International Journal of Dermatology, Venereology and Leprosy Sciences

E-ISSN: 2664-942X
P-ISSN: 2664-9411
www.dermatologypaper.com/
Derma 2019; 2(1): 42-45
Received: 07-03-2019
Accepted: 25-03-2019

Dr. Swati Arora
Associate Professor, Department of Dermatology, Madha Medical College, Mangadu, Thandalam, Tamil Nadu, India

Dr. Suresh Naik Tajavatu
Assistant Professor, Department of Dermatology, Maheshwara Medical College, Patancheru, Sangareddy District, Telangana, India

Corresponding Author:
Dr. Suresh Naik Tajavatu
Assistant Professor, Department of Dermatology, Maheshwara Medical College, Patancheru, Sangareddy District, Telangana, India

To study the changes in clinical nails in papulosquamous conditions

Dr. Swati Arora and Dr. Suresh Naik Tajavatu

DOI: https://doi.org/10.33545/26649411.2019.v2.i1a.195

Abstract
Introduction: The nail serves as an indicator of health. Ten percent of all dermatological conditions are nail disorders, with papulosquamous disorders being the predominant cause. Dermoscopy serves as an effective bridge between macroscopic and microscopic dermatology. The objective of the study is to ascertain the clinical and dermoscopic features of papulosquamous disorders in the nails and correlate them with the severity of the condition.
Materials and Methods: A research of nail modifications was performed from March 2018 to February 2019 at Maheshwara Medical College, Patancheru, Sangareddy District, Telangana, inside the Dermatology department's outpatient clinic to enhance understanding of the course of papulosquamous illness.
Results: The study included 100 individuals in total. Our results support the observations of others who noted that the most frequently injured nail is the right index fingernail. The thumb nail is the nail that is most frequently impacted, according to the authors' research, which indicated that modifications to a single fingernail were the most common type of nail involvement. The most frequent signs of lichen striatus were found to be longitudinal ridging and cracking of the nails. Each of these patients had atopy, which is in line with the findings of our own assessment.
Conclusion: According to the study mentioned above, which was carried out in a medical college hospital, it is certain that nail changes in papulosquamous disorders have a clinical importance.

Keywords: Nail disorder, clinical nails, papulosquamous, dermoscopy

Introduction
An indicator of health is the nail. 10% of all dermatological disorders are nail disorders, with papulosquamous disorders being the primary cause. A useful bridge connecting macroscopic and microscopic dermatology is dermoscopy [1, 2]. Onychoscopy makes it possible to easily record and save the projected images in addition to providing quick, real-time, high-resolution viewing at larger magnifications. Thus, we are examining both the clinical and dermoscopic results in this patient and contrasting them with the disease severity as measured by body surface area and the psoriasis area severity index [1-3].
Due of the nail's limited ability to mount reaction patterns to the numerous illnesses that afflict it, many conditions may not be properly recognized through visual inspection alone. Not every nail biopsy results in confirmation. Therefore, dermoscopy is a useful tool for improving visible nail features as well as for uncovering hidden diagnostic features, lowering the need for invasive procedures like nail biopsies [2-4], directing treatment, and improving patient follow-up regarding response to treatment. The NAPSI score would enable comparisons between various treatment modalities and be useful in monitoring patient progress during therapy. However, NAPSI must be used in conjunction with a test that also evaluates quality of life because it does not quantify the lesions that are already present and may not be sensitive enough to identify subtle changes [3-5]. Leukonychia is a common finding in people who do not have any nail diseases. Consequently, it is important to reevaluate if leukonychia is a more prevalent occurrence or if the inflammatory process of psoriasis causes it, and whether the NAPSI score should be affected. On the other hand, beau's lines and longitudinal ridges, which are frequently observed in fingernail psoriasis, are not listed in the NAPSI [4-6].
The goal of the study is to identify the clinical and dermoscopic characteristics of papulosquamous illnesses in the nails and tie them to the severity of the ailment.

Materials and Methods

During the time period of March 2018 to February 2019, a study of nail alterations was conducted at the outpatient clinic of the Maheshwara Medical College, Patancheru, Sangareddy District, Telangana, in the Department of Dermatology. The purpose of this study was to gain a better understanding of the progression of papulosquamous disease.

Inclusion criteria

- People with diseases called papulosquamous

Exclusion criteria

- Patients who declined to participate in the trial;
- Women who are nursing or pregnant;
- Patients who have also been excluded

Results

The study had 100 individuals in total, of which 70 were men and 30 were women. Proportion of men to women. The greatest age group of patients was those between the ages of 35 and 55, while the smallest age group consisted of patients over 60. Most of the patients were male and between the ages of 31 and 45. The age range of 40 to 60 was where the majority of the female patient group fell.

Table 1: The age range for papulosquamous disease

Age	Male	Female	Total
< 12	10	6	20
13-30	12	5	20
31-45	19	6	25
46-60	15	6	25
> 60	14	7	10
Total	70	20	100

Psoriasis was the most common papulosquamous ailment; lichen planus, pityriasis rosea, and PRP were in close second. Psoriasis and lichen planus were the most prevalent papulosquamous illnesses in both genders. Pityriasis rosea was more common in women than in men, although PRP was more common in men. PLC, lichen striatus, and parapsoriasis were the most common papulosquamous illnesses in ladies, while parapsoriasis was the rarest in males.

Table 2: Popular squamous cell diseases cases

Sr. No.	Diagnosis	Patients
1	Psoriasis	40
2	Lichen planus	15
3	Pityriasis rosea	15
4	Pityriasis rubra pilaris	10
5	Lichen niditus	06
6	Pityriasis lichenoides	05
7	Lichen striatus	05
8	Parapsoriasis	04
Total		100

There were 1.20 men for each woman in attendance. Male and female adults between the ages of 31 and 45 made up the bulk of individuals with nail abnormalities. The majority of patients with papulosquamous illnesses exhibited pitting in their nails, which was followed by thickening of the nail plate, Beau's line, and subungual hyperkeratosis. Pterygium was the least frequent type of nail alteration. On the index and middle fingers, nail anomalies like pitting, Beau's line, and onychomedesis were most common. Nail disorders such subungual hyperkeratosis and thickening of the nail plate were more prevalent in the lower limbs.

Table 3: KOH mount

Sr. No.	Koh mount	Patients
1	Positive	29
2	Negative	71

Using a KOH mount, six patients with altered nails tested positive for onychomycosis. Twenty instances of papulosquamous illnesses were HIV reactive, 44 had a history of atopy, 20 had diabetes, and 14 cases had systemic hypertension.

Table 4: Disorders that occur together

Sr. No.	Co-morbidities	Patients
1	Diabetes	20
2	SHT	16
3	HIV	20
4	ATOPY	44
Total		100

Discussion

After applying the inclusion and exclusion criteria, a total of eighty instances of papulosquamous diseases were invited to participate. Psoriasis, the papulosquamous disorder that is the most common, was the cause of forty-seven of these manifestations. Under the umbrella of psoriasis, the majority of papulosquamous disorders can be found. The overall population consisting of 29 individuals consisted of twenty-four males and twenty-three females [7-9]. The proportion of males to females was precisely one to one. Between the ages of 20 and 50, when patients were at their most susceptible to the effects of stress and pressure, there was an increase in the prevalence of psoriasis in India compared to earlier populations. The majority of people who were diagnosed with psoriasis were between the ages of 31 and 45 decades old. Patients with psoriasis who participated in our research were consistently more likely to experience changes in their nails [10-13].

This was one of the papulosquamous disorders that we looked into, specifically among those that we researched. It has been demonstrated through research that between 80 and 90 percent of those who suffer from psoriasis will [14-16], at some point in their lives, display nail involvement. When compared to the 78% that was found in the research conducted by SS and colleagues, this number is significantly higher. The nail is affected by psoriasis in fifty percent of patients, but when the entire population is taken into consideration, this percentage rises to eighty to ninety percent [17-20].

In the case of fingernails and toenails, respectively, only 32 and 24 percent of patients were afflicted by the condition. 4.2 years after the appearance of skin lesions, nail lesions frequently manifest themselves in people who have persistent plaque psoriasis. It was shown that finger nails were more likely to have pitting, whereas toe nails were more likely to have subungual hyperkeratosis [21-23]. Both of these changes were found in sixty-five percent and thirty-three percent of the patients, respectively. Despite the fact that the thumb and index finger on the right hand were the most frequently damaged digits, our research revealed that

the fourth fingernail was the most afflicted in both hands. The base of the big toe on the right foot is where the majority of infected toenails are found [24-26].

The data that we have obtained are in agreement with those of those who have observed that the nail that is damaged the most frequently is the right index fingernail. They came to the conclusion that the most prevalent type of nail involvement was a modification to a single fingernail, with the thumb nail being the nail that was most frequently impacted [25-27]. This conclusion was based on the findings of their research. It was discovered that the most typical signs of lichen striatus are called longitudinal ridging and cracking of the nails. In each of these patients, atopy was found, which is in line with the findings of our own evaluation for the condition [28-30].

Conclusion

Alterations to the nails are one of the symptoms of papulosquamous sickness; however, this is not the only symptom included. There is a strong correlation between the severity of the illness and the degree to which it is participating in the process. Each subtype of papulosquamous penumbra disease has its own unique pattern of participation in the development of the disease. The fact that twenty fingernails may be examined in a short amount of time and with little effort makes this a useful diagnostic tool. Nevertheless, in spite of all of these benefits, alterations to the nails remain an area that is rarely investigated in the scientific literature. The significance of nail alterations in papulosquamous illnesses from a therapeutic standpoint.

Funding source

None

Conflict of interest

None

References

1. David BG, Kannan G, Babu P. A clinical study of nail changes in common papulosquamous disorders. J Pak Assoc Dermatol. 2016;26(4):332-336.
2. Karim AR, Sadeque SP, Khan MA, Hasan MS, Al Azad MA, Siraj MS, Kabir MH, Begum ST. A study of nail changes in various dermatosis. J Armed Forces Med Coll Bangladesh. 2015;11(1):38-44.
3. Cohen PR. Longitudinal erythronychia: individual or multiple linear red bands of the nail plate: a review of clinical features and associated conditions. Am J Clin Dermatol. 2011 Aug;12:217-231.
4. Kouskoukis CE, Scher RK, Ackerman AB. The "oil drop" sign of psoriatic nails: A clinical finding specific for psoriasis. Am J Dermatopathol. 1983 Jun;5(3):259-262.
5. Salomon J, Szepietowski JC, Proniewicz A. Psoriatic nails: a prospective clinical study. J Cutaneous Med Surg. 2003 Aug;7(4):317-321.
6. Than SS, Lin JJ, *et al*. Clinical observation on nail changes in psoriasis. Ann Acad Med Singapore. 1988;17(4):482-485.
7. Calvert HT, Smith MA, Wells RS. Psoriasis and the nails. Br J Dermatol. 1963;73:415-418.
8. De Berker DAR, Baran R, Dawber RPR. Disorders of the nail. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's textbook of dermatology. 7th ed. Oxford: Blackwell Publishing; c2004. p. 61-62.
9. Sacchidanand S, Oberai C, Inamadar AC. IADVL Text Book of Dermatology. 4th ed. Bhalani Book Depot; c2015. p. 158.
10. Haneke E. Surgical anatomy of the nail apparatus. Dermatol Clin. 2006 Jul;24(3):291-296.
11. Kaur I, Kumar B, Sharma KV, Kaur S. Epidemiology of psoriasis in a clinic from North India. Indian J Dermatol Venereol Leprol. 1986;52(4):208.
12. Sharma TP, Sepaha GC. Psoriasis: a clinical study. Indian J Dermatol Venereol Leprol. 1964 Sep;30(5):191.
13. Baran R. The burden of nail psoriasis: an introduction. Dermatology. 2010;221(1):1-5.
14. Smith DO, Oura C, Kimura C, Toshimori K. Artery anatomy and tortuosity in the distal finger. J Hand Surg Am. 1991 Mar;16(2):297-302.
15. De Berker D, Wojnarowska F, Sviland L, Westgate GE, Dawber RP, Leigh IM. Keratin expression in the normal nail unit: markers of regional differentiation. Br J Dermatol. 2000 Jan;142(1):89-96.
16. Jiaravuthisan MM, Sasseville D, Vender RB, Murphy F, Muhn CY. Psoriasis of the nail: anatomy, pathology, clinical presentation, and a review of the literature on therapy. J Am Acad Dermatol. 2007 Jul;57(1):1-27.
17. Van der Velden HM, Klaassen KM, van de Kerkhof PC, Pasch MC. Fingernail psoriasis reconsidered: a case-control study. J Am Acad Dermatol. 2013 Aug;69(2):245-252.
18. Klaassen KM, Kerkhof PC, Pasch MC. Nail psoriasis: a questionnaire-based survey. Br J Dermatol. 2013 Aug;169(2):314-319.
19. Solomon J, Szepietowski JC, Proniewicz A. Psoriatic nails: a prospective clinical study. J Cutaneous Med Surg. 2003 Aug;7(4):317-321.
20. Brazzelli V, Carugno A, Alborghetti A, Grasso V, Cananzi R, Fornara L, De Silvestri A, Borroni G. Prevalence, severity and clinical features of psoriasis in fingernails and toenails in adult patients: Italian experience. J Eur Acad Dermatol Venereol. 2012 Nov;26(11):1354-1359.
21. Puri N, Kaur T. A study of nail changes in various dermatosis in Punjab, India. Our Dermatol Online. 2012 Jul;3(3):164-170.
22. Marina EM, Botar-Jid C, Bolboaca SD, Roman II, Senila CS, Mihu CM, Tataru DA. Patterns of clinical nail appearances in patients with cutaneous psoriasis. Clujul Med. 2017;90(1):22.
23. Gopal V, Shenoy MM. Nail evaluation in internal diseases: an indispensable exercise. Arch Med Health Sci. 2017 Jul;5(2):269-274.
24. Bernard LA, Eichenfield LF. Eczematous and papulosquamous disorders. In: Neonatal Dermatology E-Book. 2007 Dec 20:229-244.
25. Cohen BA. Papulosquamous eruptions. In: Pediatric Dermatology. 4th ed. Baltimore: Elsevier; 2013 Aug 5:68-103.
26. Barman DD, Bhattacharyya P, Ray PS, Sarkar S, Sarkar R, Roy AK. Clinicopathological correlation of noninfectious erythematous papulosquamous cutaneous lesions in a tertiary care hospital. Indian J Dermatopathol Diagn Dermatol. 2018 Jul;5(2):101-105.
27. Madke B, Chougule BD, Kar S, Khopkar U.

Appearances in clinical dermatology. Indian J Dermatol Venereol Leprol. 2014 Sep;80:432.
28. Pinney SS, Alousi AM, Hymes SR. Clinical presentation of nonsclerotic epidermal chronic graft-versus-host disease and hair and nail changes. In: Atlas of Graft-versus-Host Disease: Approaches to Diagnosis and Treatment; c2017. p. 69-91.
29. Na SJ, Jo SJ, Youn JI. Clinical study on psoriasis patients for past 30 years (1982–2012) in Seoul National University Hospital Psoriasis Clinic. J Dermatol. 2013 Sep;40(9):731-735.
30. Patel KB, Desai BR. Pediatric dermatoses encountered in dermatology outpatient department of a teaching institute. Int J Contemp Pediatr. 2016 Oct;3(4):1178-84.