

Clinical Dermatology and Dermatitis

Kap Study Regarding Leprosy amongst Doctors of a Tertiary Care Hospital, New Delhi

Sundeep Chowdhry^{1*}
Rohini Soni²
Paschal D'souza³
Tapankumar Dhali⁴
Archana Lokhande⁵

¹Senior Specialist and Assistant Professor Department Of Dermatology, ESIC PGIMSR & Model Hospital, Basaidarapur New Delhi. India

²Second year post graduateresident- Department Of Dermatology, ESIC PGIMSR & Model Hospital, Basaidarapur New Delhi. India

³Head of Department and Director Professor Department Of Dermatology, ESIC PGIMSR & Model Hospital, Basaidarapur New Delhi. India

⁴Professor Department Of Dermatology, ESIC PGIMSR & Model Hospital, Basaidarapur New Delhi. India

⁵Senior Resident Department Of Dermatology, ESICPGIMSR & Model Hospital ,Basaidarapur New Delhi. India

Abstract

Objective: To assess the level of knowledge, social attitude towards patients, and diagnostic capabilities of doctors (KAP) regarding leprosy, practicing at tertiary care institute of New Delhi, India.

Study Design: Cross-sectional, observational study

Materials and Methods: A pretested and pre-validated questionnaire consisting of 21 questions was administered to 300 clinicians working in various specialities of this tertiary care hospital. The questionnaire covered all aspects of leprosy including clinical features, diagnostic methods, duration of treatment, stigma etc to test the knowledge and attitude of a clinician towards the patient of leprosy. The collective sum of correct answers marked by respondent doctors was taken to classify them. Respondents who marked more than 15 questions correctly were considered to have excellent knowledge, whereas those aggregating 10-15 and 5-10 correct answers were classified to have good and average knowledge respectively. Participants with less than 5 correct answers were marked to have poor knowledge.

Results: A total of 300 doctors were included in the study out of which 262 gave consent to answer the questionnaire. Twenty four doctors (9.18%) doctors had excellent knowledge whereas twenty six (9.92%) doctors had poor knowledge about the disease. Ninety four (35.87%) and one hundred eighteen (45.03%) had average and good knowledge about the disease respectively.

Conclusion: There is deficiency in knowledge and practices about leprosy amongst clinicians which needs to be improved to bring down the prevalence of this disease globally.

Keywords

Leprosy; Hansen's disease

Introduction

Leprosy is a chronic infectious condition caused by *Mycobacterium leprae*. This disease is known to mimic various dermatoses as well as many systemic disorders as it has a wide range of clinical presentations. It can present as single hypo pigmented patch with mild to severe hypoanesthesia or can present with a wide range of deformities including loss of vision, deformities of hands and feet, autoamputation, resorption of digits and many others which can be attributed to the multisystem involvement of Hansen disease. Therefore it is prudent to have a good knowledge about this condition so that no case is missed out by the clinician.

The WHO report showed that after 2015 the global registered prevalence of leprosy was 176176 which was 0.18 cases per 10000 population and incidence was 211973 which was 0.21 per 100000 [1]. In India according to the NLEP report of 2015-2016 the prevalence rate was 0.69 per 100000 population and the annual new case detection rate was 127334 which translates to 9.71 per 100000 population [2]. It was further reported that state of Bihar showed highest case detection rate amongst the data available from all other states in the country. Delhi, being the capital of India, is a central place for all the immigrant population and this could be a probable cause of high prevalence rate of Leprosy in this region. For a common person, Medical Officer (General Physician) is usually the first level of interface with the public and constitutes the backbone of health care services in any country [2]. Therefore it is necessary to ascertain whether the General practitioner (GP) who refers the suspected/ affected individual to higher centres for the treatment has adequate knowledge about the clinical features, progression and outcome of the disease process. In view of above

Article Information

DOI: 10.31021/cdd.20181101

Article Type: Research Article

Journal Type: Open Access

Volume: 1 **Issue:** 1

Manuscript ID: CDD-1-101

Publisher: Boffin Access Limited

Received Date: 01 February 2018

Accepted Date: 05 March 2018

Published Date: 10 March 2018

*Corresponding author:

Sundeep Chowdhry

Senior Specialist and Assistant Professor

Department of Dermatology

ESIC PGIMSR & Model Hospital

Basaidarapur New Delhi

India

Tel: 91-9910084482

E-mail: suncutis@gmail.com

Citation: Chowdhry S, Soni R, D'souza P, Dhali T, Lokhande A. KAP Study regarding leprosy amongst doctors of a tertiary care hospital, New Delhi. Clin dermatol dermatitis. 2018 Mar; 1(1): 101

Copyright: © 2018 Chowdhry S, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 international License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

it was proposed to assess level of knowledge, social attitude towards patients, diagnostic and management capabilities with regards to various aspects of leprosy in the Medical Officers (MBBS Graduate) of a tertiary care hospital in New Delhi, India.

Methodology

This study was conducted in a tertiary care hospital, New Delhi from the period of April 2017-June 2017. Doctors including Medical Officers, residents undergoing post graduation as well junior residents in various specialities of this Hospital were enrolled in the study. Doctors who had previously worked in leprosy clinics and those who are presently practicing in Dermatology department were excluded from the study to avoid bias in the result. A carefully structured questionnaire comprising of 21 questions was administered to all doctors included in the study. The questionnaire was designed to cover various aspects of Hansen's disease including the clinical presentations, treatment modalities, attitude towards patients, leprosy as a social stigma and other parameters pertaining to the disease. All the questions were either having answers in Yes/No or in multiple choices. Respondents were asked to tick appropriate answers in the proforma. Sum of the total correct answers marked by the respondents were taken to classify knowledge of leprosy amongst doctors. A score of 0-5 was considered as poor, 6-10 as average, 11-15 as good and more than 15 as excellent [3]. All the proformas were evaluated at the end of the survey and the responses obtained were evaluated using statistical program SPSS version 16.0. Pearson's Chi-square test was applied among categorical variables [3].

Results

This study included the response of 300 Medical Officers (MO's) out of which 262 gave the consent and complied by filling the survey questionnaire. Out of 262 doctors 178 were males (68%) and 84 doctors were females (32%). More than half of MO's were posted as Medical officers in various specialties. This study also included students undergoing post graduation (48 in number) excluding those who are already working in the department of Dermatology.

Graph (Figure 1) below depicts overall knowledge of leprosy among practitioners based upon their correct answers. It was found that a total of 118 doctors (45.03%) had a good knowledge whereas 26 (9.92%) doctors had poor knowledge about the disease. Ninety four out of 262 (35.87%) had average whereas 24 out of 262 (9.18%) had excellent knowledge. Overall ratio of correct answers was higher among Post Graduate students in various disciplines as compared to doctors working as Medical Officer.

Discussion

Leprosy is a chronic disease prevalent in India country since ages and is popularly known as "Kusht Rog" in hindi (national) language. It is essential to have effective implementation of various control and eradication programs, specialized centres throughout a nation and more importantly, where the disease is endemic. In India NLEP (National Leprosy Eradication programme) has done a lot to curb this disease, but still a lot needs to be done further so as to bring it under control. Medical Officers (MO's) are the first point of contact

with patients and in turn serve as a source of first referral to higher centres for further management. Therefore it is desirable that these clinicians should have adequate knowledge about the disease.

Leprosy is a neural disease characterized by hypo pigmented, hypoaesthetic patches with nerve trunk involvement. Itching and pain (excluding reactions) are not the part of disease per se. However 50% of the doctors answered the question related to this incorrectly which signifies that they are not be in a position to differentiate between characteristic patch in a leprosy patient from a lesion of some itchy dermatoses in other patients.

Scaling is not the feature of leprosy except if we consider reactions. About 68% of doctors gave incorrect answer thereby reflecting that they would have difficulty in differentiating between an inflammatory cutaneous condition and a lesion seen in leprosy patients.

Droplet is the commonest mode of transmission for Hansen's disease and clinical examination, slit skin smear, skin biopsy etc are other supplementary diagnostic techniques in diagnosing leprosy in patients. Answers to both these questions were correctly given by the participants, which was quite encouraging. Standard duration of treatment for paucibacillary leprosy is 6 months whereas schedule for multi bacillary leprosy is for 12 months as per guidelines for treating leprosy patients. About 35% of the doctors did not know about this treatment protocol which was quite disheartening. It was also interesting to know that most doctors did not know about the drugs available for use in leprosy as per stipulated guidelines of National Leprosy Eradication Program (NLEP) in India. More than fifty percent did not know that dapsone is the main cause of drug hypersensitivity reactions and clofazimine causes reversible generalized hyper pigmentation after its prolonged use.

The doctors on being asked whether they would like to mingle with the leprosy patients and/or collectively take a cup of tea with treated cases of leprosy, gave quite encouraging responses, as 84.4% expressed that they would like to chat with or employ treated patients as domestic help if the need arises. 79.0% of the participants still considered it as social stigma which leads to a inference that still a lot has to be done to bring out awareness in this field. In this study it was found that resident students undergoing postgraduation had better knowledge about the disease in comparison to graduate medical officers working in different specialties. This difference can probably be attributed to the fact that the former group constantly upgrades their clinical skills and because of their working in tertiary care centres they are academically in contact with the consultants and experts in the field of Dermatology and Leprology. Also, they are attending regular lectures, seminars, conferences etc, which continuously upgrades their clinical skills from time to time.

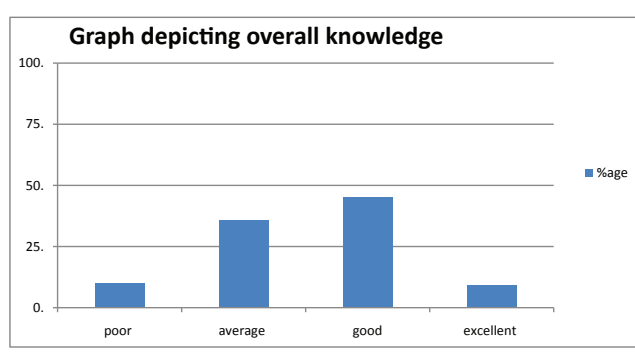
This study shows that though the practicing physicians had relatively good knowledge but they were ignorant of symptoms of the disease, drugs used in treatment and other similar parameters associated with this disease.

These results are in accordance with the study conducted in China wherein leprosy is prevalent but only 15.4% of the physicians knew respiratory transmission as a major mode of infection where as in this study 81.6% participants answered correctly which was quite conflicting [4].

In another study from Pakistan, overall results are quite comparable but in that study only 43% respondents considered pain a symptom of leprosy per se whereas in our study 64.4% answered it incorrectly [3]. Studies from Botswana, in regards to knowledge about leprosy amongst general practitioner showed contrary observations.

The participants in this study didn't know the causative agent of leprosy. They were also ignorant of the duration of treatment. Results of Studies from Andhra Pradesh, India were comparable to our study. 78 (71%) expressed that a leprosy patient with severe reaction needed priority attention at the out-patient department indicating good understanding of reactions in leprosy and a positive attitude towards such patients [5,6].

Figure 1



| S.no | Question | Correct responses%(n) | Incorrect responses%(n) |
|------|---|-----------------------|-------------------------|
| 1. | Do you think itch is a symptom of leprosy? a. Yes b. No | 41.9%(110) | 58.1%(152) |
| 2. | Do you think white patch is a part of disease? a. Yes b. No | 86.2%(226) | 13.8%(36) |
| 3. | Do you think numbness is a feature of disease? a. Yes b. No | 91.9%(241) | 8.1%(21) |
| 4. | Do you think thickened palpable nerves is a part of disease? a. Yes b. No | 58.1%(152) | 41.9%(110) |
| 5. | Do you think scaling is a feature of leprosy apart from reactions? a. Yes b. No | 32.1%(84) | 67.9%(178) |
| 6. | What you think is the mode of transmission of leprosy? a. Droplet b. Hand shaking c. Hematogenous | 81.6%(214) | 18.4%(48) |
| 7. | Do you think that pain in the lesions is a feature of leprosy apart from reactions? a. Yes b. No | 35.2%(92) | 64.8%(170) |
| 8. | Do you think unexplained motor weakness /wasting is a feature of leprosy? a. Yes b. No | 52.7%(138) | 47.3%(124) |
| 9. | Do you think leprosy is curable? a. Yes b. No | 79.8%(209) | 20.2%(53) |
| 10. | What is the duration of treatment for multibacillary leprosy? a. 4 months b. 9 months c. 12 months | 64.5%(169) | 35.5%(93) |
| 11. | Would you prefer to mingle with treated cases of leprosy? a. Yes b. No | 84.4%(221) | 15.6%(41) |
| 12. | Do you think leprosy causes social stigma? a. Yes b. No | 79.0%(207) | 21.0%(55) |
| 13. | Do you think it has infective etiology or sequelae of past sins? a. Infective b. Past sin | 92.3%(242) | 7.7%(20) |
| 14. | Do you know that treatment of leprosy is freely available free of cost in govt hospitals? a. yes b. No | 86.7%(227) | 13.3%(35) |
| 15. | Which of the following drugs is known to cause drug hypersensitivity reaction? a. Dapsone b. Clofazimine | 49.3%(129) | 50.7%(133) |
| 16. | Which of the following drug is a second line drug for leprosy? a. Ofloxacin b. Clofazimine c. Dapsone | 61.9%(162) | 38.1%(100) |
| 17. | Which of the following drug causes generalised pigmentation of the skin? a. Rifampicin b. Clofazimine c. Dapsone | 21.0%(55) | 79.0%(207) |
| 18. | From which of the following state leprosy is still not eliminated? a. Punjab b. Himachal Pradesh c. Bihar | 71.3%(187) | 28.7%(75) |
| 19. | India as a country achieved the WHO goal of Leprosy Elimination in which year a. 2005 b. 2001 c. 2010 | 64.2%(168) | 35.8%(94) |
| 20. | Do you think deformity is the end result of all leprosy patients? a. Yes b. No | 24.8%(65) | 75.2%(197) |
| 21. | What are the diagnostic methods of leprosy? a. Slit skin smear b. skin biopsy c. Clinical examination d. All of the above | 81.6%(214) | 18.4%(48) |

Table 1: Table below depicts the questions asked and the correct as well as incorrect answers obtained in the survey

| SCORE | GRADING OF KNOWLEDGE | %(N) |
|-------|----------------------|-------------|
| 1-5 | Poor | 9.92%(26) |
| 6-10 | Average | 35.87%(94) |
| 11-15 | Good | 45.03%(118) |
| 16-20 | Excellent | 9.18%(24) |

Table 2

A significant strata of clinicians still considers leprosy as a social stigma and hesitates to mingle with the affected population. This depicts that still lot has to be done so as to bring awareness among people dealing with these cases. In light of above findings we further recommend regular education programs, workshops for the general practitioners and other clinicians so that they could play a pivotal role in diagnosing, controlling and eliminating this disease from their respective countries which will eventually culminate in the global eradication Hansen's disease.

Once clinicians are properly trained to diagnose Hansen's disease, then only they will be in a position to refer patients to higher centres for further management. This will ultimately result in better detection rates, adequate management of the patients, avoidance of resultant potential deformities and proper follow up of the patients.

All the above measures will help achieve and strengthen goals set up the government health programmes like NLEP(National Leprosy Eradication program) which are aimed to eradicate Hansen disease

in India. By reducing global burden of Hansen disease, of which India is the major contributor, we can significantly minimize the morbidity associated with leprosy and finally eradicate it globally over the period of time.

References

1. World Health Organisation(2017). *World Health Organisation*. [online] Available at: <http://who.int> [Accessed 20 Jun. 2017]
2. Nlep.nic.in. *National Leprosy Eradication Programme (NLEP)*. [online] Available at: <http://Nlep.nic.in> [Accessed 20 Jun.2017]
3. Bajaj D, Matlani B, Soomro F, Iqbal M. Knowledge, Attitude and Practices Regarding Leprosy Among General Practitioners at Hyderabad. *J Coll Physicians Surg Pak*. 2009 Apr;19(4):215-218.
4. Chen SM, Zhang L, Liu DC, Liu HX. Assessment of knowledge and skills in early diagnosis of leprosy and attitudes towards leprosy amongst doctors working in dermatological services, Shandong Province, People's Republic of China. *Lepr Rev*. 2004 Dec;75(4):348-56.
5. Rao PV, Rao SL, Vijayakrishnan B, Chaudhary AB, Peril S, et al. Knowledge, attitude and practices about leprosy among medical officers of Hyderabad, urban district of Andhra Pradesh. *Indian J Lepr*. 2007 Jan-Mar;79(1):27-43.
6. Kumaresan JA, Maganu ET. Knowledge and attitude of health workers towards leprosy in north-western Botswana. *East Afr Med J*. 1994 Jun;71(6):366-367.