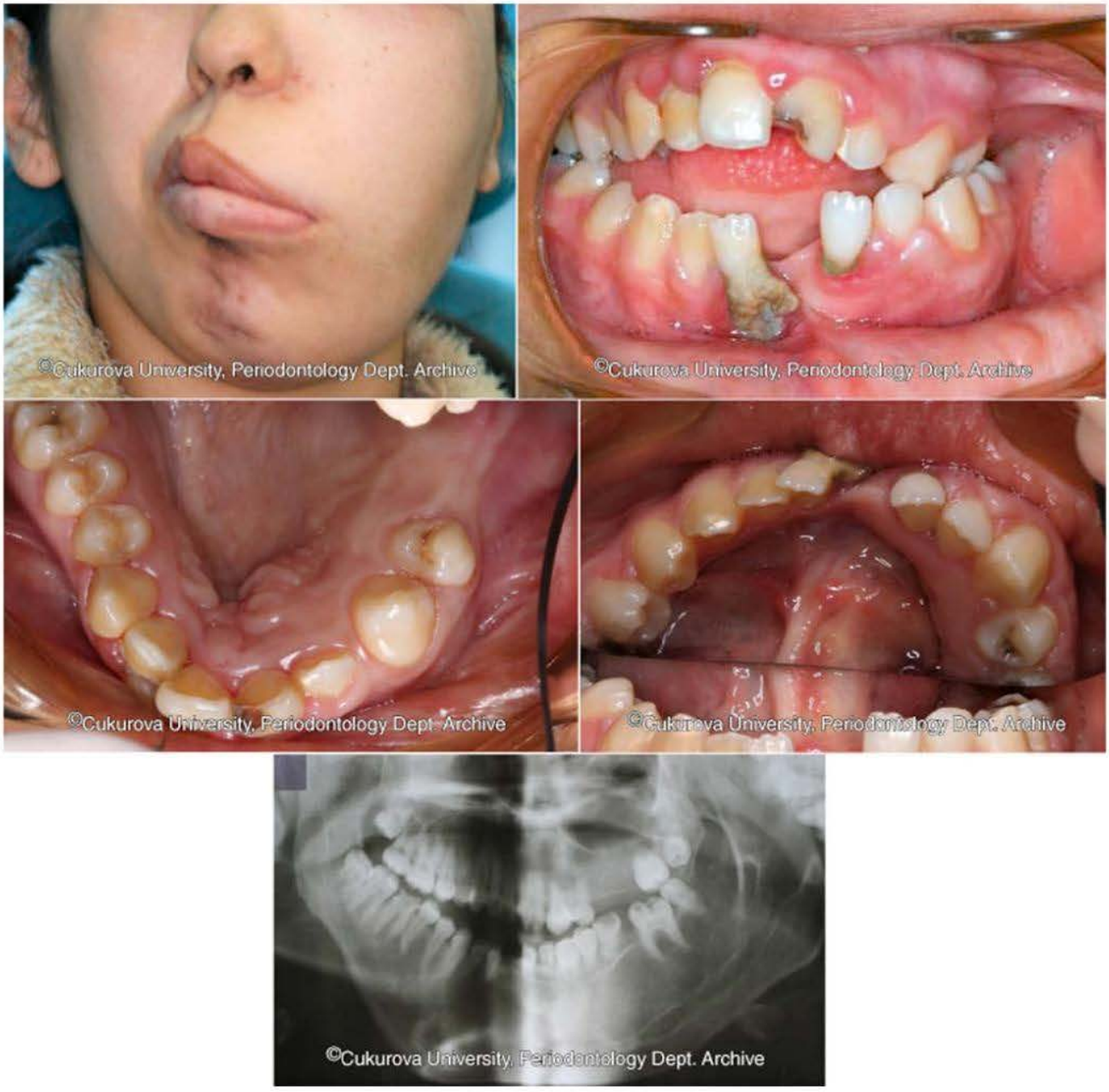
eFig. 7.66 Three views show pemphigus vulgaris characterized by desquamation, pain, and bleeding in a 56-year-old woman. The suprabasal and subepithelial separation of cells can be detected in the histologic analysis.

Other Systemic Diseases

eFig. 7.67 Four views show developmental deformities of the fingers and limited mouth opening in an 18-year-old boy with scleroderma. Insufficient attached gingival width complicates oral hygiene procedures, and advanced gingival recession is seen on the lower central incisor.

eFig. 7.68 Gingival enlargement occurred in a 9-year-old boy with juvenile hyaline fibromatosis.

eFig. 7.69 Four views show atopic dermatitis characterized by pruritic lesions on the extremities and lips of a 22-year-old woman. Notice the inadequate vestibular depth and gingival recession.



eFig. 7.70 Five views show fibrous dysplasia characterized by unilateral fibroosseous expansion of the bones in a 17-year-old girl. Notice the facial asymmetry, advanced malocclusion, migration of teeth starting from the midline, and gingival enlargement in accordance with expansion of the underlying bones. The radiograph shows unilateral increases of the dimensions of mandible and maxilla.

eFig. 7.71 Three views show Sturge-Weber syndrome characterized by unilateral cavernous hemangiomas on the face and neck of a 35-year-old man. Notice the unilateral soft tissue and easily bleeding gingival enlargement with high vascularization on the affected site.

eFig. 7.72 Three views show Rothmund-Thomson syndrome characterized by photosensitivity and hypopigmentation and hyperpigmentation on the skin of a 16-year-old girl. Notice the decreased keratinization and spontaneous bleeding of the gingiva. Histologic analysis showed discontinuity of the basement membrane. (*From Haytac MC, Oztunç H, Mete UO, Kaya M. Rothmund-Thomson syndrome: a case report.* Oral Surg Oral Med Oral Pathol Oral Radiol Endodontol. *2002;94[4]:479–484.*)

eFig. 7.73 Four views show recurrent major aphthous lesions on the cheek and lip mucosa, tongue, and alveolar mucosa in a 42-year-old man with Behçet disease.

Allergies

eFig. 7.74 Four views show results of the oral challenge test for the diagnosis of an allergic reaction of the gingiva to apples in a 48-year-old woman. Notice the formation of blisters, desquamation, and subepithelial bleeding. (*From Haytac MC, Ozcelik O. Oral challenge test for the diagnosis of gingival hypersensitivity to apple: a case report.* Oral Surg Oral Med Oral Pathol Oral Radiol Endodontol. *2006;101[3]:317–321.*)

Traumatic Lesions: Factitious, Iatrogenic, and Accidental

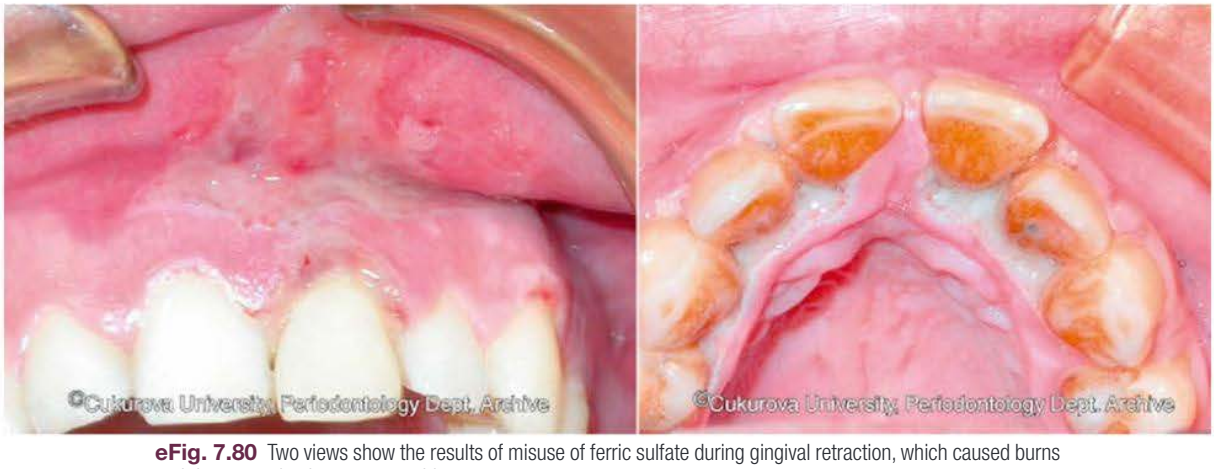
eFig. 7.75 Inadequate margins, design, and shape of the restoration violating the biologic width caused severe gingival inflammation in a 32-year-old woman.

eFig. 7.76 Overhanging margins and injury were caused by the self-curing acrylic used for restoration in a 49-year-old woman.

eFig. 7.77 Three views show extensive calculus formation and an ill-fitting restoration on the lower anterior teeth of a 51-year-old man. Notice the trauma caused by the deposits on the sublingual soft tissue seen after the restoration was removed.

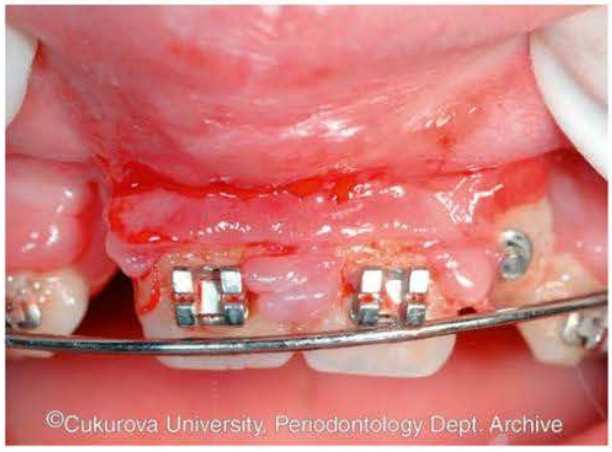
eFig. 7.78 Two views show extensive calculus formation under the restoration on the lower anterior teeth of a 44-year-old man. Notice the trauma caused by calculus on the sublingual soft tissue seen after removal.

eFig. 7.79 Subgingival margin locations and lack of interproximal embrasures of the crowns caused gingival inflammation in a 29-year-old man.



eFig. 7.80 Two views show the results of misuse of ferric sulfate during gingival retraction, which caused burns and desquamation in a 30-year-old man.

eFig. 7.81 Two views show iatrogenic use of a bonding agent for the treatment of dentinal hypersensitivity, causing gingival recession in a 32-year-old woman.



eFig. 7.83 Gingival trauma was caused by the ligature wire in a 12-year-old girl.

eFig. 7.85 Gingival desquamation after a 21-year-old woman rinsed with cologne.

eFig. 7.82 Trauma and inflammation of the soft tissues was caused by the brackets in a 14-year-old orthodontic patient.

eFig. 7.84 Gingival recession was associated with vigorous toothbrushing in a 48-year-old man.

eFig. 7.86 Hyperkeratosis was associated with smokeless tobacco use in a 42-year-old man.

eFig. 7.87 Desquamation was associated with toothbrushing with soap in a 55-year-old man.

eFig. 7.88 Trauma and desquamation occurred after placing plant seeds on the gingiva for a toothache in a 41-year-old man.

eFig. 7.89 Gingival recession was associated with habitual scratching of the gingiva with a nail in a 26-year-old woman.

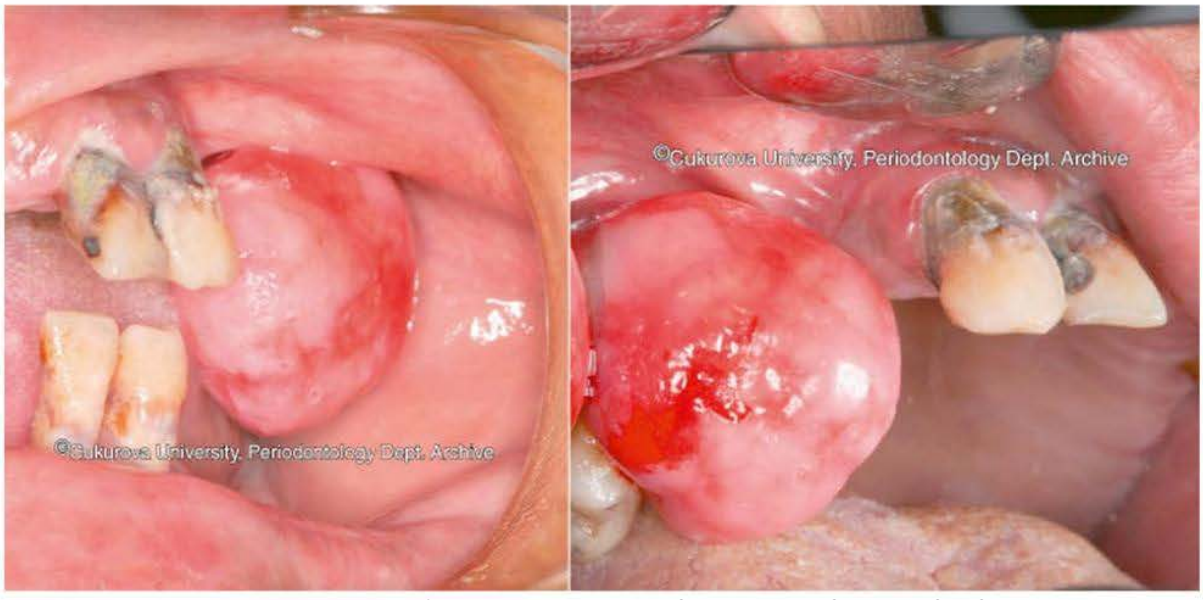
eFig. 7.90 Gingival recession was associated with habitual cleansing with tissue in a 42-year-old woman.

eFig. 7.91 Desquamation and burn occurred after a 50-year-old man rinsed with raki, a Turkish drink with a 40% to 50% alcohol content.

eFig. 7.92 A traumatic lesion resulted from placing fresh garlic onto the aching third molar in a 26-year-old man.

Cysts and Tumors

eFig. 7.93 A fibroma in a 45-year-old man had a firm and nodular character.



eFig. 7.94 Two views show a fibroma in a 56-year-old man. (*Courtesy Dr. Burcu Cam and Dr. Onur Ozcelik.*)

eFig. 7.95 A papilloma occurred in a 27-year-old woman.

eFig. 7.96 A papilloma developed on the palatal tissue in a 42-year-old woman.

eFig. 7.97 Two views show severe, generalized human papillomavirus–associated warts in a 7-year-old child.

eFig. 7.98 A peripheral giant-cell granuloma was seen in a 31-year-old woman.

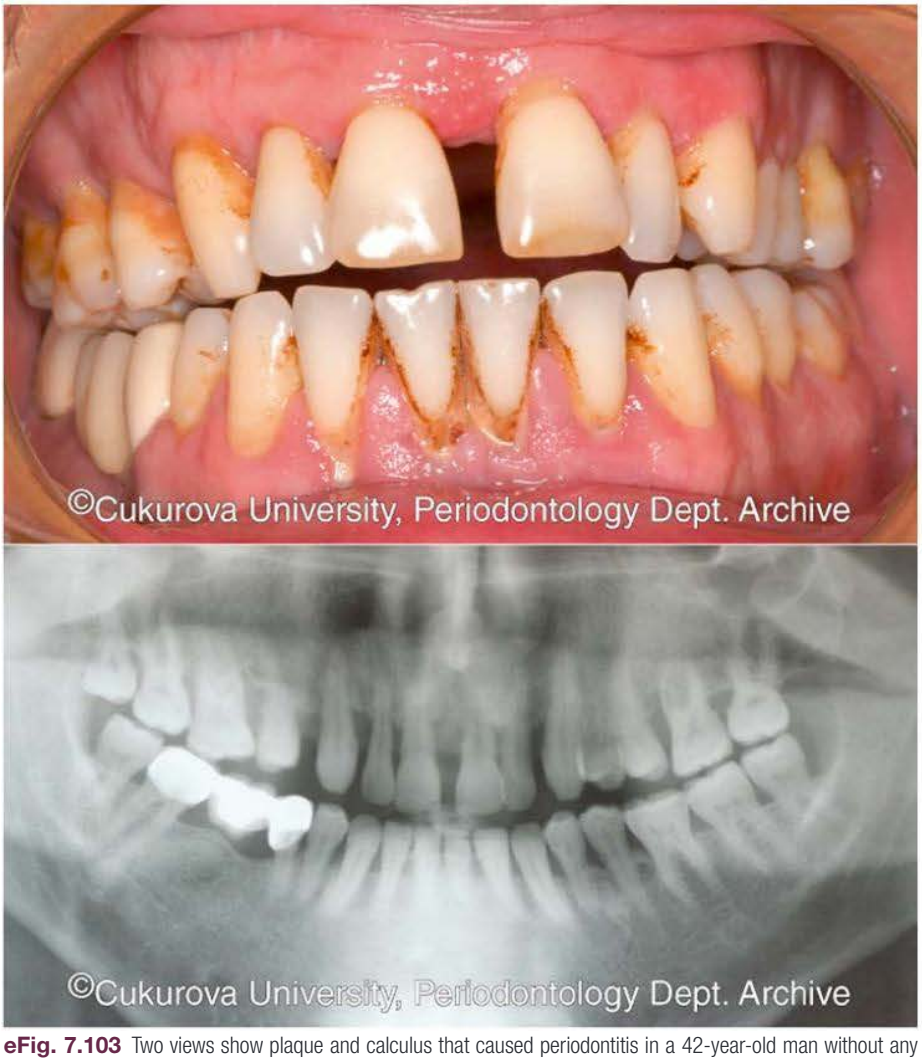
eFig. 7.99 An ameloblastoma occurred in a 54-year-old woman.

eFig. 7.100 An ameloblastoma was seen in a 49-year-old patient.

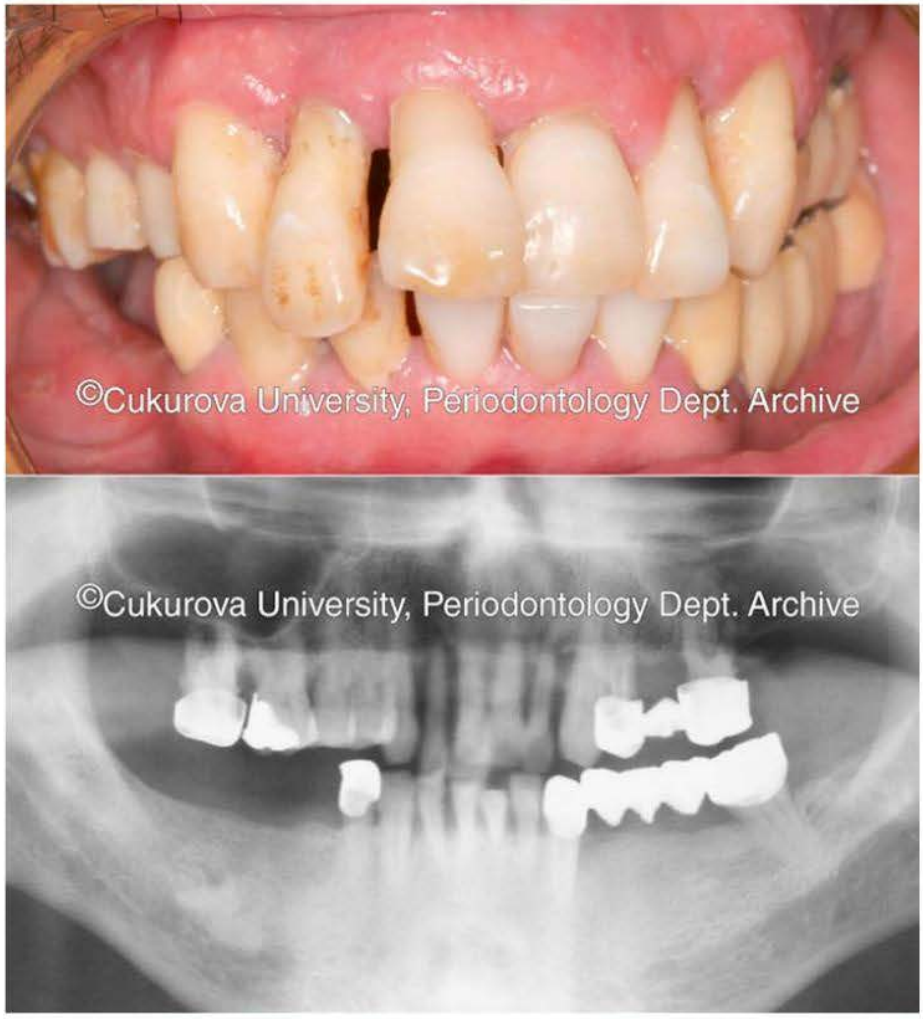
eFig. 7.101 Squamous cell carcinoma was detected in a 62-year-old patient.

eFig. 7.102 Malignant melanoma was seen in a 52-year-old woman.

Periodontitis

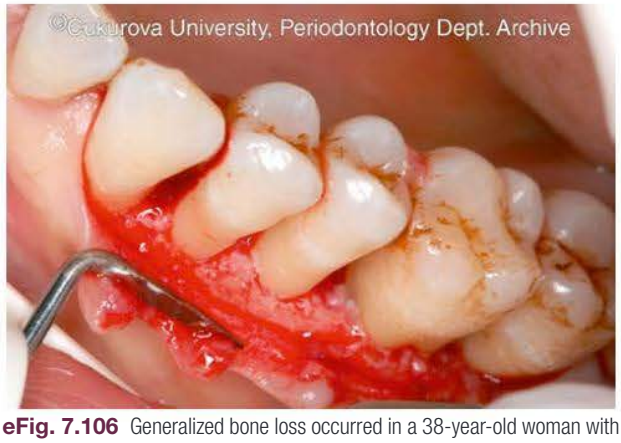


eFig. 7.103 Two views show plaque and calculus that caused periodontitis in a 42-year-old man without any systemic diseases. Notice the generalized radiographic bone loss.



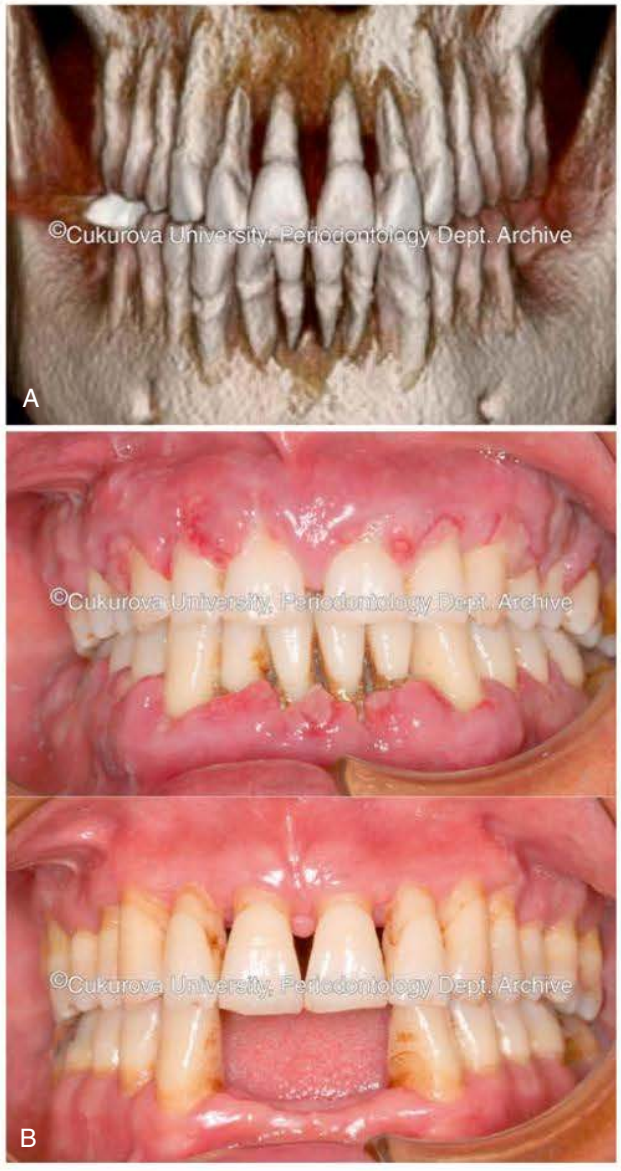
eFig. 7.104 Two views show gingival recession, mobility, migration, and extrusion of teeth due to alveolar bone loss in a 48-year-old man with periodontitis.

eFig. 7.105 Advanced periodontitis was seen in a 54-year-old man who had hygiene neglect and smoking as contributing factors.



eFig. 7.106 Generalized bone loss occurred in a 38-year-old woman with moderate periodontitis.

eFig. 7.107 Two views show generalized bone loss that occurred in a 45-year-old male smoker with advanced periodontitis.



eFig. 7.108 (A) Cone-beam computed tomography shows generalized bone loss in a 39-year-old man with advanced periodontitis. (B) Two views show the patient before and 4 months after initial periodontal therapy and extraction of mandibular incisors (*bottom*). There is closure of the diastema between the maxillary central incisors after therapy.

Periodontitis Modified by Systemic Factors
Diabetes Mellitus

eFig. 7.109 Severe gingival inflammation and periodontal abscess occurred in a 26-year-old woman with type 1 diabetes mellitus. Notice the extrusion of the maxillary left central incisor caused by alveolar bone loss.

eFig. 7.110 Severe inflammation, pus formation, and periodontal breakdown occurred in a 34-year-old man with uncontrolled type 1 diabetes mellitus.

eFig. 7.111 Two views show the dentition of a 14-year-old girl who was referred with a complaint of tooth mobility. She had spontaneous loss of teeth #11, #31, #41, and #46 in the past 2 years. The patient had advanced bone loss despite a minimal amount of bacterial plaque and degree 3 mobility of many teeth. She was diagnosed with type 1 diabetes mellitus on consultation.

eFig. 7.112 Three views show alveolar bone loss and severe inflammation with spontaneous bleeding, pus formation, and abscess in a 56-year-old man with type 2 diabetes mellitus who used external insulin for 12 years.

eFig. 7.113 A 28-year-old woman with uncontrolled type 1 diabetes mellitus was referred with complaints of rapid mobility of teeth, severe pain, spontaneous pus, and several abscesses. Her fasting glucose level was 486 mg/dL on the day of referral. (A) Although the lesions resembled abscesses of periodontal origin, the pocket depths and attachment levels were within normal levels. (B) The computed tomography findings and consultation with the infection department confirmed the diagnosis of osteomyelitis. (C) View of the patient after 1 week of blood glucose control in the intensive care unit and hyperbaric oxygen therapy. (D) Although the lesions healed uneventfully, severe malocclusion was evident at the 1-year follow-up examination.

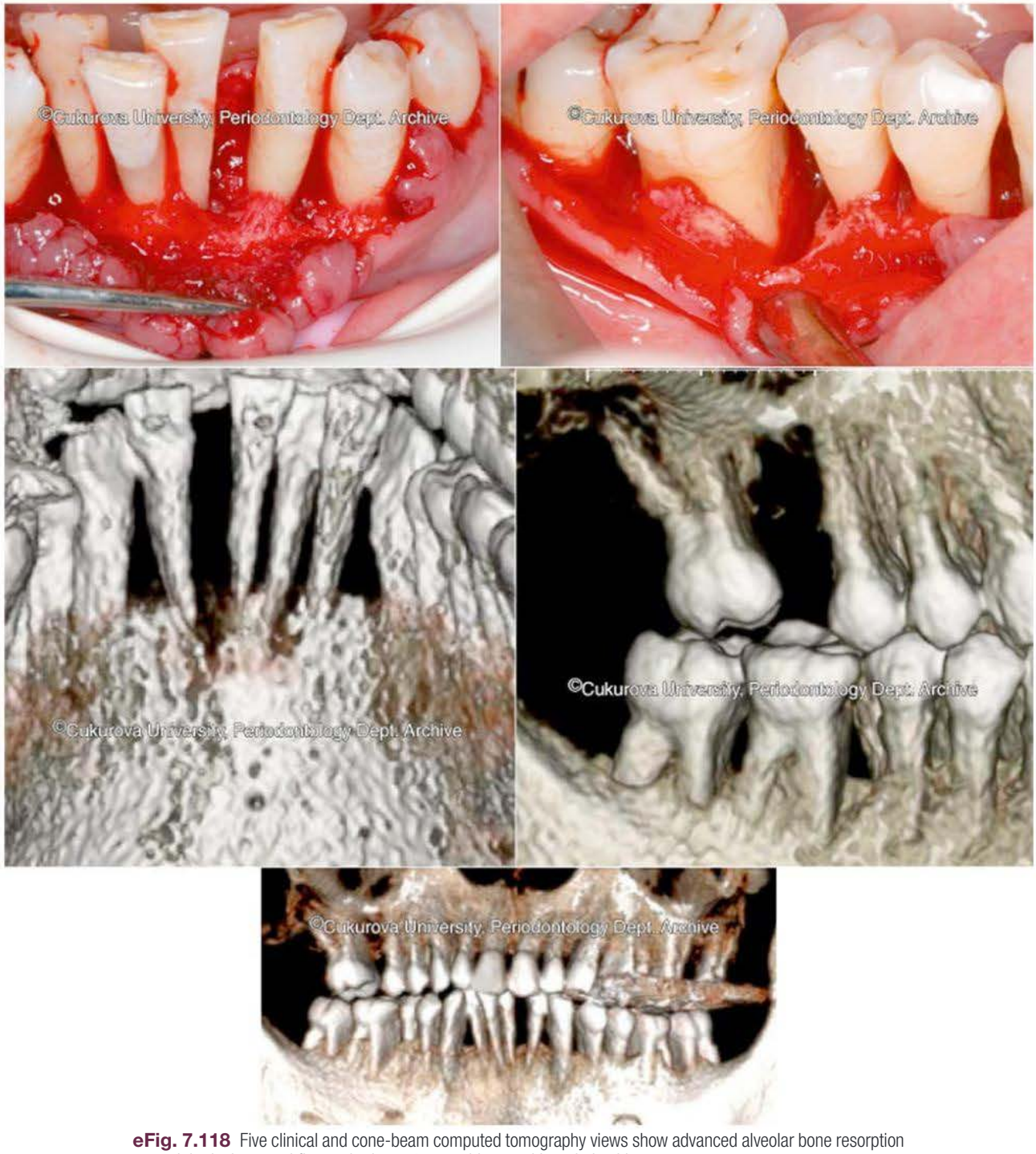
Periodontitis

eFig. 7.114 Three views show periodontitis in a 3-year-old boy without systemic diseases. There is severe alveolar bone destruction of deciduous molar teeth.

eFig. 7.115 Two views show extrusion of the left central incisor in a 21-year-old man with localized periodontitis. There is severe breakdown of alveolar bone of the incisor and mandibular first molar.

eFig. 7.116 Three views show advanced bone loss in an 18-year-old boy with periodontitis.

eFig. 7.117 Two views show intrabony defects in a 24-year-old woman with periodontitis.



eFig. 7.118 Five clinical and cone-beam computed tomography views show advanced alveolar bone resorption around the incisors and first molar in a 24-year-old man with periodontitis.

eFig. 7.119 Clinical and radiographic views of a 27-year-old man show generalized periodontitis at (A) the initial visit and (B) the 5-year follow-up examination after therapy. Cone-beam computed tomography views show (C, D, and F) advanced alveolar bone resorption around incisors, (E) premolars, and (G) first molar.

Periodontitis as a Manifestation of Systemic Diseases

Leukemias

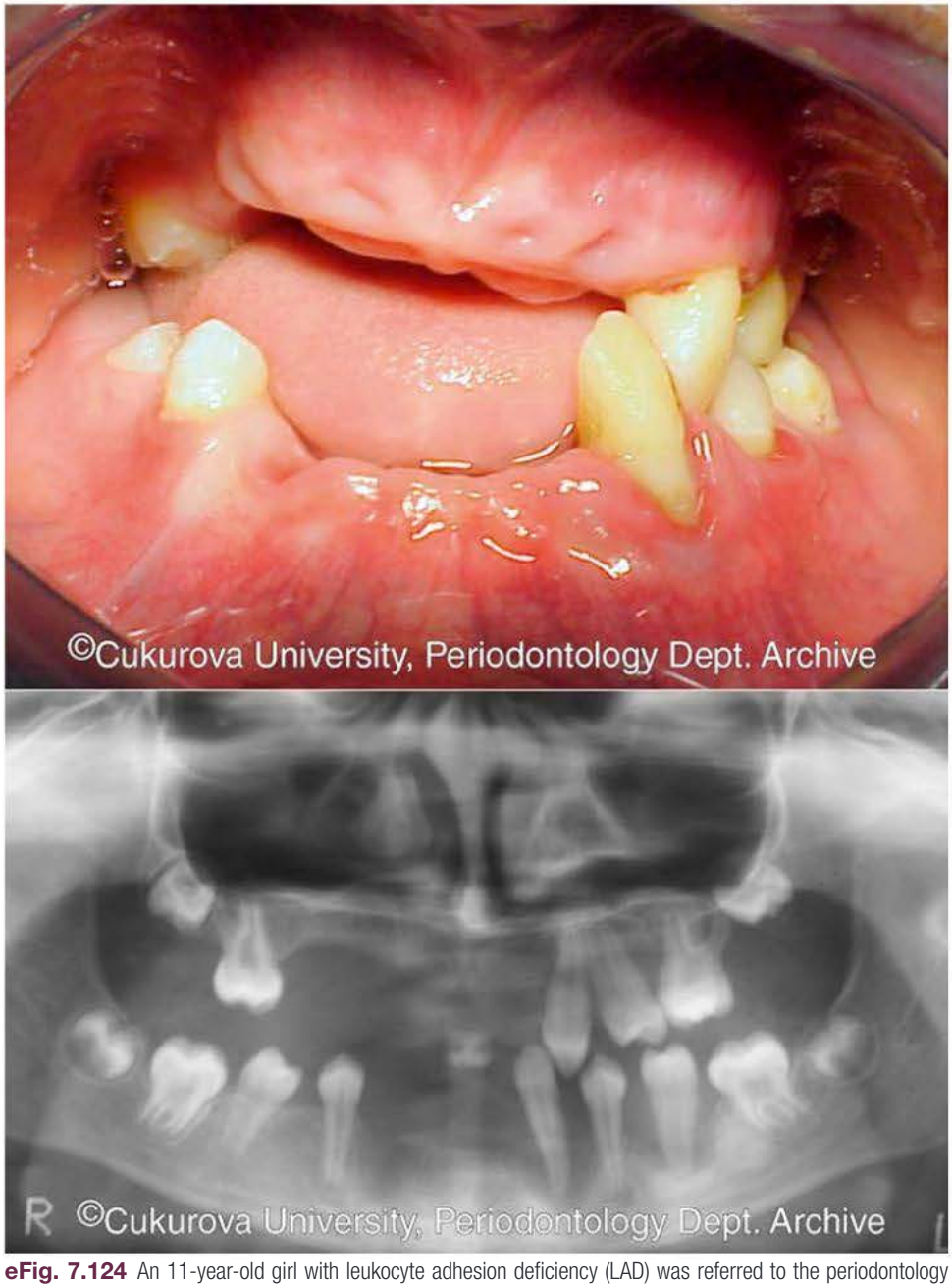
eFig. 7.120 A 12-year-old girl was referred with complaints of rapid swelling on (A) the face and (B) the gingiva, and (C) spontaneous bleeding. The patient also had persistent fever and general malaise for 2 weeks. (D) Radiographic analysis revealed alveolar bone loss and separation of the roots of the maxillary right lateral and canine. Consultation with the hematology department and histologic analysis of the lesion confirmed the diagnosis of granulocytic sarcoma, which can precede acute myelogenous leukemia. (E) Histologically, infiltration of atypical myeloid cells into the gingival tissues was evident (hematoxylin and eosin; original magnification ×100). (F) The lesion regressed significantly after two courses of chemotherapy. (*From Antmen B, Haytac MC, Sasmaz I, Dogan MC, Ergin M, Tanyeli A. Granulocytic sarcoma of gingiva: an unusual case with aleukemic presentation.* J Periodontol. *2003;74[10]:1514–1519.*)

eFig. 7.121 A 14-year-old boy was referred with complaints of rapid mobility of teeth, gingival swelling, persistent fever, and joint pain. (A) Clinical examination revealed gingival hyperplasia in accordance with the expansion of jawbones and third-degree mobility in many teeth despite minimal bacterial plaque. (B) Bone marrow aspiration biopsy revealed cytoplasmic vacuolization of lymphoblasts specific for acute lymphoblastic leukemia type L3 (May-Grünwald Giemsa stain; original magnification ×100). (C) Radiographically, there was severe bone loss, abnormal trabeculation, and radiolucent areas around roots, which was more prominent on the molar teeth. (*From Haytac MC, Antmen B, Dogan MC, Sasmaz I. Severe alveolar bone loss and gingival hyperplasia as initial manifestation of Burkitt cell type acute lymphoblastic leukemia.* J Periodontol. *2003;74[4]:547–551.*)

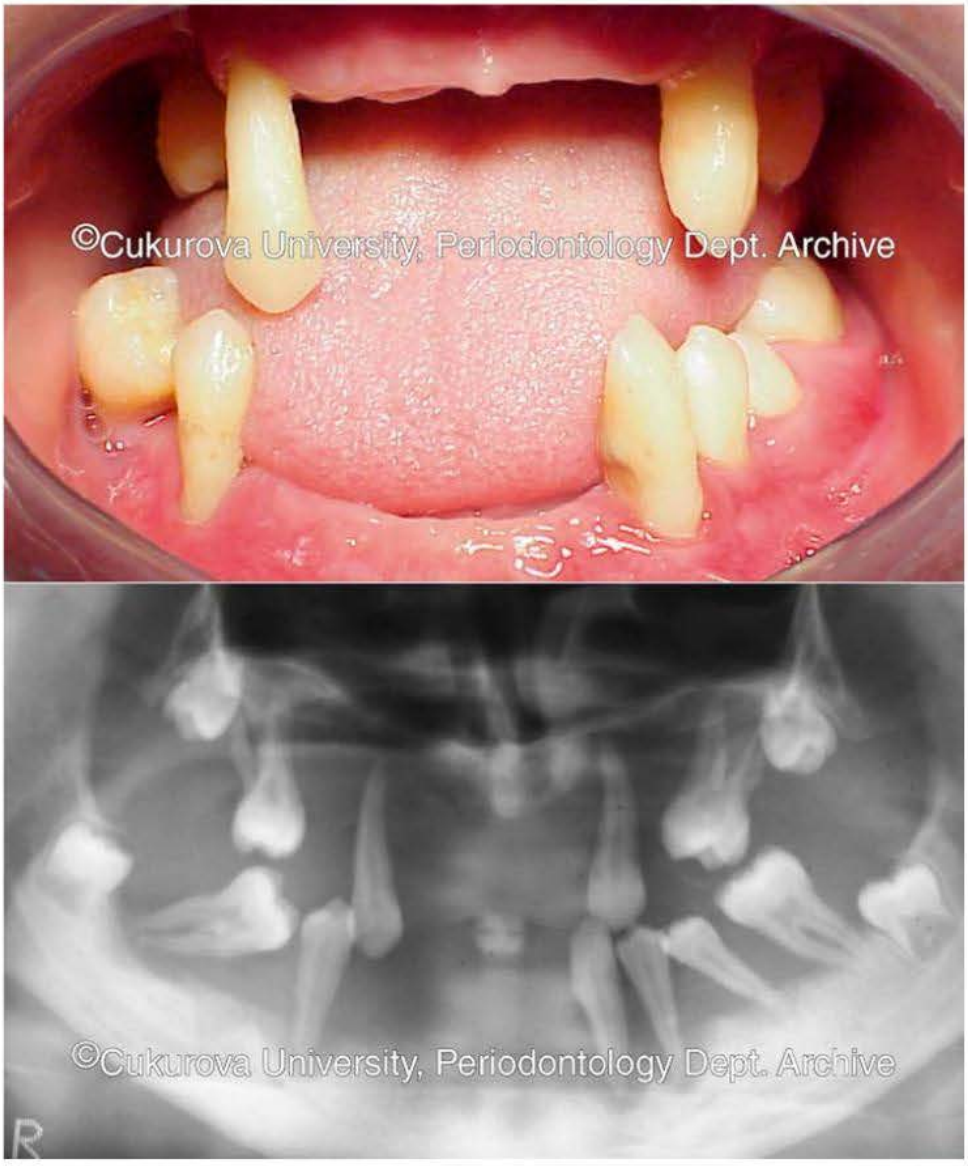
eFig. 7.122 Two views show alveolar bone destruction and gingival enlargement around teeth #41, #42, and #43 in a 15-year-old boy with acute lymphocytic leukemia.

Genetic Disorders

eFig. 7.123 A 16-year-old girl who had been receiving treatment for neutropenia for 8 years was referred for gingival inflammation. Two views show severe malocclusion and gingival inflammation, spontaneous bleeding, deep periodontal pockets up to 15 mm, and advanced radiographic alveolar bone loss.

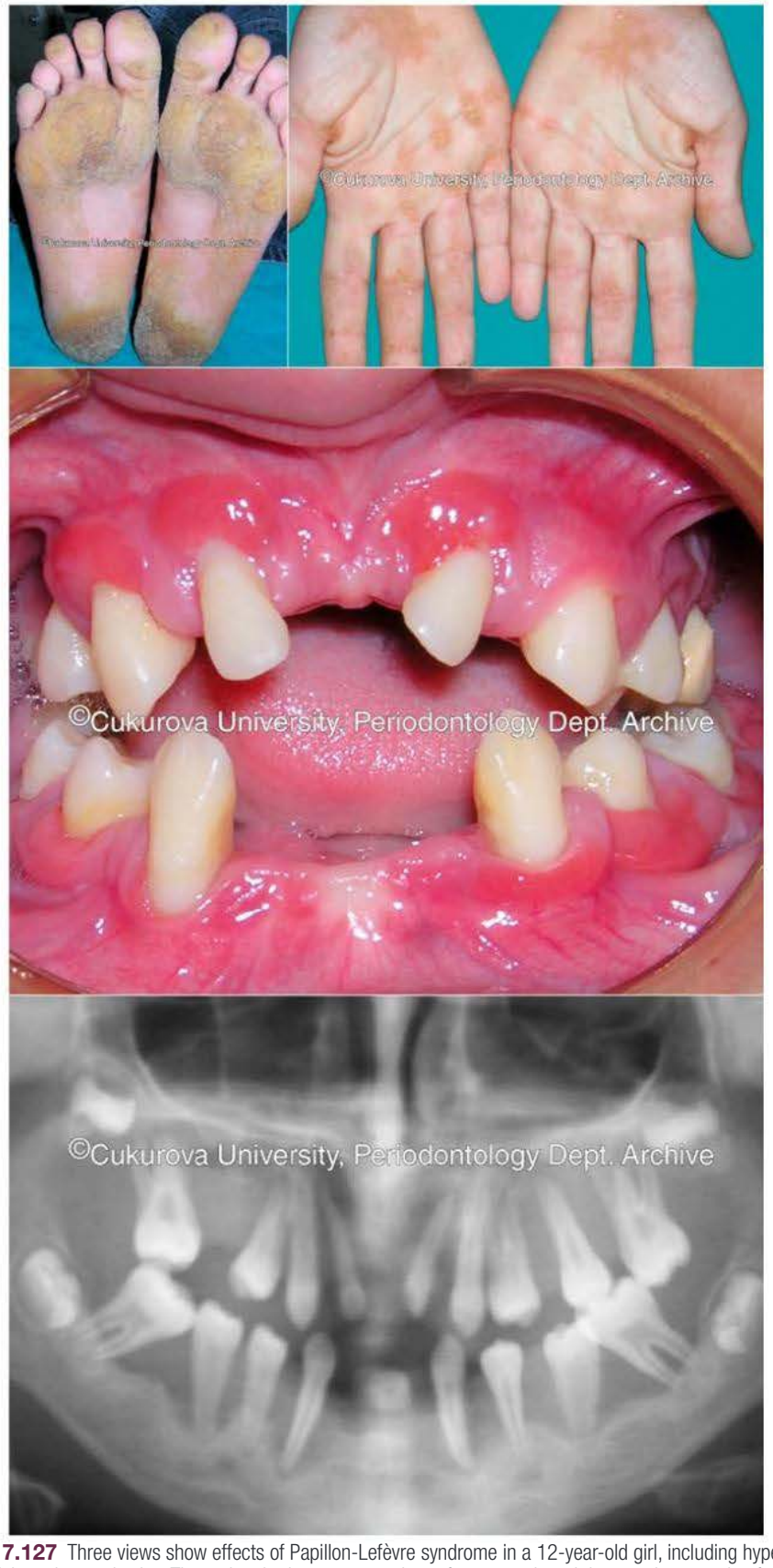


eFig. 7.124 An 11-year-old girl with leukocyte adhesion deficiency (LAD) was referred to the periodontology department. She had recurrent skin, ear, upper respiratory tract, and lung infections since early childhood and was diagnosed with LAD 4 years earlier. She had one kidney surgically removed due to infection. Two views show severe periodontal breakdown with spontaneous loss of many teeth and advanced bone loss, deep pockets up to 15 mm, and mobility for the remaining teeth. The patient's elder sister, who was 14 years old, also had LAD and was diagnosed during the same period. The elder sister's periodontal status is shown in Fig. 7.125.



eFig. 7.125 Two views show leukocyte adhesion deficiency in a 14-year-old girl.

eFig. 7.126 Three views show hyperkeratosis of the palms, loss of anterior teeth, gingival recession, and extensive radiographic alveolar bone loss of deciduous teeth in a 3-year-old boy with Papillon-Lefèvre syndrome.



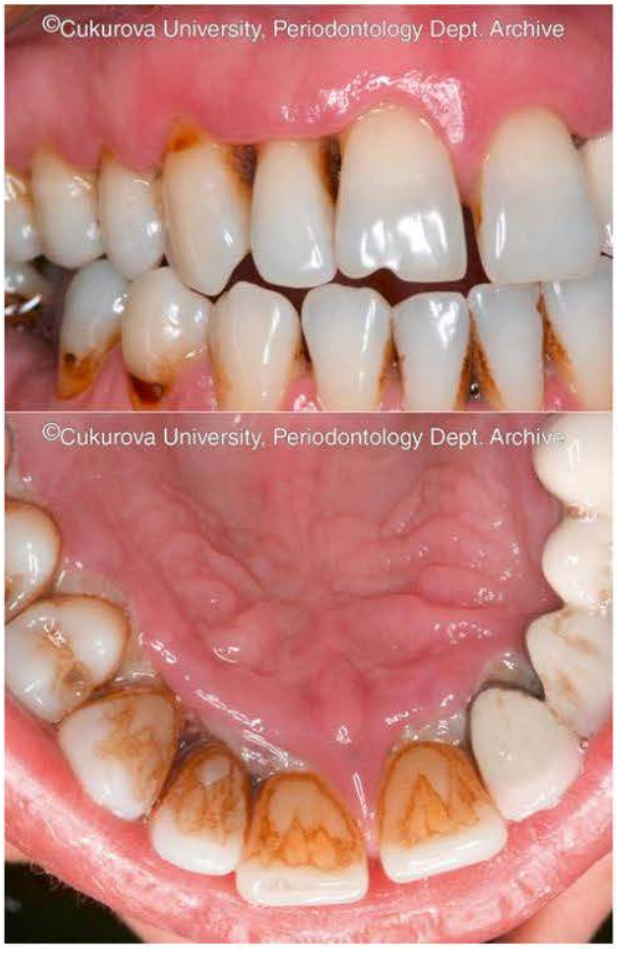
eFig. 7.127 Three views show effects of Papillon-Lefèvre syndrome in a 12-year-old girl, including hyperkeratosis of the palms and soles. The patient had spontaneous loss of many teeth and deep pockets ranging from 4 to 12 mm on the remaining teeth. Severe alveolar bone destruction is seen in the panoramic radiograph.

Fig. 7.128 Three views show skeletal deformities and gingival inflammation in a 14-year-old girl with hypophosphatasia.

Necrotizing Periodontal Diseases

eFig. 7.129 Typical punched-out appearance of the gingiva *(arrow)* in necrotizing ulcerative gingivitis is seen in a 25-year-old man.

eFig. 7.130 Two views show a necrotizing ulcerative gingivitis lesion before and after removal of pseudomembrane in a 27-year-old woman.



eFig. 7.131 Two views show a crater-like lesion and pseudomembrane formation on the palatal gingiva in a 31-year-old man with necrotizing ulcerative gingivitis.

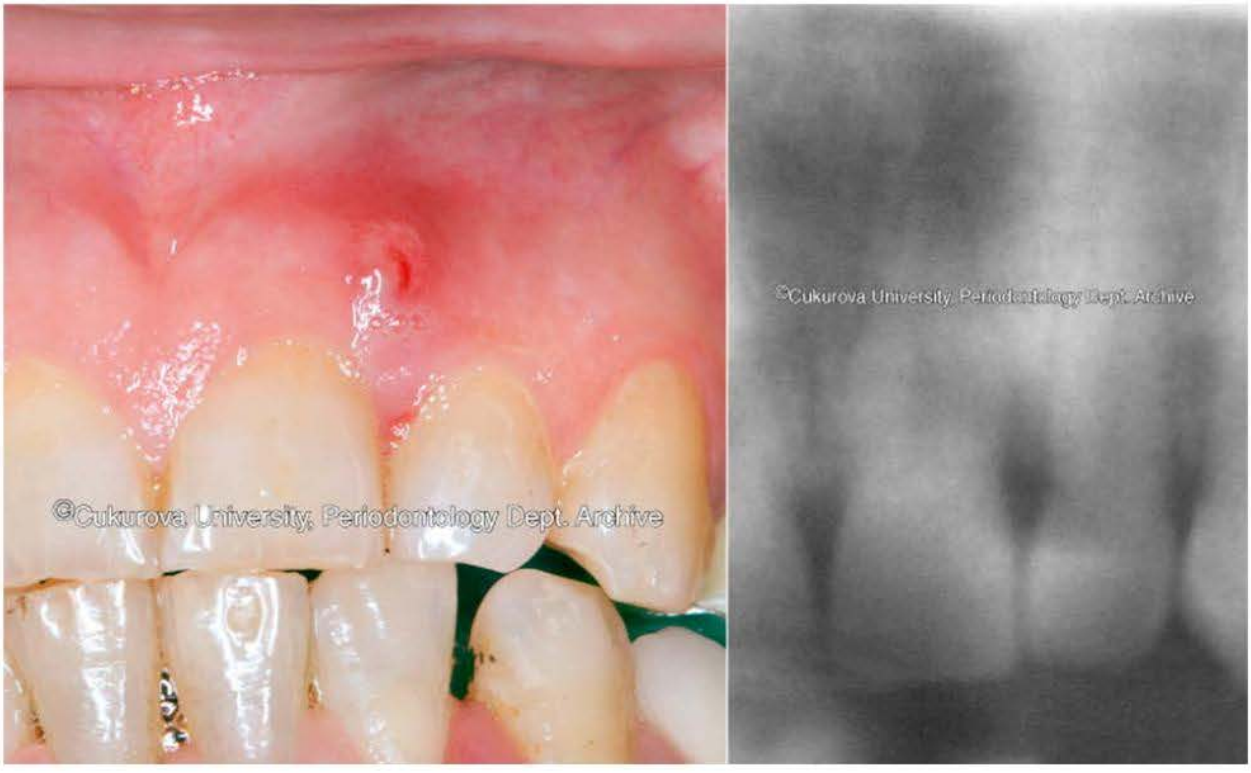
eFig. 7.132 Three views show severe necrotizing ulcerative gingivitis and a necrotizing ulcerative periodontitis infection that caused extreme pain in a 22-year-old woman on the first, third, and seventh day of referral. Rapid soft tissue destruction exposed the alveolar bone.

Bisphosphonates

eFig. 7.133 Zoledronic acid–related osteonecrosis occurred in a 54-year-old woman who had been using the drug intravenously for breast cancer. The lesion occurred 1 month after extraction of tooth #36.

eFig. 7.134 Three views show rapid gingival and bone necrosis 1 month *(top left)*, 2 months *(top right)*, and 7 months *(bottom)* after scaling and root planing in a 52-year-old woman receiving intravenous zoledronic acid after breast cancer treatment.

Abscesses of Periodontium



eFig. 7.135 Two views show a periodontal abscess of the left central incisor in a 21-year-old woman with periodontitis.

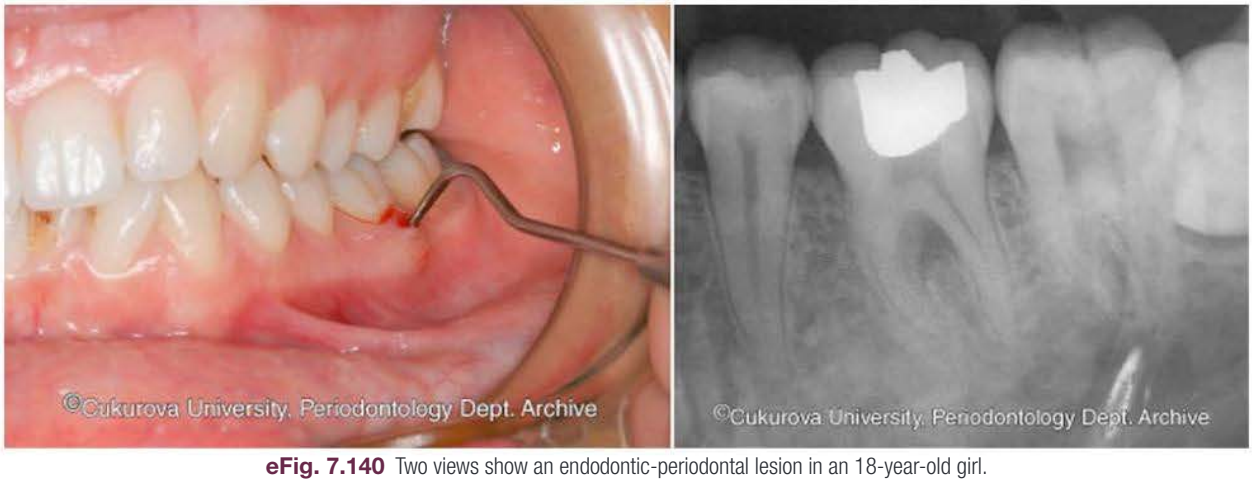
eFig. 7.136 Periodontal abscess of the maxillary first molar occurred in a 35-year-old man with periodontitis.

eFig. 7.137 Two views show a periodontal abscess in a 39-year-old woman before and after treatment.

eFig. 7.138 Pericoronitis is seen around a partially erupted mandibular third molar in a 19-year-old girl.

Endodontic-Periodontal Lesions

eFig. 7.139 Two views show an endodontic-periodontal lesion in a 36-year-old man.



eFig. 7.140 Two views show an endodontic-periodontal lesion in an 18-year-old girl.