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The Dental and Periodontal Findings of Dermatomyositis: A Case Report

Dermatomiyozitisin Dental ve Periodontal Bulguları: Olgu Bildirimi

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Özet

Dermatomyositis (DM) is an uncommon inflammatory disease marked by muscle weakness and skin lesions. The most prominent intraoral findings of DM include telangiectasia, increased dental caries prevalence and gingival inflammation without consequent alveolar bone loss. This article reports a case of DM with localized alveolar bone loss.

Keywords: Alveolar bone loss, dermatomyositis, connective tissue diseases, gingival disease, dental caries

Abstract

Dermatomyositis (DM) kas güçsüzlüğü ve deri lezyonları ile karakterize nadir görülene enflamatuvar bir hastalıktır. Telanjiektazi, artmış çürük sıklığı ve alveolar kemik kaybı ile sonuçlanmayan gingival enflamasyon hastalığın en belirgin intraoral bulgularıdır. Bu raporda lokalize alveolar kemik kaybı olan bir DM vakası sunulmaktadır.

Anahtar sözcükler: Alveolar kemik kaybı, dermatomyozitis, bağ dokusu hastalıkları, gingival hastalıklar, çürük

Introduction

The inflammatory myopathies can be differentiated into three major subsets: dermatomyositis (DM), polymyositis, and inclusion-body myositis. DM is a microangiopathy affecting skin and muscle. The disease affects both children and adults, and women more than men.[1]

A heliotrope rash and Gottron's papules are characteristic and possibly pathognomonic cutaneous features of DM. The heliotrope rash is a violaceous dusky erythematous rash, with or without edema, in asymmetrical distribution involving periorbital skin. Gottron's papules are found covering bony prominences, particularly the metacarpophalangeal joints, proximal interphalangeal joints, and distal interphalangeal joints. The lesions consist of slightly raised violaceous papules and plaques. There may be a slight scale.[2]

The myopathy primarily affects the proximal muscles, is generally symmetrical, and slowly progressive. Initial symptoms include myalgias, fatigue, or weakness, manifested in the patient as an inability to climb stairs, to raise the arms for actions such as brushing hair or shaving, to rise from a squatting or sitting position, or a combination of these features.[2]

DM is a multisystem disorder.[3] Arthralgia, arthritis, esophageal disease and cardiopulmonary dysfunction may occur in dermatomyositis. Calcinosis of the skin or muscle is unusual in adults but may occur in up to 40% of children or adolescents with DM. Calcinosis cutis is manifested by firm, yellow, or flesh-colored nodules, commonly over bony prominences.[3] The link of dermatomyositis to malignant disease has been clarified.[4] The erythrocyte sedimentation rate is usually increased in patients with DM. Anemia occurs in chronic cases. Leukocytosis may be present in acute cases, and subsequently leukopenia may be noted.[5]

Several general measures are helpful in treating patients with dermatomyositis. Bed rest is usually valuable in patients with progressive weakness, but must be combined with a range-of-motion exercise program to prevent contractures. Management of the patient with myositis usually includes systemic

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corticosteroids with or without an immunosuppressive agent. Cutaneous disease is more difficult to manage, but antimalarials, methotrexate, and intravenous immunoglobulin could be effective.[2]

The most common alterations of oral mucosa are telangiectasia, edema, and erythema.[6-9] The tongue may become rigid and large due to calcinosis.[5,9] Altered tooth morphology has been seen, especially shortened roots, calcified pulp chambers, and pulp stones.[5,10] Dysphagia and dysphonia may result when the striated muscles of the esophagus, pharynx and palate are affected. The muscle dysfunction can lead to alteration of the temporomandibular joint.[5] Furthermore a recent study has shown that patients with DM have poor gingival indices without consequent periodontal disease, hyposalivation and increased prevalence of dental caries.[8]

This article reports a case of DM with localized alveolar bone loss.

Case report

A 19-year-old girl came to the clinic with complaint of difficulty in chewing due to severely damaged teeth. There was no history of pain.

She was first diagnosed as having dermatomyositis at the age of 12. She had been treated with prednisone since then and at the present; she was given 10 mg of prednisone daily. Routine hematology screening revealed that she had mild anemia (Hgb: 11.4 g/ 100 ml) and increased erythrocyte sedimentation rate (33 mm/hr). Her parents' marriage was a consanguineous one. The parents and her four sisters were in good health.

Extraoral examination revealed pigmentary changes on the knuckles (Figure 1). She had nasal speech. TMJ function was normal, but the patient had difficulty in opening her mouth fully.

Intraoral examination revealed absence of filiform papillae and asyptomatic white patches were seen on the dorsum of the tongue (Figure 2). There were marked telangiectases on the labial mucosa. She had poor oral hygiene and severe gingival inflammation (Figure 3 and 4). Mandibular first molars, maxillary third molars and mandibular right first premolar were missing. Most of the teeth showed moderate or severe carious lesions (Figure 3 and 4). Interestingly, no teeth were sensitive to percussion. The periodontal probing depths were within normal limits in all regions except for mandibular right premolar and central incisors.

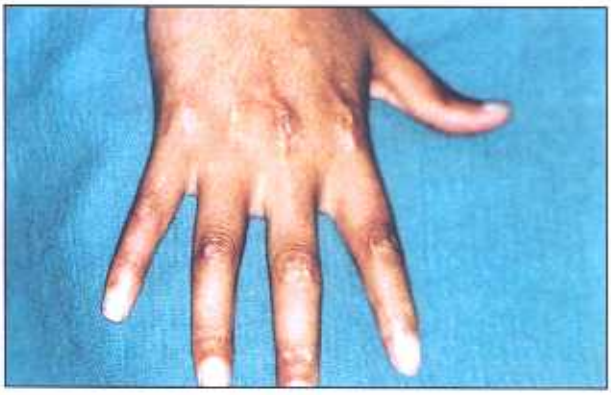

Figure 1. Gottron papules on the knuckles

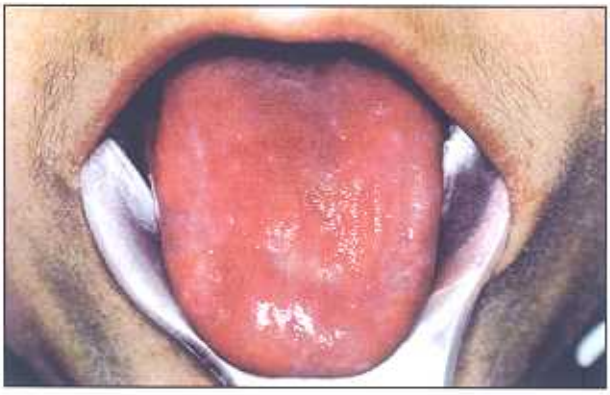

Figure 2. Loss of papillae and white mucosal patches on the dorsum of tongue.

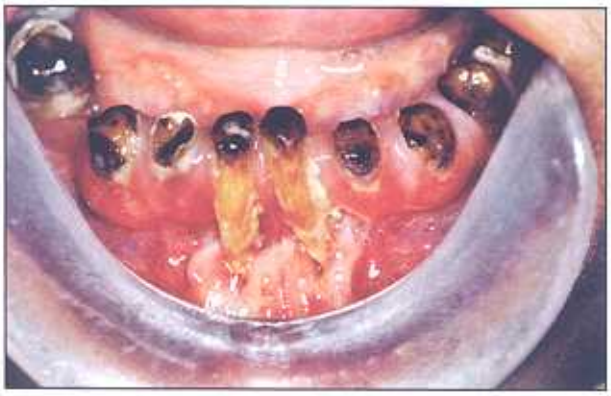

Figure 3. Overall appearance of gingiva.

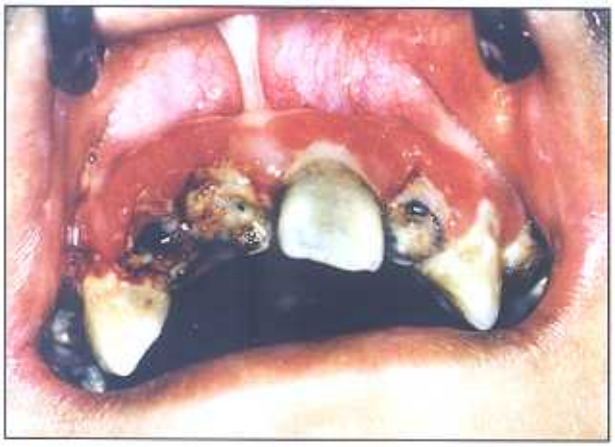

Figure 4. Telangiectasia on the labial mucosa.

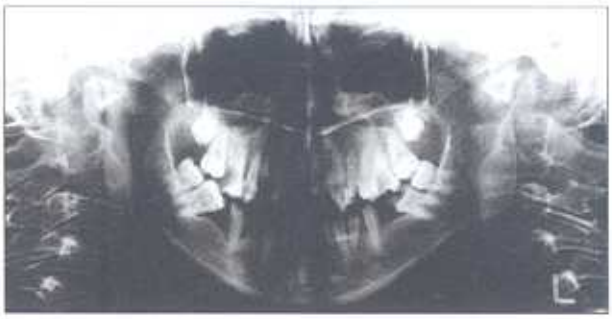

Figure 5. Panoramic radiograph showing the pulp stone of the maxillary right second molar.

Radiographic examination revealed unerupted maxillary third molars, alveolar bone loss in the mandibular right premolar and mandibular incisor region, pulp stone in the maxillary right second molar, and thin pulp canals of most of the teeth (Figure 5, 6).

The physician was consulted to determine the need for supplemental corticosteroids and antibiotics for dental treatment. Dental treatment was performed in a relaxed atmosphere and under antibiotic prophylaxis. Extraction of most teeth was preferred because of her socioeconomic status. Local periodontal treatment including scaling, root planning and curettage was performed and chlorhexidine solution was suggested. Teeth with moderate carious lesions were restored with amalgam filling. Removable partial dentures were constructed. She has been periodically monitored for possible dental and periodontal changes.

Discussion

Chronic muscle weakness is the most prominent feature of dermatomyositis. Marton et al.[8] demonstrated that patients with DM have decreased maximal biting force in the first molar's region. Similarly, the present case showed nasal speech and difficulty in opening the mouth.

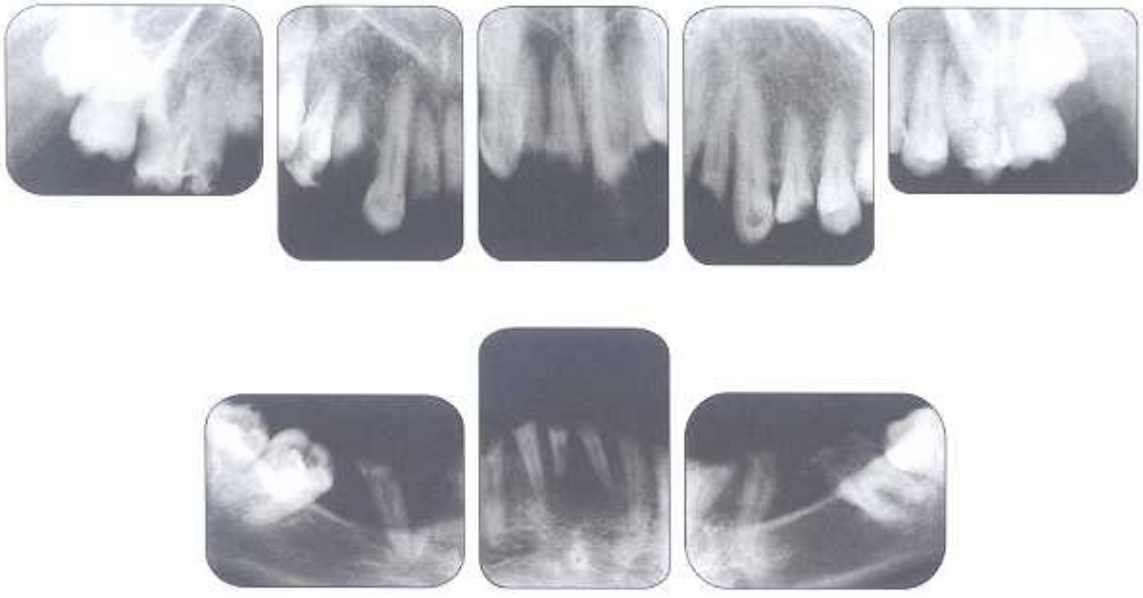

Figure 6. Periapical radiographs showing the thinning of the pulp chambers and alveolar bone loss in the mandibular right premolar and mandibular incisor area and the integrity of lamina dura.

Oral lesions of DM are not pathognomonic.[9] These lesions are often similar to those seen in lupus erythematosus.[5] Telangiectasia seems to be the most prominent mucosal signs of DM.[6,8] In the present case in addition to the marked telangiectases on the labial mucosa, there were absence of filiform papillae and white lesions on the dorsum of the tongue. Whitish reticulated patches on the tongue have also been reported previously in patients with DM.[7] On the other hand, in the present case there were no mucosal edema. This is in accord with the results of Marton et al.[8]

Obliteration of pulp chamber is considered as a corollary sign of the generalized calcinosis.[10] In accord with the case of Sanger and Kirby[10] the present case showed a pulp stone, thin pulp canals. However Marton et al. have not reported these changes in their cases.[8]

Patients with DM have increased prevalence of dental caries.[8] Marton et al. demonstrated histological alterations in lower labial salivary glands and decreased glandular function in patients with DM. They suggested that hyposalivation is the main reason of higher prevalence of dental caries.[8] Similarly, in the present case most of the teeth showed moderate or severe carious lesions.

DM patients show increased dental plaque accumulation and gingival inflammation, however these are not result in bone loss. Increased gingival indices are attributed to the edema and erythema secondary to the changes of the gingival capillaries.[8] On the other hand the present case of DM had localized alveolar bone loss in addition to generalized gingival inflammation. The contribution of the disease on alveolar bone loss seen in our patient can not be determined exactly. However, absence of generalized involvement makes us think that both additional local factors and DM were effective.

Kaynaklar

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