



Onycholysis as an Endodontics Hazard: A Case Report

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Article ID: WMC001961

Article Type: Case Report

Submitted on: 31-May-2011, 07:23:29 PM GMT **Published on:** 01-Jun-2011, 06:20:18 PM GMT

Article URL: http://www.webmedcentral.com/article_view/1961

Subject Categories: DENTISTRY

Keywords: Onycholysis, Endodontics, Occupational Dermatitis, Dentistry, Speciality, Case Report

How to cite the article: Mosannen-Mozafari P , Layegh P , Tonkaboni A , Amirchaghmaghi M . Onycholysis as an Endodontics Hazard: A Case Report . WebmedCentral DENTISTRY 2011;2(6):WMC001961

Source(s) of Funding:

This study was founded by the vice chancellor of research of Mashhad University of Medical Sciences.

Competing Interests:

None

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Abstract

Dentistry is one of the careers which have so many occupational risks for dentists in competence with therapeutic advantages for patients. By far dermatitis, musculoskeletal disorder, carpal tunnel syndrome, allergies, psychological problems, respiratory problems and obesity have been known as occupational hazards of dentistry. Onycholysis and nail pitting are of occupational dermatitis of manicurists and people whose jobs relate to vibrating machines but have not been mentioned in dentistry. Here we report a unique case of this object. A 29-year-old right-handed female dentist who had been carrying out endodontics for 5 years, was visited in Qaem dermatology clinic with complaint of nail deformity. There was not any evidence of dermatologic disease and allergy in her medical history. Clinical examination revealed onycholysis in internal angle of right thumbnail and pitting in the ipsilateral index finger, with a 6 months duration. Besides, nail bed biopsy ruled out other differential diagnosis of dermatologic disease with nail manifestations. She reported exacerbation of the condition with longer occupation time and relative improvement in vacations. The possibility of occupational onycholysis with a none-allergic etiology was considered. Improvement was noted when she stopped her career. This is the first report of occupational onycholysis due to dentistry. It seems that because of the variable approaches in different branches of dentistry occupational hazards should be assessed separately.

Introduction

Dentistry is one of the careers which have so many occupational risks for dentists in competence with therapeutic advantages for patients. Unique working condition in dentistry can affect the overall health of dentists. Dentists report more frequent and worse medical problem than other health care providers. (1) By far common health risks, dermatitis, musculoskeletal disorder, allergies, psychological

problems, mental impairments, respiratory problems, hypertension and obesity have been known as occupational hazards of dentistry. (1). It seems that these problems begin earlier in dentists and Females have more problems than males. Occupational dermatosis occurs frequently in dentistry. Up to half of those reported are due to allergic contact dermatitis. (2) Other occupational dermatosis are reported in different jobs. For example manicurists and those working with pneumatic vibrating tools may complain of nail pitting and nail deformity. (3) Traumatic dermatosis has not been reported in dentistry. Here we report a unique case of occupational onycholysis and nail pitting due to pressure bearing on fingers of a dentist.

Case Report(s)

A 29-year-old right-handed female dentist who had been performing endodontic treatment for 5 years was visited in Qaem dermatology clinic with complaint of nail deformity. There was not any evidence of dermatologic disease and allergy in her medical history. A thorough dermatologic examination did not disclose any dermatologic disease (e.g. psoriasis...) in any part of skin. Clinical examination revealed Onycholysis in internal angle of right hand thumb nail and pitting in the ipsilateral nail of index finger, with a 6 months history. (Illustration 1 & 2). She reported that her problem flared up with prolonged job time and decreased in vacations. Besides, nail bed biopsy ruled out other dermatologic diseases with nail manifestations. Patch tests and prick testing was normal. Total IGE was normal (86 KU/L). She took a break for one month and the progression of onycholysis was stopped. After returning to career, the onycholysis recurred. She reported that at the end of days in which a lot of pressure is applied on her fingers- due to packing of guttaperca by sprider and prolonged filling, (illustration 3) the onycholysis was more severe, especially in the following day. Due to the relationship between pressure and patient compliant, She stopped working. The nail deformity did not resolve but onycholysis have been cut off and no recurrence was noted after two years. Exfoliation of normal nail has not been occurred. (illustration 4,5)

Discussion

Hand problems are common among dentists. Carpal tunnel syndrome, hand pain and dermatitis are well known hand problems in dentistry. (1) Dentistry is known to affect the physical health of dentists or even aggravate their preexisting disorders(2). Studies have shown that dentists report more frequent and worse health problems than other high-risk medical professionals. Many studies show the derangement of physical health and wellbeing of dental specialists.(1)

Onycholysis is separation of the nail plate from the nail bed or complete nail plate loss. It can occur from trauma (as in prolonged hiking or skiing with ill-fitting footwear); from overzealous nail cleaning; with diseases such as psoriasis and thyrotoxicosis; or from exposure to certain chemicals or drugs and sunlight (photo-onycholysis).(3) People with onycholysis are at risk of infection with yeast and fungus, and nail deformity.

Onycholysis and nail pitting are of occupational dermatitis of manicurists and people whose jobs relate to vibrating machines but have not been mentioned in dentistry. (2, 4-5) some cases of occupational psoriasis have been reported in two dentists, one surgeon, one pharmacist and a driver and some other cases all due to pressure on hands(4-7). In our case the normal nail bed biopsy and absence of psoriasis in other parts of skin ruled out occupational psoriasis. Here we report a unique case of occupational onycholysis due to pressure of endodontic instruments in a young dentist. It seems that because of the variable approaches in different branches of dentistry occupational hazards should be assessed separately and different dental specialties may pose variable health hazards.

Conclusion

This is the first report of occupational onycholysis due to pressures related to endodontic treatments. In endodontics, dermatological problems, neuromuscular, musculoskeletal disorders and allergies are more common and important.(1)

References

1.Puriene A, Aleksejuniene J, Petrauskiene J, BALCIUNIENE I, JANULYTE V. Self-reported occupational health issues among Lithuanian dentists.

Industrial health. 2008;46(4):369-74.

2.Huber MA, Terezhalmay GT. Adverse reactions to latex products: preventive and therapeutic strategies. The journal of contemporary dental practice. 2006;7(1):97.

3.Wingfield E, Rehmus M, MPH, . Deformities and Discoloration. merckmanuals; [updated August 2007 cited 2011 05]; Available from: <http://www.merckmanuals.com/home/au/sec18/ch216666/ch216666b.html>.

4.Adams RM. Occupational contact dermatitis. Occupational contact dermatitis. 1969.

5.KANERVA L, TALVI A, ESTLANDER T. Occupational contact psoriasis. Eur J Dermatol. 1998;8:217-8.

6.Ancona A, Fernandez-Diez J, Bellamy C. Occupationally induced psoriasis. Dermatosen in Beruf und Umwelt Occupation and environment. 1986;34(3):71.

7.Fisher AA. Occupational palmar psoriasis due to safety prescription container caps. Contact Dermatitis. 1979;5(1):56-.

Illustrations

Illustration 1

Onycholysis and pitting in internal angle of right thumb nail



Illustration 2

Nail pitting in the right index finger



Illustration 3

Pressure applied on two fingers during endodontic treatment

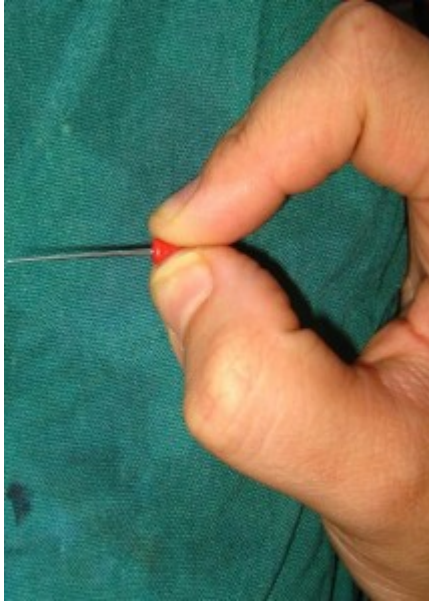


Illustration 4

Onycholysis has been stopped in right thumb nail



Illustration 5

Nail pitting in right index finger nail



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