

Study of Skin Diseases in Incumbent Prison Inmates

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Abstract

Introduction: Dermatological diseases in prison is still an under-researched field and the importance of identifying and treating them promptly has recently been recognized. Skin diseases are common among prisoners especially those from developing countries due to the substandard living conditions such as overcrowding with hot and humid environment.

Aims and Objectives: Our study aimed to estimate the occurrence of various dermatological diseases among prison inmates. **Materials and Methods:** A descriptive cohort study of inmates at Nashik Central Jail, Maharashtra was done for a duration of 6 months between February to July 2018. **Results:** Out of 3609 inmates, 532 inmates (461 males and 71 females) aged 23–62 years were suffering from various skin diseases. Most common skin disease were infectious dermatoses (72.18%, n=384). Amongst infections, fungal contributed to maximum cases (85.93%, n=330) of cases followed by bacterial infection (13.84%, n=53). Infestations were second most common skin disease (20.86%, n=111). Rest were less 7% of cases. **Conclusion:** Prison inmates are prone to develop various skin infections and infestations due to poor standard of living. They are often neglected & may pose a danger of spreading skin infections among other prison inmates & in the community eventually. Appropriate and adequate health policies can prevent skin disease in prison.

Keywords: Eczema, Papulosquamous, Infection, Infestation, Prison, Skin Diseases

1. Introduction

Prisons have been a part of society where lawbreakers specifically are placed into the confinement¹. The infrastructure of these prisons are poorly maintained and as a result skin diseases are quite common among prisoners in developing countries due to substandard living conditions², overcrowding, hot and humid environment, lack of ventilation, poor nutrition and poor personal hygiene³. Duration of stay in the prison also have shown to have a significant association with infective dermatoses⁴. These all lead to further stress and psychosocial impairment leading to negligence of one own

health⁵. Health care in prisons has become a serious issue, which the government ignores at their own risk, and as a result at the end of their sentence, the vast majority of people in prison will return to the community and further burden the existing health care facilities. Dermatological diseases in prison is an under-researched field and importance of identifying and treating them promptly is very important.

2. Aims and Objectives

This study aimed to estimate the burden of skin diseases among inmates of prison Nashik Central Jail.

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3. Materials and Methods

Design: A descriptive observational study of inmates at Nashik Central Jail, Maharashtra was done between February to July 2018. After consents from participants and respective authority’s permissions were obtained, the prisoners were examined on consultation requests placed by the referring prison physician. For safety point of view, those inmates who were convicted for murders and those under psychiatric medications were excluded from the study.

Setting: Inmates were escorted to their appointments under security. After recording the age and sex, a brief history pertaining to the skin complaints was elicited. The inmates were subjected to a detailed cutaneous examination under broad daylight.

Analysis: The diagnosis was only recorded for the first encounter. There was no follow-up included in our study protocol. Diagnostic grouping was done under major headings of infections, infestations, eczema and dermatitis, papulosquamous disorders and other conditions.

4. Results

General Characteristics

Table 1 shows number of inmates examined and number of males and females included in the study

Figure 1 shows distribution of skin diseases according to age group. Most of the cases were from the age group 31-40 years of age (50.37%) youngest being 23 and oldest 62 years old.

Table 1. General characteristics

Total number of inmates	3609
Number of inmates examined	532
Males	461
Females	71

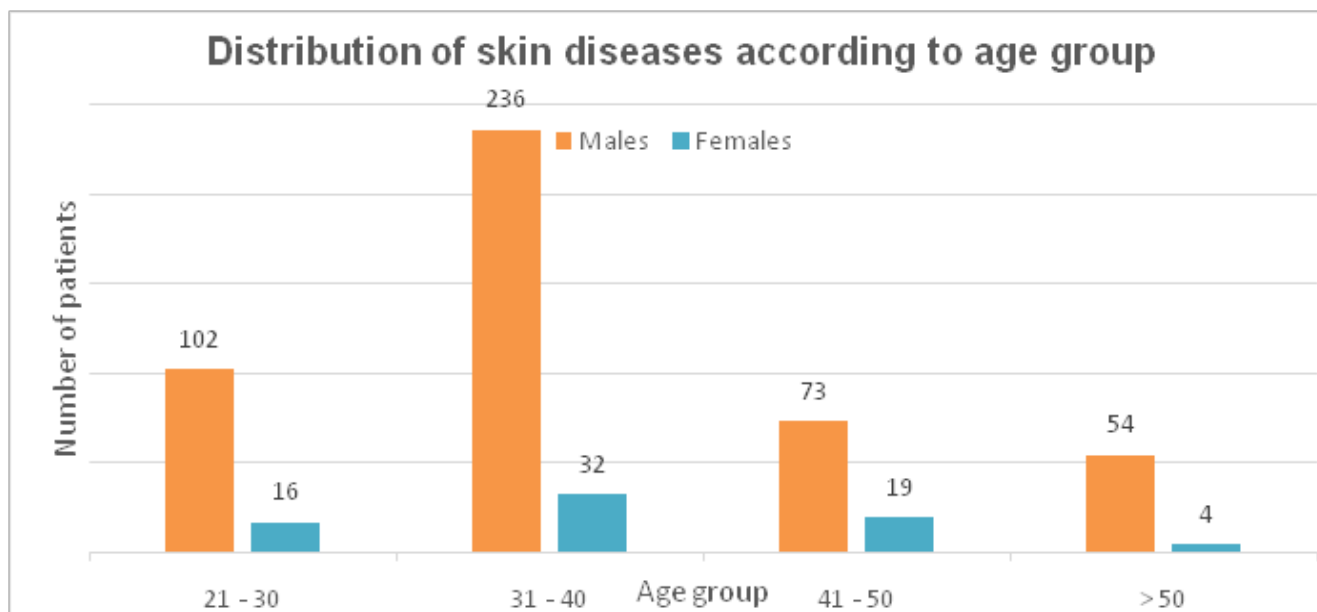


Figure 1. Distribution of skin diseases according to age group.

Pattern of skin infection

Table 2. Pattern of skin infections in study subject

DERMATOSES	NUMBER OF CASES	PERCENTAGE
Infections	384	72.18
Infestations	111	20.86
Eczema	27	5.07
Papulosquamous	3	0.56
Others	7	1.31

Table 3. Dermatologic Diagnosis of Study Patients

Diseases	Number of Patients	Percentage
Infections		
Fungal		
Dermatophytosis	249	46.80
Pityriasis versicolor	52	9.77
Candidiasis	29	5.45
Bacterial		
Furuncle	31	5.82
Carbuncle	16	3.00
Abscess	1	0.18
Impetigo	4	0.75
Hansen	1	0.18
Viral		
Warts	1	0.18
Infestations		
Scabies	107	20.11
Pediculosis	4	0.75
Eczema and Dermatitis		
Seborrheic dermatitis	4	0.75
Allergic contact dermatitis	3	0.56
Irritant contact dermatitis	4	0.75

Table 3 Continued

Lichen simplex chronicus	6	1.12
Pompholyx	2	0.37
Asteatotic eczema	5	0.93
Prurigo nodularis	3	0.56
Papulosquamous Disorders		
Psoriasis	2	0.37
Lichen planus	1	0.18
Others		
Melasma	5	0.93
Rosacea	1	0.18
Hansen	1	0.18

As seen in Table 2, most common skin disease were infectious dermatoses (72.18%, n=384). Among infections, fungal contributed to maximum cases (85.93%, n=330) of cases followed by bacterial infection (13.84%, n=53).

Infestations were second most common skin disease (20.86%, n=111).

Dermatitis contributed to 5.07% (n=27), papulosquamous (0.56%, n=3) and others (1.31%, n=7).

5. Discussion

Health care facilities for prison inmates are extremely poor for developing countries and periodic health check-ups for them are scarce. Along with these poor infrastructure have led to poor hygienic conditions leading to number of diseases.

Our findings were similar to previous studies conducted by Kuruvila *et al.*, in Mangalore where infectious dermatoses were prevalent in 40.04% of cases of which superficial dermatophytosis were 51.3%, 16% were scabies and 13.3% were pediculosis¹.

Similar results were seen in studies by Oninla *et al.*, at Nigeria where infectious dermatoses were seen in 53.6% of cases in which fungal infection were rampant in 64% of cases followed by pityriasis versicolor in 27% of cases³.

A study conducted by Parajuli *et al.*, at Nepal also had 34.8% of infections of which fungal contributed to 82% of cases. However, eczema was second most common (16.3%) followed by infestations (12.3%)⁶.

Other studies by Kocaturk *et al.*⁷, Mannocci *et al.*⁸ and Coury *et al.*⁹ also had similar findings like our study.

Our results signify high rate of exposure to infectious conditions. These were found to be frequent among inmates living in dormitories due to greater exposure and overcrowding. Also hot and humid climate, lack of soap for bathing and poor personal hygiene contributed the predisposition to fungal infections.

Brauner *et al.*, had already emphasized some of the potential difficulties in treating prisoners due to limitations to the dosing frequency of pills, dispensing topical compounds and lack of soaps and other skin care products¹⁰.

However, the inmates were from a single prison only, therefore the sample size was small. Only inmates referred by the local prison physician were examined, therefore sample size may not indicate true prevalence of the disease. As a result, percentage of/ prevalence of/ incidence of dermatological diseases in the incarcerated population can be higher than what we have seen. This study was conducted during summer season. Cutaneous manifestation may vary according to change in season

and environment. Clinical photographs were not allowed for security reasons.

6. Conclusion

Prisons and jails are necessary for the protection of society. Because of a very high load of infections and infestations due to the poor and neglected personal care, hygiene and surrounding living conditions, it is important to screen them frequently as they are more likely to suffer from communicable diseases and may pose a danger to neighbouring inmates and the persons serving them. As medical professions share the responsibility for the current state of correctional health care, health care staff must be appropriately educated and trained to promptly identify and manage the disease. Appropriate health policies should be formulated to prevent and manage skin infections¹¹.

7. References

1. Kuruvila M, Shaikh M, Kumar P. Pattern of dermatoses among inmates of district prison- Mangalore, Indian J Dermatol Venereol Leprol. 2002; 68:16–18.
2. Guo W, Cronk R, Scherer E, Oommen R, Brogan J, Sarr M, Bartram J. A systematic scoping review of environmental health conditions in penal institutions, Int J Hyg Environ Health. 2019 Jun; 222(5):790–803. <https://doi.org/10.1016/j.ijheh.2019.05.001>. PMID:31078437
3. Oninla OA, Onayemi O. Skin infections and infestations in prison inmates, Int J Dermatol. 2012 Jan 17; 51(2):178–81. <https://doi.org/10.1111/j.1365-4632.2011.05016.x>. PMID:22250627
4. Oninla OA, Onayemi O, Olasode OA, et al. Pattern of dermatoses among inmates of Ilesha prison Nigeria, Niger Postgrad Med J. 2013; 20:174–80
5. Bayle P, Cuzin L, Paul C, et al. Prisoners and skin diseases in Toulouse, France: Epidemiological analysis and evaluation of life impact, J Eur Acad Dermatol Venereol. 2009; 23:52–7. <https://doi.org/10.1111/j.1468-3083.2008.02945.x>. PMID:18702624
6. Parajuli N, Jonkman Veenstra G, Jonkman M. Skin diseases in a Nepali prison, Journal of Chitwan Medical College. 2015 Jan 28;4(4). <https://doi.org/10.3126/jcmc.v4i4.11968>
7. Kocaturk E, Kocaturk A, Kayala M. Prevalence of skin diseases in female prisoners in Turkey: Analysis of impact of prison conditions and psychological stress, Acta Dermatovenerol Croat. 2014; 22:26–31.
8. Mannocci A, Di Thiene D, Semyonov L, et al. A cross-sectional study on dermatological diseases among male prisoners in southern Lazio, Italy, Int J Dermatol. 2014; 53:586–592. <https://doi.org/10.1111/j.1365-4632.2012.05762.x>. PMID:24758231
9. Coury C, Kelly B. Prison dermatology: Experience in the Texas Department of Criminal Justice dermatology clinic, J Correct Health Care. 2012; 18:308. <https://doi.org/10.1177/1078345812456365>. PMID:22899813
10. Brauner GJ, Goodheart HP. Dermatologic care behind bars, J Am Acad Dermatol. 1988 May; 18:1066–73. [https://doi.org/10.1016/S0190-9622\(88\)70107-3](https://doi.org/10.1016/S0190-9622(88)70107-3)
11. Rich JD, Chandler R, Williams BA, Dumont D, Wang EA, Taxman FS, et al. How health care reform can transform the health of criminal justice-involved individuals, Health Aff. 2014 Mar 1; 33(3):462–467. <https://doi.org/10.1377/hlthaff.2013.1133>. PMID:24590946. PMCid:PMC4034754

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