Profile of Nail Disorders in Patients Presenting to a Tertiary Care Hospital in Kashmir Valley

Muzafar Ahmad Mir[1], Iffat Hassan[2], Abid keen[3], Yasmeen Jabeen Bhat[4]

ABSTRACT

Introduction: Nail disorders comprise about 10% of all dermatological conditions. They may get involved in various systemic diseases, infectious processes, nutritional deficiencies, ageing, genetic disorders, and neoplasms. Current study objective was to see the clinical pattern of nail changes in patients presenting with various nail disorders and to determine the clinical pattern of nail involvement in various dermatoses.

Material and methods: This was a cross sectional study in which patients presenting to our department with any nail disorders were examined. A proper history, examination and the relevant investigations like KOH, nail culture, and nail biopsy were also done.

Results: A total of 500 patients were screened, 282 females and 218 males. The most common nail change observed was longitudinal ridging (45.6%), followed by distal subungual hyperkeratosis (35.8%) and cuticular changes (35.2%). Onychomycosis was the most common nail disorder observed, constituting 36.2% of all nails diseases**.** Among non infective diseases, nail psoriasis was the most common nail disorder followed by nail lichen planus.

Conclusion: A variety of nail changes can occur in various dermatological and various other systemic disorders. So a thorough clinical examination of nails is of prime importance to correlate all these nail changes and to make dermatologists to reach a conclusive diagnosis.

Keywords: Nail Disorders, Onychomycosis, Nail Psoriasis

INTRODUCTION

The nail apparatus consists of a horny "dead" product, the nail plate, and four specialized epithelia: proximal nail fold, nail matrix, nail bed, and the hyponychium.[1] Nail disorders comprise approximately 10% of all the dermatological conditions.[2-4] They may get involved in various dermatoses, systemic diseases, infections, ageing, topical and systemic medications, vascular insufficiency, physical and environmental agents, trauma, neurological abnormalities, nutritional deficiencies and various benign and malignant tumours.[5]Among all nail disorders, about 20-40% are due to onychomycosis, the prevalence of which depends upon age, sex, occupation, lifestyle and other comorbidities.[6]

Various nail signs that can be observed can be categorized on the basis of nail shape, its attachment, surface and color. On the basis of abnormalities of shape, various nail signs that can be observed include clubbing, koilonychia, pincer nail, anonychia, macronychia and micronychia. Nail attachment abnormalities include nail shedding, onycholysis, pterygium and subungual hyperkeratosis. Changes in nail surface can manifest as longitudinal grooves, transverse grooves, beau's lines, pitting, trachyonychia, onychoschizia, beading and ridging. Nail color changes that can be observed include leukonychia, Terry's nail, Muehrcke's paired white bands, Mee's stripes, yellow nails as in yellow nail syndrome, longitudinal erythronychia, red lunula and splinter haemorrhages.

As there is a paucity of literature regarding the clinical spectrum of various nail disorders, the present study was designed to ascertain the clinical profile of patients presenting to our tertiary care hospital with nail disorders.

MATERIAL AND METHODS

This was a cross sectional study carried over a period of one and a half years in which patients presenting to our department with any nail disorder or any other dermatoses affecting the nails were examined and screened for various nail changes. A preformed questionnaire was formulated and required data was collected from the patients after taking a proper consent regarding demographic details, duration, course, occupation, trauma, specific drug intake, any skin diseases or history of any systemic disease. A detailed general physical examination, systemic examination and cutaneous examination was carried out in each subject and the details were recorded. Routine investigations like complete blood count, urine examination, kidney function tests and liver function tests were done wherever pertinent and relevant laboratory investigations and specialized tests like KOH of nail clippings, culture of nail clippings, onychoscopy, nail biopsy and skin biopsy were also carried out in selected patients.

The study group included patients of all the age groups who presented to our department with history of any nail ailment or any dermatological disorder with nail changes. There were no specific exclusion criteria in our study. An informed

[1]Senior Resident, Department of Dermatology, STD and Leprosy, [2]Professor, Department of Dermatology, STD and Leprosy, [3]Senior Resident, Department of Dermatology, STD and Leprosy, [4]Associate professor, Department of Dermatology, STD and Leprosy, Government Medical College, Srinagar.

Corresponding author: Iffat Hassan, Room no. 120, Opposite Ward, 6, SMHS Hospital, Karan Nagar, Srinagar, J&K, 190010, India

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consent was obtained from all the study subjects and the study was approved by our institutional ethical committee.

STATISTICAL ANALYSIS

The data at the end of the study was entered in Microsoft Excel and analyzed using SPSS (Statistical Package for Social Sciences) version 20. Frequencies were obtained using descriptive statistics. Chi-square tests were used for finding out relation between variables. A p-value (two-tailed) of less than 0.05 was considered statistically significant.

RESULTS

A total of 500 patients were screened, 282 females and 218 males with a male to female ratio of 1:1.29. Most of the patients were house wives (34.6%), followed by students (30.4%) [Figure1]. Mean age of the study group was 36.45±14.85 years with age ranging from 1.1- 80 years. Most of the patients (25.4%) were seen in the age group of

S. no	Age group (years)	No. of patients	Percentage (%)
1	<10	16	3.2
2	10.1-20	66	13.2
3	21.1-30	100	20.0
4	31.1-40	127	25.4
5	41.1-50	100	20.0
6	50+	91	18.2
Total		500	100%

Table-1: Age distribution of patient

Nails involved	Frequency	Percent
Finger nails	323	64.6
Toe nails	135	27.0
Both finger and toe nails	42	8.4
Total	500	100.0

Table-2: Finger nail versus toe nail involvement

Nail diseases	No. of cases	Percentage
Infectious	195	39.0
Non infectious	300	60.0
Infectious and non infectious	5	1.0
Total	500	100.0

Table-3: Infectious and noninfectious diseases of nails

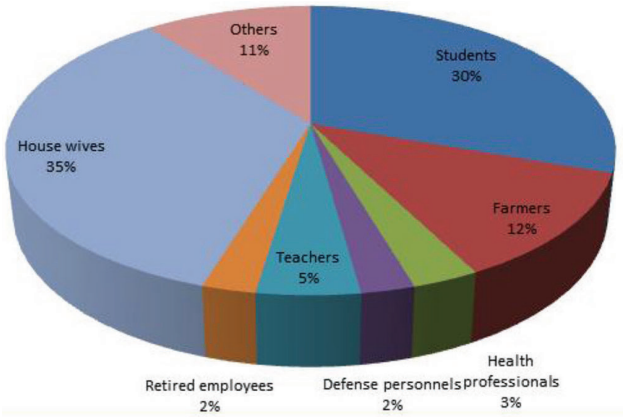

Figure-1: Occupational status of patients

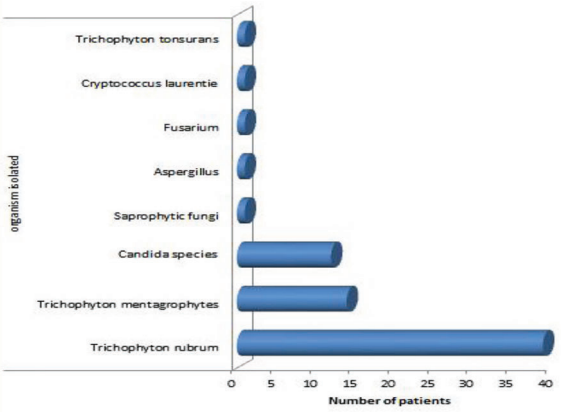

Figure-2: Organisms isolated in onychomycosis

Figure-3: Distal and lateral subungual onychomycosis

Figure-4: Superficial white onychomycosis

Figure-5: Onychoscopy of onychomycosis

S. No.	Diagnosis	No. of cases (N=500)	Percentage (%)
1	Onychomycosis	181	36.2
2	Nail psoriasis	75	15
3	Nail lichen planus	58	11.6
4	Chronic paronychia	33	6.6
5	Onychocryptosis	18	3.6
6	Nail changes in hand eczema	16	3.2
7	Nail dystrophy	13	2.6
8	Benign longitudinal melanonychia	11	2.2
9	Beaus lines	9	1.8
10	Onychomadesis	9	1.8
11	Nail changes in systemic sclerosis	7	1.4
12	Subungual/splinter haemorrhage	7	1.4
13	Nail changes in systemic lupus erythematosus	5	1
14	Leukonychia	4	0.8
15	Periungual verruca	9	0.8
16	Glomus tumour	4	0.8
17	Muehrcke's bands	4	0.8
18	Nail changes in darier's disease	3	0.6
19	Nail changes in pemphigus	3	0.6
20	Nail changes in palmoplantar keratoderma	3	0.6
21	Anonychia	2	0.4
22	Nail changes in dermatomyositis	2	0.4
23	Onychorrhexis	2	0.4
24	Habit tic deformity	2	0.4
25	Benign longitudinal melanonychia + Leukonychia	2	0.4
26	Malignant melanoma	1	0.2
27	Nail changes in alopecia areata	1	0.2
28	Koilonychias + Benign longitudinal melanonychia	1	0.2
29	Pincer nail deformity + Onychomycosis	1	0.2
30	Onychogryphosis	1	0.2
31	Myxoid cyst	1	0.2
32	Median canaliform dystrophy of Heller	1	0.2
33	Nail changes in pityriasis rubra pilaris	1	0.2
34	Onychomatricoma	1	0.2
35	Pachyonychia congenital	1	0.2
36	Brachydactyly	1	0.2
37	Nail changes in ectodermal dysplasia	1	0.2
38	Half and half nails + Onychomycosis	1	0.2
39	Pincer nail deformity + Onychocryptosis	1	0.2
40	Onychomycosis + Onychocryptosis	1	0.2
41	Benign longitudinal melanonychia + Onychomadesis	1	0.2
42	Onychocryptosis + Chronic paronychia	1	0.2
43	Lichen planus + Periungual verruca	1	0.2
Total		500	100

Table-4: Prevalence of various nail disorders

S. No.	Types of onychomycosis	No. of cases	Percentage (among all nail diseases)	Percentage (among onychomycosis)
1	distal lateral subungual onychomycosis	162	32.4	89.5
2	superficial white onychomycosis	14	2.8	7.7
3	Proximal subungual onychomycosis	2	.4	1.1
4	total dystrophic onychomycosis	3	.6	1.7
Total		181	36.2	100.0

Table-5: Clinical variants of onychomycosis

S. No.	Nail changes	No. of cases	Percentage (%)
1	Longitudinal ridging	228	45.6
2	Distal subungual hyperkeratosis	179	35.8
3	Cuticular changes (ragged, absent, haemorrhagic)	176	35.2
4	Thickening of nail plate	119	23.8
5	Brownish discoloration of nail plate	114	22.8
6	Transverse grooves	97	19.4
7	Distal onycholysis	86	17.2
8	Yellowish discoloration of nail plate	77	15.4
9	Transverse ridging	76	15.2
10	Pitting	75	15
11	Inflamed nail folds	69	13.8
12	Crumbled/dystrophic nail plate	52	10.4
13	White discoloration of nail plate	52	10.4
14	Grayish discoloration of nail plate	44	8.8
15	Nail fold discoloration	39	7.8
16	Increased transverse curvature	38	7.6
17	Longitudinal grooves	36	7.2
18	Thinning of nail plate	34	6.8
19	Pterigium	32	6.4
20	Brownish black discoloration of nail plate	29	5.8
21	Increased longitudinal nail plate curvature	28	5.6
22	Onychoatrophy	23	4.6
23	Salmon patch	20	4
24	Absent nail folds	16	3.2
25	Periungual erythema	16	3.2
26	Absent nail plate	13	2.6
27	Pseudo nail plate	12	2.4
28	Purplish/red discoloration of nail bed	12	2.4
29	Splits in nail plate (longitudinal/horizontal)	10	2
30	Koilonychias	9	1.8
31	Proximal separation of nail plate from nail bed	9	1.8
32	Blackish discoloration of nail plate	7	1.4
33	Dilated capillaries	7	1.4
34	Pup tent sign	6	1.2
35	Distal tapering of nail plate	6	1.2
36	Periungual telangiectasia	5	1
37	Transverse pink bands	5	1
38	Longitudinal red streaks	3	0.6
39	Herring pattern of nail plate	2	0.4
40	Oval/round swelling of nail plate	2	0.4
41	Broader nail plate	1	0.2
42	V shaped notch in nail plate	1	0.2

Table-6: Prevalence of nail changes

30-40 years. Distribution of patients in various age groups is depicted in [Table 1].

Among associated systemic diseases associated, the most common was diabetes mellitus (14.2%) and hypertension (6.4%) and these diseases were most commonly associated with onychomycosis. In patients with onychomycosis, diabetes mellitus was present in 17.13% and hypertension in 8.29%, which could be attributed to the decreased blood flow to the digits because of microangiopathy.

In our study, finger nail involvement outnumbered toe nail involvement. In 64.6% of patients only finger nails were involved, 27% of patients had isolated toe nail involvement, whereas 8.4% of patients had both finger and toe nail involvement [Table 2].

Among a total of 500 patients examined for nail diseases, 60% had non infectious diseases, 39% had only infectious diseases and in 1% of patients both infectious and noninfectious diseases were present [Table 3].

Prevalence of various nail disorders in our study is depicted in [Table 4]. Onychomycosis was the most common nail disorder constituting 36.2% of all nails diseases, observed in 181 patients, 95 males and 86 females. Among non infective diseases, nail psoriasis (15%) was the commonest nail disorder followed by lichen planus (11.6%).

S. No.	Nail changes	No. of cases (N=181)	Percentage (%)
1	Distal subungual hyperkeratosis	137	75.69
2	Thickening of nail plate	94	51.93
3	Brownish discoloration of nail plate	82	45.3
4	Longitudinal ridging	65	35.91
5	Cuticular changes(ragged, absent, haemorrhagic)	64	35.36
6	Yellowish discoloration of nail plate	37	20.44
7	Transverse ridging	35	19.38
8	Grayish discoloration of nail plate	34	18.78
9	White discoloration of nail plate	33	18.23
10	Crumbled/dystrophic nail plate	30	16.57
11	Transverse grooves	27	14.92
12	Distal onycholysis	15	8.29
13	Increased longitudinal nail plate curvature	9	4.97
14	Increased transverse curvature	8	4.42
15	Inflamed nail folds	8	4.42
16	Nail fold discoloration	8	4.42
17	Thinning of nail plate	7	3.87
18	Onychoatrophy	6	3.31
19	Pitting	3	1.66
20	Brownish black discoloration of nail plate	3	1.66
21	Longitudinal grooves	2	1.1
22	Distal tapering of nail plate	2	1.1
23	Blackish discoloration of nail plate	1	0.55
24	Purplish/red discoloration of nail bed	1	0.55
25	Splits in nail plate (longitudinal/horizontal)	1	0.55

Table-7: Nail changes in onychomycosis

S. No.	Nail changes	No. of cases (N=75)	Percentage (%)
1	Pitting	62	82.7
2	Distal onycholysis	57	76
3	Longitudinal ridging	55	73.3
4	Distal subungual hyperkeratosis	24	32
5	Yellowish discoloration of nail plate	24	32
6	Salmon patch	18	24
7	Cuticular changes(ragged, absent, haemorrhagic)	11	14.7
8	Transverse grooves	7	9.3
9	White discoloration of nail plate	7	9.3
10	Thickening of nail plate	5	6.7
11	Increased longitudinal nail plate curvature	4	5.3
12	Increased transverse curvature	4	5.3
13	Brownish discoloration of nail plate	4	5.3
14	Brownish black discoloration of nail plate	4	5.3
15	Grayish discoloration of nail plate	3	4
16	Transverse ridging	2	2.7
17	Inflamed nail folds	2	2.7

Table-8: Nail changes in psoriasis

The mean age of patients with onychomycosis was 40.89 ± 13.67 years, and the most common pathogen isolated was trichophyton rubrum (55.71%) followed by trichophyton mentagrophytes (20%) and candida species (17.14%) [Figure 2].

Various clinical types of onychomycosis observed in our study were distal lateral subungual onychomycosis [Figure 3], superficial white onychomycosis [Figure 4], proximal subungual onychomycosis and total dystrophic onychomycosis, constituting 89.5%, 7.7%, 1.7% and 1.1% of the patients respectively [Table 5].

In our study, we observed discoloration of nail plate as the most common nail change (67%) among which brownish discoloration predominates in 34.3% of patients. The second commonest nail change observed was longitudinal ridging (45.6%) followed by distal subungual hyperkeratosis (35.8%) [Table 6]. The commonest nail change that we observed in patients of onychomycosis was discoloration of the nail plate, seen in 88.38% of patients, among which brownish discoloration and yellowish discoloration of

S. No.	Nail changes	No. of cases(N=58)	Percentage (%)
1	Longitudinal ridging	40	69
2	Pterigium	30	51.7
3	Thinning of nail plate	25	43.1
4	Longitudinal grooves	22	37.9
5	Onychoatrophy	15	25.9
6	Brownish discoloration of nail plate	12	20.7
7	Crumbled/dystrophic nail plate	11	19
8	Nail fold discoloration	9	15.5
9	Absent nail plate	9	15.5
10	Absent nail folds	9	15.5
11	Cuticular changes(ragged, absent, haemorrhagic)	8	13.8
12	Thickening of nail plate	7	12.1
13	Pseudo nail plate	7	12.1
14	Koilonychias	6	10.3
15	Distal onycholysis	5	8.6
16	Pup tent sign	5	8.6
17	Grayish discoloration of nail plate	3	5.2
18	Distal subungual hyperkeratosis	2	3.4
19	Transverse grooves	2	3.4
20	Increased longitudinal nail plate curvature	2	3.4
21	Brownish black discoloration of nail plate	2	3.4
22	Purplish/red discoloration of nail bed	2	3.4
23	Transverse ridging	1	1.7
24	Pitting	1	1.7
25	Yellowish discoloration of nail plate	1	1.7
26	Salmon patch	1	1.7
27	Periungual erythema	1	1.7
28	Splits in nail plate (longitudinal/horizontal)	1	1.7

Table-9: Nail changes in lichen planus

S. No.	Nail changes	No. of cases(N=16)	Percentage (%)
1	Transverse grooves	15	93.75
2	Cuticular changes (ragged, absent, haemorrhagic)	15	93.75
3	Transverse ridging	9	56.25
4	Pitting	6	37.5
5	Inflamed nail folds	5	31.5
6	Longitudinal ridging	5	31.25
7	Distal subungual hyperkeratosis	2	12.5
8	Increased longitudinal nail plate curvature	2	12.5
9	Brownish discoloration of nail plate	2	12.5
10	Thickening of nail plate	1	6.25
11	Crumbled/dystrophic nail plate	1	6.25
12	Longitudinal grooves	1	6.25
13	Blackish discoloration of nail plate	1	6.25
14	Splits in nail plate (longitudinal/horizontal)	1	6.25

Table-10: Nail changes in eczema

nail plate predominated and were seen in 45.30% and 20.44% of these patients, respectively. The next common nail change observed in patients with onychomycosis was distal subungual hyperkeratosis seen in 75.69% of patients [Table7]. In suspected cases of onychomycosis, onychoscopy was used and revealed proximal jagged edge, spikes and longitudinal striae [Figure 5].

Nail psoriasis was the commonest non infective disease among our patients. Nail pitting was the commonest nail change observed in 82.7% of these patients [Figure 6], followed by distal onycholysis (76%) [Figure 7] and longitudinal ridging (73.3%) [Figure 6] [Table 8]. Onychoscopy was used in selected patients and showed nail changes in the form of irregular pitting, longitudinal and transverse ridging, onycholysis surrounded by a proximal erythematous border, red to orange irregular salmon patches, splinter hemorrhages,

S. No.	Nail changes	No. of cases(N=7)	Percentage (%)
1	Longitudinal ridging	6	85.71
2	Cuticular changes(ragged, absent, haemorrhagic)	6	85.71
3	Dilated capillaries	4	57.14
4	Increased transverse curvature	3	42.86
5	Increased longitudinal nail plate curvature	2	28.57
6	Inflamed nail folds	2	28.57
7	Transverse ridging	1	14.29
8	Distal onycholysis	1	14.29
9	Proximal separation of nail plate from nail bed	1	14.29
10	Nail fold discoloration	1	14.19
11	Distal tapering of nail plate	1	14.19

Table-11: Nail changes in systemic sclerosis

S. No.	Nail changes	No. of cases(N=5)	Percentage (%)
1	Periungual telangiectasia	4	80
2	Cuticular changes(ragged, absent, haemorrhagic)	3	60
3	Longitudinal ridging	3	60
4	White discoloration of nail plate	2	40
5	Purplish/red discoloration of nail bed	2	40
6	Absent nail plate	1	20
7	Dilated capillaries	1	20

Table-12: Nail changes in systemic lupus erythematosus

S. No.	Nail changes	No. of cases(N=2)	Percentage (%)
1	Longitudinal ridging	1	50
2	Cuticular changes(ragged, absent, haemorrhagic)	1	50
3	Periungual telangiectasia	1	50

Table-13: Nail changes in dermatomyositis

Figure-6: Nail psoriasis showing pitting and longitudinal ridging

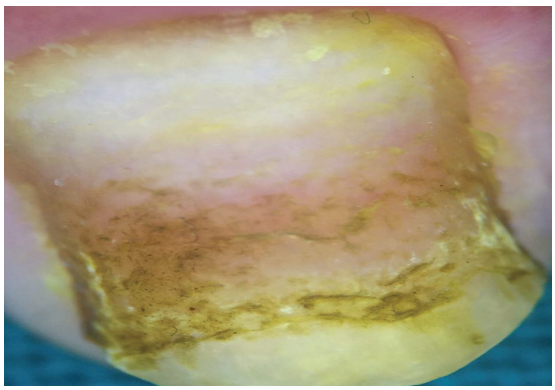

Figure-8: Onychoscopy of nail psoriasis

Figure-7: Onycholysis in a patient with psoriasis

Figure-9: Nail lichen planus showing pterygium unguis

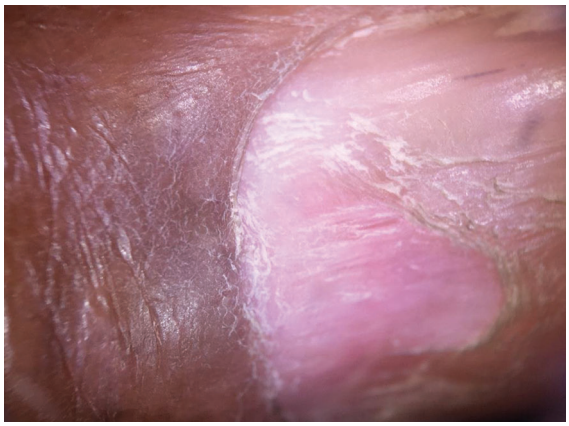

Figure-10: Onychoscopy of nail lichen planus

dilated tortuous capillaries in hyponychium and proximal nail fold and subungual hyperkeratosis. [Figure 8]

The second most common non infective disorder observed in our study was lichen planus. The commonest nail change observed was longitudinal ridging (69%) followed by pterygium unguis (51.7%) [Figure 9] [Table 9]. The findings in patients with lichen planus were substantiated by using onychoscopy which showed nail changes in the form of longitudinal streaks, pitting, pterygium, red lunula, trachyonychia, nail fragmentation, chromonychia, splinter hemorrhages etc. [Figure 10].

Nail involvement in eczemas was seen in 16 patients, the commonest nail changes being transverse grooves (93.75%) and cuticular changes (93.75%) [Table 10].

Nail changes in patients with systemic sclerosis, systemic lupus erythematosus and dermatomyositis are depicted in [Tables 11, 12 and 13] respectively.

DISCUSSION

Nails act as a window for a physician to diagnose various dermatological, systemic, or nutritional diseases of the patient. The primary function of the nails is to protect the distal phalanx from trauma. They contribute to the tactile discrimination, fine motor functions of the finger tips, social, sexual and esthetic appearance. Also they let us the ability to scratch and groom as rudimentary weapon and are also important for motor functions of feet by contributing to pedal biomechanics.[7] The prevalence of nail disorders comprise about10% of all dermatologic diseases and includes both patients with nail diseases per se as well as the patients in whom nail diseases are associated with other diseases.[2]

In our study population, age of the patients varied from 1.1-80 years, with a mean value of 36.45 ± 14.85 years, and male to female ratio was 1:1.29. This was almost similar to study conducted by Le Bidreet al.[8] where the age of the patients ranged from 8 to 92 years with mean age of 47.9 years and male to female ratio was 1:1.5.

In our study most of the patients (25.4%) were seen in the age group of 30-40 years followed by the patients in the age group of 20-30 years. These findings were similar to the study conducted by Puri N et al.[9] who observed that the maximum number of patients with nail changes (40%) were in the age group of 21-40 years.

The mean duration of nail diseases in our study was 3.61±5.74 years. The duration varied among the diseases and was based on the nature of the disease. In our study, nail diseases were most common in house wives constituting 34.6% of all the patients. This might be explained on the basis of housewives being exposed to wet work and irritants, leading to onychomycosis, paronychia, or eczema. This finding was similar to the study conducted by Jassi R et al.[10] Thus, to avoid frequent and prolonged immersion and exposure to irritants, the use of appropriate preventive measures such as cotton-lined gloves for kitchen work is advised, and appropriate footwear may help to decrease the risk of acquiring a nail disease.

In our study, majority of the patients had involvement of finger nails and the isolated finger nail involvement was seen in 64.6% of patients, the isolated toe nails were involved in 27% of patients and the involvement of both finger and toe nails was seen in 8.4% of the patients. This was similar to the study conducted by Jassi R et al.[10] where they noted isolated finger nail involvement in 67.7% of patients and both finger and toe nail involvement in 8.2% of patients.

In our study, majority of the patients (60%) of the patients had non infectious diseases and 40% had infectious diseases. Among the infectious diseases, fungal infections were the most prevalent and were seen in 38% of the patients. Also the most common nail disease observed was onychomycosis, comprising 36.2% of all patients. Among different types of onychomycosis, DLSO was the most common variant and was seen in 89.5% of patients. KOH mount in these patients was positive in 95% of patients. On culture, different types of fungal species were isolated in 70 patients, the most common species detected being trichophyton rubrum and trichophyton mentagrophytes seen in 55.71% and 20% of culture positive patients respectively. In our study, Candida species were isolated in 17.14% of culture positive patients. However, the study conducted by Jassi R et al.[10] demonstrated KOH positivity in around 58% of patients and the organisms isolated were of Trichophyton species constituting 59.6% of the all organisms isolated. In our study, the commonest finding that we observed in patients of onychomycosis was discoloration of nail plate, seen in 88.38% of patients, among which brownish discoloration and yellowish discoloration predominate and were seen respectively in 45.30% and 20.44% of patients. The second common nail change that we observed was distal subungual hyperkeratosis which was seen in 75.69% of patients. Kauret al.[11] reported the occurrence of discoloration in 100% of patients and pain in 17% of patients with onychomycosis, whereas Gupta et al.[12] reported occurrence of discoloration in 92% of patients of toe-nail onychomycosis. In our study, the most common disorder affecting nails was onychomycosis (36.2%) followed by psoriasis (15%) and lichen planus (11.6%). These findings were almost similar to the study conducted by Puri N et al.[9] who also noticed onychomycosis as the commonest disease followed by psoriasis, seen in 25% and 20% of patients respectively.

In a study conducted on nail psoriasis in Singapore, the

main patterns of nail changes seen were pitting, followed by onycholysis, subungual hyperkeratosis and discoloration.[13] In our study, the most common nail change seen was pitting followed by onycholysis and longitudinal ridging.

A study conducted in 375 cases of lichen planus showed nail changes in the form of thinning of nail plate, pterygium unguis and total destruction of nail plate.[14] Another study carried out in Jordanian patients by Abdallat S A et al.[15] found that the commonest nail change was longitudinal ridging followed by discoloration, splitting, loss of nail plate and pterygium. In our study, the commonest nail change seen was longitudinal ridging followed by pterygium, thinning of nail plate and longitudinal grooves, corroborating the findings of many previous studies.

Nail involvement is also common in connective tissue diseases. Though most of these are not specific but they may give a clue in the diagnosis of the disease. A study conducted by Elmansour I et al.[16] in 39 patients with connective tissue diseases found that in patients with systemic sclerosis, 87.5% patients had nail changes. The commonest nail changes observed were nail fold telangiectasia (56.25%) and ragged cuticles (42.86%). In patients with systemic lupus erythematosus, nail changes were seen in 50% of patients in the form of proximal nail-fold erythema, longitudinal ridging, bluish-black discoloration of the nail plate, onycholysis, subungual hyperkeratosis, splinter haemorrhages and red lunula. In patients with dermatomyositis, 75% had nail fold erythema and 50% of them had ragged, hyperkeratotic cuticles. The other less common changes were longitudinal ridging and nail fold telangiectasia. In our study, the commonest nail changes in patients with systemic sclerosis were longitudinal ridging and cuticular changes both seen in 85.71% of patients followed by dilated capillaries in 57.14% of patients. In our study, the commonest nail changes observed in patients with systemic lupus erythematosus were periungual telangiectasia followed by cuticular changes and longitudinal ridging. Nail changes observed in dermatomyositis were longitudinal ridging, cuticular changes and periungual telangiectasia.

CONCLUSION

A myriad of nail changes can occur in various dermatological, systemic and other conditions, thereby correlating various nail changes can help a dermatologist to reach a conclusive diagnosis. The results in our study were in conformity with the results in various parts of India and abroad. However, a few differences in the results were observed which could be attributed to a relatively smaller sample size. Therefore, further representative studies with a larger sample size are required to obtain a detailed profile of various nail disorders.

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