Onycholysis as an Endodontics Hazard: A Case Report

Author(s): Dr. Pegah Mosannen-Mozafari, Dr. Pouran Layegh, Dr. Arghavan Tonkaboni, Dr. Maryam Amirchaghmaghi

Corresponding Author:
Dr. Arghavan Tonkaboni,
Postgraduate Student, Oral Medicine Department, Dental School of Mashhad University of Medical Sciences - Iran (Islamic Republic of)

Submitting Author:
Dr. Pegah Mosannen-Mozafari,
Assistant Professor of Oral Medicine, Oral and Maxillofacial Research Center, Mashhad University of Medical Sciences, 91735 - Iran (Islamic Republic of)

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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 thumb nail 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. Clinical examination revealed onycholysis in internal angle of right thumb nail 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.
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 footgear); 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

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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