



To assess the level of knowledge, social attitude & diagnostic capabilities of doctors (KAP) regarding leprosy, at practicing tertiary care hospital of Vadodara, Gujarat, India

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Abstract

Objective: To assess the level of knowledge, social attitude & diagnostic capabilities of doctors (KAP) regarding leprosy, at practicing tertiary care hospital of vadodara, Gujarat, India.

Study Design: Cross-sectional, observational study.

Materials and Methods: A pretested and pre-validated questionnaire consisting of 26 questions was administered to 200 doctors working as interns, Medical officers as well as junior residents in various specialities of this tertiary care hospital. The questionnaire covered all aspects of leprosy including clinical features, treatment & stigma to assess the knowledge and attitude towards leprosy patients. The collective sum of correct answers was taken to classify them. Clinicians who marked more than 21 questions correctly were considered to have excellent knowledge, whereas those having 8-14 & 15-21 correct answers classified as average and good knowledge about disease respectively. Respondents with less than 7 correct answers were marked to have poor knowledge.

Results: A total of 200 doctors were included in study out of which 180 had given valid consent for participation in study. It was found that a total of 74 doctors (41.11%) had a good knowledge whereas 22 (12.22%) doctors had poor knowledge about the disease. Fifty nine of 180 (32.77%) had average whereas 25 out of 180 (13.9%) had excellent knowledge.

Conclusion: Clinicians were lacking in knowledge & Practice regarding Leprosy which must be taken care of to bring down prevalence of disease globally.

Keywords: Leprosy, Hansen's disease, MDT, multidrug treatment, national leprosy eradication programme

1. Introduction

Leprosy, also known as Hansen's disease, is a chronic infection caused by the *Mycobacterium leprae*. Leprosy has wide range of typical and atypical clinical presentation & can mimic to various other dermatoses as well as systemic disorders. The disease ranges from a singular patch or single nerve thickening to the diffuse involvement of the Skin, multiple nerves and even internal organs. The neurological involvement in leprosy results in sensory-motor deficits leading to deformities & disabilities that creates social stigma and socioeconomic-emotional isolation of patients. Hence, it is imperative to have adequate knowledge to recognize, classify and appropriately treat the disease to prevent complications by the clinicians.

The WHO launched a 5-year "Global leprosy strategy 2016– 2020" in April 2016 titled 'accelerating towards a leprosy-free world' [1]. The global prevalence at the end of 2016 was 171,948 with a registered prevalence rate of 0.23 per 10,000 population, a decrease from that in 2015. In India according to NLEP report of 2015-2016 the prevalence rate was 0.69 per 100000 Populations and the annual new case detection rate was 9.71 per 100000 population [2]. Medical officers serve as a backbone in the health system & actually act as first level of interference in most of the health care services. Therefore, it is necessary to educate them about clinical features, progression and outcomes of the Leprosy. In view of above, the study was taken up with the objective to evaluate the level of knowledge & social attitude towards

leprosy patients which further helps to assess diagnostic & managing capabilities of medical officers of tertiary care hospital in Vadodara, Gujarat, India.

2. Methodology

The study conducted was cross-sectional in a tertiary care hospital of Gujarat from the period of October 2019 to December 2019. Doctors including Medical Officers, Ayurvedic & homeopathic interns 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 were practicing in Dermatology department were excluded from the study to avoid bias in the result. A carefully self-structured, pre-formed and validated questionnaire comprising of 26 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. 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 0-7 was considered as poor, 8-14 as average, 15-21 as good and more than 21 as excellent [3]. All the filled proformas were evaluated at the end of the survey and the responses obtained were evaluated using MS Excel 2007.

3. Results

This study included the response of 200 doctors out of which 180 gave the consent and complied by filling the survey questionnaire. Out of 180 doctors 114 were males (63%) and 66 doctors were females (37%). Out of 180 doctors 40 were ayurvedic interns, 55 were homeopathic interns, 65 were Medical officers & 20 junior residents working in various specialities of hospitals included. This study excludes 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 74 doctors (41.11%) had a good knowledge whereas 22 (12.22%) doctors had poor knowledge about the disease. Fifty nine of 180 (32.77%) had average whereas 25 out of 180 (13.9%) had excellent knowledge. Overall ratio of correct answers was higher among Medical officers & junior residents.

4. Discussion

Leprosy is one of oldest scourges to mankind which also known as “Kusht Rog” in hindi language. As leprosy is chronic disease & Prevalent in India, it's very essential to enhance effectiveness of various control & eradication programmes throughout the nation and also at places where disease is endemic in current situation. In India, in 2005 the government took major step towards expansion of National Leprosy Eradication Programme (NLEP) & Leprosy work was integrated into general health services to curb the disease but still a lot needs to be done to keep it under control. Medical officers and junior doctors generally serve first point of contact with patients at various health centres so it's desirable that they should have adequate knowledge and updation regarding the disease.

Leprosy is a slowly developing, progressive disease that damages the skin & nervous system and characterised by hypopigmented, hypoaesthetic patches with thickened nerves. Majority of doctors have given correct answers regarding these cardinal signs of leprosy. Itching is not considered as a feature of leprosy. However, 50% of the doctors had answered to this incorrectly which suggest that they are not able to differentiate between characteristic patch of leprosy and other itchy Dermatitis.

In Context to pain and scaling these features considered as a signs of leprosy reaction and not a part of leprosy disease per se. It was very sad to know that 60% & 37% of the doctors have considered pain & scaling as a feature of leprosy disease itself respectively which signifies that they have difficulty to recognise between inflammatory cutaneous condition and a lesion seen in leprosy patients.

Droplet Transmission is major mode for spread of disease and it was quite encouraging that majority has given correct answers. In Spite of Current evidences suggest that leprosy is not highly contagious, around 60% of doctors believe that it's highly contagious which create social stigma for leprosy patient.

As per the guideline's standard duration of treatment for Paucibacillary & Multibacillary leprosy is 6 months & 12 months respectively. It was quite disheartening that only 32% of doctors had answered correctly this standard treatment protocol & only 40 % has information regarding nearby leprosy centre. It was very pleasant to know that majority doctors are aware that MDT (Multidrug Treatment)

distributed by government free of cost.

In spite of adequate scientific knowledge & advances certain communities harbour false beliefs and misconceptions regarding leprosy. It was very encouraging that most of the doctors have discouraged these beliefs. The doctors on being asked whether they would like to mingle with leprosy patients in terms of sharing of foods, making them friends, sitting side by side, it was seen that 60% of the participants still considered it as social stigma which needs interference in terms of bringing awareness in this field. In this study it was found that Medical officers and junior residents had better knowledge which can be attributed to the fact that these groups constantly upgrades their clinical skills & because of their working and contact with experts. Also, most of the times, they are part of lectures, seminars etc which is very helpful to upgrade their skills.

This study is reflecting the fact that though the doctors had relatively good knowledge regarding the disease, they are still lacking in context to certain aspects of disease symptoms & its treatment protocol.

In comparison to study conducted in china wherein leprosy is prevalent, only 15% of the Physicians able to give correct answer regarding transmission of leprosy where in this study 70% of the doctors had answered it correctly which was little bit conflicting.^[4]

In accordance to study conducted in India by Uplekar & Cash almost none of the general practitioners able to answer correctly regarding MDT where as in this study doctors had relatively good knowledge regarding MDT.^[5] In another study conducted in Pakistan around 40% consider pain a symptom of Leprosy per se whereas in our study 64% had answered it incorrectly.^[3] Results of one study conducted in Andhra Pradesh, India having comparable results with our study and expressed that leprosy patient needs utmost attention at out-patient department.^[6]

A significant group of clinicians expressed stigmatising attitude towards leprosy patient which was primarily attributed to lack of adequate knowledge and prevalence of certain false beliefs. This indicates that lots of things must be done to bring awareness in terms of workshops & seminars for the doctors as well as regular education programmes. We must emphasize that clinicians could play major role for diagnosing, controlling & eliminating disease which in turn helpful for eradication of Hansen's disease.

5. Tables & Figure

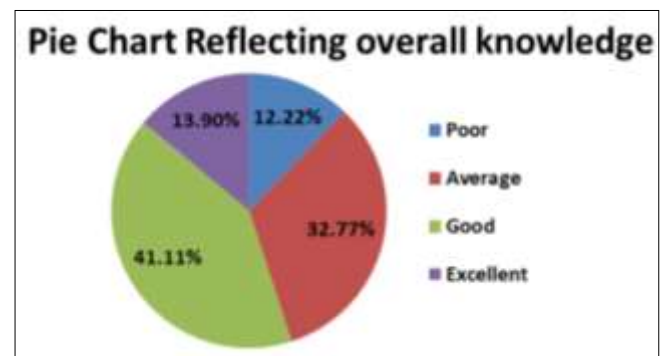


Fig 1: Figure depicting the overall knowledge level of the study subjects

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

Score	Grading of Knowledge	Percentage
0-7	Poor	12.22% (22)
8-14	Average	32.77% (59)
15-21	Good	41.11% (74)
21-26	Excellent	13.90% (25)

Table 2: Table showing knowledge levels in individual categories of the study subjects

Sr No	Variables	Response	Correct Response No. (%)	Incorrect Response No. (%)
Questions regarding knowledge about disease aspect of leprosy				
1	Is leprosy highly contagious?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	112(62.22%)	68(37.77%)
2	What you think is the mode of transmission of leprosy?	<ul style="list-style-type: none"> ▪ Sexual route ▪ Hematogenous ▪ Droplets ▪ Shaking hands 	130(72.22%)	50(27.77%)
3	Do you think motor weakness is a feature of leprosy?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	95(52.77%)	85(47.22%)
4	Do you think white patch is a part of leprosy?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	163(90.55%)	17(9.4%)
5	Do you think numbness is a feature of disease?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	122(67.77%)	58 (32.22%)
6	Do you think itch is a symptom of leprosy?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	87 (48.33%)	93(51.66%)
7	Do you think pain is a feature of leprosy apart from reactions?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	65(36.11%)	115(63.88%)
Questions regarding Prevention and treatment aspects of leprosy				
8	Is the scaling is a feature of apart from reaction?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	67(37.22%)	113(62.77%)
9	Is leprosy preventable?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	145(80.55%)	35(19.44%)
10	Is leprosy curable?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	158(87.77%)	22(12.22%)
11	Aware about MDT?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	133(73.88%)	47(26.11%)
12	What is the duration of treatment of multibacillary leprosy?	<ul style="list-style-type: none"> ▪ 4 months ▪ 7 months ▪ 6 months ▪ 12months 	59(32.77%)	121(67.22%)
13	Are the antileprosy drugs distributed by the government?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	123(68.33%)	57(31.66%)
14	Is treatment available free of cost?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	112(62.22%)	68(37.77%)
15	Do you know any leprosy treatment centre in your area?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	74(41.11%)	106(58.88%)
Questions for myths/beliefs regarding leprosy				
16	Is leprosy a result of sins of previous birth?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	167(92.77%)	13(7.22%)
17	Leprosy occurs due to impure blood.	<ul style="list-style-type: none"> ▪ Yes ▪ No 	155(86.11%)	25(13.88%)
18	Leprosy is hereditary.	<ul style="list-style-type: none"> ▪ Yes ▪ No 	162(90%)	18(10%)
19	Leprosy and Vitiligo are same diseases.	<ul style="list-style-type: none"> ▪ Yes ▪ No 	137(76.11%)	43(23.88%)
20	Would you like to shake hand with leprosy patient?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	134(74.44%)	46(25.55%)
21	Would you buy food from a leprosy patient?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	114(63.33%)	66(36.66%)
22	Would you make leprosy patient your friend?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	87(48.33%)	93(51.66%)
23	Would you share food from the same plate with an ex-leprosy patient?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	65(36.11%)	115(63.88%)
24	Would you mind sitting side by side with leprosy patient in public conveyance?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	88(48.88%)	92(51.11%)
25	Would you like to help a leprosy patient?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	144(80%)	36(20%)
26	Is leprosy a result of sins of previous birth?	<ul style="list-style-type: none"> ▪ Yes ▪ No 	167(92.77%)	13(7.22%)

6. Conclusion

Adequate knowledge of clinicians will be helpful for better detection rates, fruitful management, prevention of deformities & to prevent stigmatisation along with positive change in attitude towards leprosy patients.

These measures will definitely rectify the goals of government health programmes like NLEP (National Leprosy Eradication Programme) for eradication of leprosy & reducing global burden of Hansen disease, as India is a major contributor of this chronic disease.

7. Acknowledgment

I specially thank to Dr Shashwat Nagar, Associate Professor, Dept of PSM, PIMSIR for help in Statistical analysis & critical appraisal of this study.

8. References

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