

## Awareness about Monetary Compensation for Wage Loss in Cases of VL and PKDL in a Village of Highly Endemic District of Bihar

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### Abstract

**Background:** Prevalence of PKDL in endemic district of Bihar is not known. However, Post Kala-azar Dermal Leishmaniasis (PKDL) develops in 5-8% of patients apparently cured of Visceral Leishmaniasis (VL), and 5-10% of patients not earlier treated for VL. Skin lesions of PKDL are infectious to sand flies and may contribute to disease transmission. Govt of India and Bihar have incentive schemes for VL and PKDL cases. Monetary compensation for wage loss is given after VL and PKDL diagnosis and complete treatment. Mostly PKDL cases present with hypopigmented macular lesions and no other systemic symptoms. Patients do not have urgent need to get treatment.

**Objective:** 1. To know the proportion of rural people who have knowledge about Monetary compensation for wage loss in case of VL and PKDL in the village. 2. To know the level of literacy of the people. 3. To know the type of housing of the people/community. Method- Community based cross sectional study. Total of 602 people were interviewed by trained staff and faculty of department of community medicine.

**Result:** Less than 20% people knew about the Monetary compensation schemes for VL and PKDL cases. Source of information was ASHA in most of the cases. Literacy among males was 67% and among females it was 37%. There was significant difference between literate and illiterate people about the awareness of monetary compensation scheme.

**Keywords:** Visceral Leishmaniasis (VL), Post Kala-Azar Dermal Leishmaniasis (PKDL), Hypopigmented, Macular, Disease transmission, Monetary compensation

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### Background

Post Kala-azar Dermal Leishmaniasis (PKDL) develops in 5-8% of patients apparently cured of Visceral Leishmaniasis (VL), and 5-10% of patients not earlier treated for VL [1]. It is the strongest contender for being the disease

reservoir [2]. Symptoms of PKDL are also often confused with several dermatological conditions, such as Vitiligo and leprosy. With the exception of cosmetic considerations, PKDL does not cause any physical limitation, and thus, patients do

not tend to seek medical care for it [3-5]. There is no strong evidence regarding true incidence of PKDL following treatment with any drug modality. Therefore, existence of few cases is sufficient to trigger an epidemic of VL in a given community, emphasizing the need for its active detection and in turn ensuring success of the current elimination program. Saran district, bordering Uttar-Pradesh, and most highly endemic district of Bihar, it has experienced a consistent increase in VL cases since 2013. The population of Saran district is 39,51,862 (as per census 2011), with about 91% being rural. The district of Saran is situated between 25<sup>0</sup>30' North and 26<sup>0</sup>13' North latitude and 84<sup>0</sup>24' and 85<sup>0</sup>15' N East latitude in the southern part, The Ganges constitute the southern boundary of the district beyond which lie the district of Bhojpur and Patna. To the north lie the districts of Siwan and Gopalganj. The soil of the district is alluvial (good for sand fly propagation) and covered around 2,641 sq. Km. area. It has twenty blocks in the district. All the twenty blocks are endemic for Visceral Leishmaniasis and few blocks have cases of Post Kala-Azar Dermal Leishmaniasis. In spite of considerable efforts by local Government and development partners cases of VL and PKDL present late for diagnosis and treatment, Making it a challenge for elimination. Community awareness and community mobilization is crucial for improving early diagnosis and active case detection [6-8]. This study aims to know the level and proportion of knowledge of local people of endemic villages about VL/PKDL and monetary compensation scheme for loss of wages in cases of VL and PKDL.

The study was conducted in an endemic village of sonapur PHC of saran district. Faculty & other staff of department of community Medicine carried out this Study.

### Objective

1. To find out the proportion of people who know VL/PKDL and about monetary compensation for loss of wage in cases of VL and PKDL in the village
2. To find out the level of literacy of the people
3. To find out the type of housing of the people/community

**Study type:** The study was a community based cross sectional study.

**Study area:** conducted in highly endemic village of Saran district) of Bihar for a period of 2 months

**Highly endemic village:** Having more than 2 VL/PKDL cases per 10,000 population

**Study population:** The study population was people above 18 years of age who or their family members have not suffered from VL/PKDL.

**Inclusion criteria-** people above 18 years of age residing in a highly endemic village for VL/PKDL in saran district of Bihar.

**Exclusion criteria-** People who suffered from VL/PKDL themselves or their family members

The sample size was calculated using the formula:

$N = (Z\alpha)^2 \frac{P Q}{L^2}$ , Where  $Z\alpha$  for 5%  $\alpha$  error is 1.96, so  $(Z\alpha)^2 = 4$  approximately. P = Percentage of people knowing govt monetary compensation scheme (based on PHC level data to be 40 %,  $P = .4$ ).

$P = .4$ ,  $Q = 1 - P = 0.60$ ,  $L =$  Allowable error = 10% of  $P = .04$

The sample size is 600 after calculation. Considering 10% non-response rate sample size was taken as 660. People were selected by simple random sampling from the house list maintained by ASHA. Only one person from each house was interviewed.

### Methodology

Pretested structured questionnaire was Directly administered to the people above

18 years in the selected village. The houses were randomly selected with the help of local ASHA worker who maintain and update house list of their area. Faculty and other staff of department of community medicine with the help of ASHA workers and local community member conducted this survey. Local community support was present. Basic demographic information was obtained as a routine procedure as the entry point of interview. Few people from the list were not present in the house, in that case other member of the same house were interviewed. Informed consent was obtained before data collection.

### Result:

In the village total 602 responses could be obtained. Few people in list were not present at the time of interview mostly students. Age ranged from 18 to 86 years. Mean age for males was 42.8 years and for females it was 44.6 years. Literacy among males was 67.1% and among females it was 37.4 %. More than 50% males were unskilled workers in brick kiln, construction site, agriculture sector (farmer). Most of the females were housewives who also took care of cattle and did related work including household

chores. Proportion of skilled workers was 27.11% and all were males (mason, carpenter, pottery maker). Few retired railway employees were also there. Students were 10 % in males and 5.8% in females among those who were interviewed. A large no of people knew about VL/Kala-azar (98%). Only 20.3% of males & 15% females had any information about PKDL. Govt offers monetary compensation for both patient and ASHA in case of VL (6600 & 500 respectively) and to patients (4000 only) only in case of PKDL after completion of treatment. Only 14 % males and 12 % females had knowledge about this monetary compensation for loss of wage. Source of information was ASHA in almost all cases except in 2 cases where posters or hoardings were the source of information. Of all houses Brick unplastered and thatched houses were more than 35% put together. Cattle shed, water body and damp area were present throughout the village. There was significant difference ( $p < .05$ ) between the knowledge about monetary compensation among literate and illiterate people. Among the literate 88 people knew about monetary compensation and only 7 among the illiterate knew about it.

**Table 1: Basic demographic chart N=602**

Variable	Male (295)	Female (307)
Mean Age	42.8	44.6
Literacy	198(67.1%)	115 (37.4%)
Occupation		
Unskilled worker	150 (50.8%)	22 (7.1%)
Skilled worker	80 (27.11 %)	-
Shop owner	22 (7.4%)	14 (4.5%)
Teacher	6 (2.0%)	5 (1.6%)
Rtd railway staff	7 (2.3%)	-
Student	30 (10.1%)	18(5.8%)
Housewife	NA	248 (80.7%)

**Table 2: Knowledge about VL/PKDL monetary compensation N=602**

Variable	Male (295)	Female (307)	Overall
Ever heard about VL	290 (98%)	300 (97.7%)	590 (98%)
Ever heard about PKDL	60 (20.3%)	48 (15.6%)	108 (17.9%)
Source of information			

ASHA	58 (96%)	48 (100%)	106 (17.6%)
Posters/hoarding	2 (3.33%)	-	2 (0.3%)
Knowledge about Govt incentive for VL	42 (14.2%)	37 (12.0%)	79 (13.1%)
Knowledge about Govt incentive for PKDL	42 (14.2%)	37 (12.0%)	79 (13.1%)
<b>Source of information</b>			
ASHA	42 (100%)	37 (100 %)	79 (100%)
Posters/Hoardings	-	-	

**Table 3: Type of Housing & Surrounding N=602**

Type of House	No	Percentage
Brick plastered	385	63.9
Brick unplastered	147	24.4
Thatched	70	11.6

**Table 4: Surrounding of the houses N=602**

Presence of	No	Percentage
Cattle shed	203	33.7
Pond,water body	185	30.7
Damp area	214	35.5

**Table 5: Knowledge about PKDL & VL/PKDL monetary compensation segregated by educational status**

Variable	literate (313)	Illiterate (289)	Chi <sup>2</sup> (p value)
Ever heard about PKDL	88 (28.11 %)	20 (6.9%)	< .05
Knowledge about Govt incentive for VL	72 (23%)	7 (2.4%)	<.05
Knowledge about Govt incentive for PKDL	72 (23%)	7(2.4%)	<.05

## Discussion

It is essential that adequate awareness and social mobilization measures are undertaken to improve early diagnosis of VL and PKDL cases. Considering the literacy level, housing characteristics it is implied that the environment is favourable for sandfly breeding and the people of endemic villages are vulnerable for repeated VL and PKDL outbreaks if adequate measures for early diagnosis and complete treatment are not ensured [9-11]. Awareness about the sign and symptoms of disease, specially PKDL is lacking in the community, making it hard to improve early detection of the cases and stop the chain of transmission. Most of the early lesions of PKDL in this area are just hypopigmented macular lesions and no systemic symptoms, making differential

diagnosis difficult. Patients don't seek treatment in early stage and play an important role in disease transmission [12-13]. Even if they seek treatment trained dermatologist are not available to diagnose early PKDL lesions in the periphery. Skin Biopsy or slit skin smear procedures are not being done at district or sub-district level. In these resource poor settings, it becomes important that people of the endemic area should have knowledge about PKDL [14-16]. Monetary Compensation is a very important step to mobilize people and ASHA for early diagnosis and complete treatment, but a small no of people in the endemic area are aware of these schemes. Literacy level is also very important factor in retaining knowledge about Govt schemes.

Therefore, it is important that repeated IIEC messages and house to house survey may be done to improve the knowledge about govt schemes and improve early case detection as well [18]. Intersectoral coordination with Panchayati Raj Institutions, Education department, Information and Broadcasting department, Integrated Child Development Services (ICDS), key religious institutions and others will help expand the reach and impact of IEC targeted for VL and specially PKDL. Depending on the scale of the activity, Information, education and communication (IEC) may be planned at different levels i.e. state, districts and/or blocks. Local volunteers may be included in IEC campaigns so that horizontal transmission of IEC messages improve in the endemic area.[19-20]

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