

CHRONIC FOLLICULITIS- A CLINICOEPIDEMIOLOGICAL STUDYBalachandran Parapattu Kunjukunju¹, Lilakumari Subramoniam²¹Professor, Department of Dermatology and Venereology, Government T.D. Medical College, Alappuzha, Kerala.²Assistant Professor, Department of Dermatology and Venereology, Government T.D. Medical College, Alappuzha, Kerala.**ABSTRACT****BACKGROUND**

Chronic folliculitis is a chronic infection of the hair follicles predominantly seen on legs. The main features of the disease are follicular pustules, perifolliculitis, cutaneous oedema, crusting, scaling, atrophy, loss of hair and follicular scarring. In spite of treatment, the condition progresses till loss of all hair from the affected area.

MATERIALS AND METHODS

This is a cross-sectional descriptive study of seventy five patients with chronic folliculitis who attended the Outpatient Department of Dermatology and Venereology, Government Medical College, Kottayam, Kerala. After getting the informed written consent, they were enrolled in the study. Aim of the study is to find out the clinical and demographic profile, aetiology and treatment response.

RESULTS

Out of the 75 patients studied, 57 (76%) were males and 18 (24%) were females. Maximum age group affected were in the 21-40 years (60%). Out of 75 patients studied, 58.7% were manual labourers. Initial site of involvement was lower limb in 86.7% patients. Involvement of legs seen in all patients in the course of the disease. Oil application, working with wet soil, soap application and rubbing are the common precipitating factors noted in the study. Staphylococci was the commonest aetiological agent seen in 57 (76%) patients.

CONCLUSION

We conclude that chronic folliculitis is mainly a disease of males affecting mainly to the manual labourers, chronic folliculitis is a disease refractory to treatment.

KEYWORDS

Folliculitis, Epidemiology, Staphylococci.

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BACKGROUND

Chronic folliculitis is a chronic infection of the hair follicles. The common site of involvement is legs. This is a common condition seen among Africans and Asians including Indians.¹

Clark was the first to describe this condition among Negroes of Nigeria and he called this condition as "Dermatitis Cruris Pustulosa et Atrophicans."² Harman described the same condition from Western Nigeria and he called it "Nigerian shin disease."³ Sugathan et al described a similar condition and proposed the term "Folliculitis Cruris Pustulosa et Atrophicans."⁴

The main features of the disease are pustular folliculitis, perifolliculitis, cutaneous oedema, crusting, scaling, atrophy, loss of hair, loss of skin markings, follicular scarring and

shininess of skin.^{1,3,4} The common site of involvement is anterior aspects of legs.^{1,3,5}

Many factors found to play some role in breaking the local resistance of the hair follicle predisposing to infection. They are physical or chemical injury, excessive perspiration, hot environment, application of oil, soap and rubbing. Staphylococcus aureus was found to be the common aetiological agent, although other organisms have also been found.^{6,7,8,9,10}

Chronicity of this condition to therapy has been stressed by all the workers. After the onset, the disease progresses in spite of all therapeutic efforts, till all the hair fall off in the affected area and scarring sets in.^{9,10,11,12} The treatment of this condition include systemic and topical antibiotics and avoidance of risk factors.^{8,9,10}

MATERIALS AND METHODS

75 patients with chronic folliculitis attending the Outpatient Department of Dermatology and Venereology, Government Medical College, Kottayam, Kerala, were included in the study after getting the informed written consent. Details regarding name, age, sex, occupation, duration of illness, symptoms, type and sites of lesions were noted. In addition, effect of factors like oil application, usage of soap, seasonal changes, rubbing and family history of similar complaints

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was also recorded. Detailed general and local examinations were done in all cases. General examination was aimed specifically to find out any systemic diseases like anaemia, malnutrition, diabetes and any focus of infection. Detailed local examination including the morphology of the lesions such as papules, pustules or vesicles, site of lesion, extent of lesion and other finding such as crusting, scaling, loss of hair and atrophy was also noted.

Investigations including routine blood and urine examination, blood sugar estimation were done in relevant cases. Pus from the lesion collected for Gram staining and culture and sensitivity test in those cases in which pustules were present.

For Treatment, Patients were divided into Three Groups-

- Group 1- Patients with extensive follicular pustules, tender lymphadenopathy and constitutional symptoms. Systemic antibiotics were given in this case.

- Group 2- Patients with few pustules without any lymphadenopathy or constitution symptoms. This group was treated with topical antibiotics.
- Group 3- Patients with mainly papules and scattered pustules. Topical antibiotic alone was given in this case.

Response to treatment was noted after one week and it was graded as follows-

- Good response- Indicated by resolution of all lesions.
- Moderate response- Improvement of pustular lesions.
- Poor response- Persistence of lesions without any improvement.

All details were entered in the proforma.

RESULTS

75 patients were included in the study. Age of the patients in this study varied from 13 years to 60 years. 60% patients were in the age group of 21 to 40 years. Out of 75 patients studied, 57 (76%) were male patients and 18 (24%) were females. Male:female ratio was 3.2:1.

Age in Years	01/11/20	21-30	31-40	41-50	51-60	Total	Percentage
Male	14	14	16	11	2	57	76
Female	1	10	5	2	Nil	18	24
Total	15	24	21	13	2	75	100
Percentage	20	32	28	17.3	2.7	100	

Table 1. Age and Sex Distribution of Patients

Occupation

Out of 75 patients, 44 (58.7%) were manual labourers. Among the rest, 10 (13.3%) were students, 6 (8%) housewives, 4 (4.3%) were drivers.

Initial Site of Involvement

The disease started unilaterally either right or left leg in 65 (86.7%) cases. Involvement of both legs simultaneously as the initial site of involvement were noted in 8 (10.7%) cases.

Sites of Involvement

All the 75 (100%) cases showed involvement of legs. Both the legs were involved in 68 (90.7%) and one leg alone in 7 (9.3%) cases. In most cases, anterior and lateral aspects of legs were involved. Involvement of anterior aspect of thigh was seen in 12 (16%), forearm in 12 (16%) and beard area in 2 cases.

Site Involved	Number	Percentage
Legs	75	100
Thighs	12	16
Forearms	12	16
Hands	4	5.3
Beard	2	2.7
Neck	1	1.3

Table 2. Site of Involvement

Duration of Disease

In 36 (48%) was between 1 and 5 years. In 17 (22.7%) was less than 1 year and 14 (18.7%) between 6 and 10 years.

In 5 cases, duration between 11 and 15 years and in 3 cases more than 15 years.

Mode of Onset

The disease started as papule in 24 (38.7%) cases and pustules in 20 (26.7%) cases. Both papules and pustules were simultaneously seen in initial stage in 19 (25.3%) of cases.

Symptomatology

Severe pruritus were seen in 31 (41.3%) patients, mild-to-moderate pruritus in 35 (46.6%) and no symptoms in 9 (12%) patients.

Aggravating Factors

Aggravating factors were identified in 61 (81.3%) patients. More than one aggravating factors noted in many patients.

Aggravating Factors	Number	Percentage
Oil application	26	34.6
Working with wet soil	21	28
Soap application and rubbing	20	26.6
Excessive sweating	10	13.3
Summer exacerbation	8	10.7
No aggravating factor	14	18.7

Table 3. Aggravating Factors

Type of Lesions

Different types of lesions were seen in same patients. The most common lesions were pustules (84) and papules (78.7%).

Type of Lesions	Numbers	Percentage
Pustule	63	84
Papule	59	78.7
Alopecia	48	64
Scaling	43	57.3
Crusting	39	52
Excoriation	34	43.3
Atrophy	32	42.7

Table 4. Type of Lesions

Associated Illness

Regional lymphadenopathy was noted in 13 (17.3%) patients. Five patients (6.7%) had either personal or family history of atopy. Four patients were diabetic.

Family History

Out of 75 patients studied, 6 (8%) patients gave a positive family history suggestive of chronic folliculitis in other members of the family. 64 (92%) patients had no family history of similar illness in any of the family members.

Investigations

Routine blood, urine and blood sugar examination were done in all 75 cases and found to be normal. Gram staining was done in all 63 patients who had pustular lesions. Pus culture and sensitivity was also done in the 63 cases, Staphylococcus aureus was cultured from 55 (87.3%) and were sensitive to erythromycin and tetracycline.

Number of Patients	Staphylococcus Aureus	Number Organisms
63	55	8
Percentage	87.3	12.7

Table 5. Pus Culture and Sensitivity

Response to Treatment

32 (42.6%) patients in Group 1 were treated with systemic antibiotic like erythromycin, doxycycline and good response seen only in 6 (18.8%) of cases, moderate response in 18 (56.3%) and poor response in 2 cases. 24 (32%) patients in the Group 2 were treated with topical framycetin, good response in 2 (8.3%), moderate in 8 (33.3%) and poor response in other cases. 19 (25.3%) patients in the Group 3 were given topical steroid antibiotic combination and good response in 2, moderate response in 6 and poor response in 11 cases.

DISCUSSION

The average age of the patient in the present study varied from 13-60 years. 24 (32%) patients in the age group of 21-30 and 21 (28%) wherein the age group of 31-40 years. So, this 2 group together constituted the maximum number of patients, i.e. 46 (60%). This is in agreement with other studies reported from India.

In this study, out of 75 patients, 57 (76%) were males and 18 (24%) were females. Sugathan et al, Tiwari et al and Prasad et al were also reported the male predominance in their studies. In India, males are more engaged in manual

labour while females are more involved in domestic work, maybe the reason for male predominance.

Occupation

In this study, out of 75 patients, 44 (58.7%) were manual labourers and majority of them were mainly engaged in agricultural works. 10 patients (13.3%) were students and 6 (8%) were housewives. Prasad et al observed that 44% were agricultural labourers and 28% were students. This is in agreement with our studies. However, only 26.5% cases were manual labourers in the study by Sugathan et al. This could be due to a change in lifestyle and standard of living over the last 25 years.

Sites of Involvement

In the study, all the 75 patients (100%) showed involvement of legs. In some patient, different sites were found to be involved at the same time. Various other studies also show legs being the common site of involvement.

Duration of Disease

In the study, duration of disease varied from 2 months to 25 years. In 17 (22.5%), the duration was less than 1 year. In 36 (48%), the duration was between 1 and 5 years and in 14 (18.6%) cases 6-10 years and in 3 cases duration was more than 15 years.

Sugathan et al found that duration of illness varied from 2 months to 22 years. Desai et al also found varied duration ranging from 6 months to 19 years, which is in agreement with our study.

Symptomatology

Out of 75 patient studied, 66 (88%) complained of itching and 9 (12%) had no symptoms at all. This finding in our study agrees with Sugathan et al and Tiwari et al who found that pruritus was the major symptoms in most of the patients.

Aggravating Factors

Oil application

Among the several aggregating factors observed in our study, oil application was found to aggravate the condition in 26 (36.6%) cases. This is in agreement with findings of Tiwari et al who reported aggravation of the condition following oil application in 33.3% cases. However, Sugathan et al could not find any influence of oil application.

Other Aggravating Factors

In our study, working with wet soil aggravate the condition in 21 (28%) of cases, Sugathan et al noted aggravation of disease in 26.5% of cases, this is in agreement with our study. Other aggravating factors noted in our study are soap application and rubbing, excessive sweating. This is in agreement with other studies.

Type of Lesion

In our study, different types of lesions were seen. Majority (84%) of the patients showed pustules followed by papules

in 78.7%, loss of hair in 64%, scaling in 57.3% and crusting in 52% of patients.

Different types of lesions were seen in same patients. Our finding was in agreement with studies of Sugathan et al, Desai et al and Tiwari et al.

Type of Hair

In the present study, all the 57 male patients studied had coarse hair. This is in agreement with Sugathan's study.

Family History

In the study, 6 (8%) patients gave a positive family history. None of the earlier studies showed any increased incidence of the disease among family members.

Associated Findings

Regional adenopathy was noted in 13 (17.3) and diabetes mellitus in 4 patients. Sugathan et al noted inguinal adenopathy in 20% of cases. Tiwari et al reported diabetes mellitus in 2 patients out of 15 cases.

Investigation

Routine blood and urine examination were normal in all 75 cases studied. Blood sugar was done in 45 cases including the diabetic patients and was found to be within normal limits.

All the studies also showed same findings.

Gram staining was done in 63 cases with pustules and 57 (90.4%) cases showed gram-positive cocci. Pus culture done in 63 patients. Staphylococcus aureus was isolated from 55 (87.3%) cases and sterile culture in 8 (12.7) cases. Our study also agrees with studies of Prasad et al, Sugathan et al and Laxmi V Nair.

Treatment

In the study, patients were divided into 3 groups for treatment purpose based on clinical features. Group 1 included 32 (42.7%) were treated with systemic antibiotics and only 6 (18.6%) cases showed good response.

In the group 1, which include 24 (32%), topical antibiotic alone was used, only 2 (8.3%) cases showed good response. Group 3 included 19 (25.3%) patients who were given a combination of topical steroid and antibiotic and only 2 (10.5%) showed good response.

Overall response to treatment was not satisfactory. Therapy resistance of this condition was reported from other studied. Our study also agrees with the finding of the other studied.

CONCLUSION

- Chronic folliculitis is a diseases of the adults. In our study, majority of patients (60%) belongs to the age group of 20-40 years.
- Chronic folliculitis is mainly a disease of males.

- Chronic folliculitis is a disease affecting mainly manual labourers.
- Chronic folliculitis preferentially affects the legs.
- Chronic folliculitis has a long and protracted course.
- Application of oil, working with wet soil, soap application and rubbing are some of the aggravating factors.
- The disease presents with different types of lesions such as follicular pustules, papules, crusting, scaling and atrophy with loss of hair.
- Chronic folliculitis does not show any genetic predisposition.
- The main aetiological agent is Staphylococcus.
- There is no significant association with any other diseases.
- Chronic folliculitis is a disease refractory to treatment.

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