

**Project report – Surveillance of Visceral leishmania
and HIV Co-infection in NEPAL.**



Submitted by

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1. Abstract :-

Visceral leishmaniasis is endemic in Southern part of the country and the disease is reported from 11 districts. The case incidence is about 43/100,000 and case fatality ranges from 0.23% to 13.6% update August 1999 1312 HIV infection and 265 deaths from AIDS have been reported. The estimated HIV infection figure for the year 1999 is 30,000. 632 persons suspected from VL were screened and 321 were found positive. 2 male migrant workers and 1 cross boarder female sex worker were found to have VL and HIV co-infection. Large number of people from VL endemic area move urban centers both in India and Nepal and practice unsafe sex with commercial sex workers , risk of VL and HIV co-infection is high amongst migrant workers and there spouses.

2. Background information :-

Visceral leishmania has come back in endemic form in Southern part of NEPAL. The disease has been reported from 11 districts. Approximately more than 5.5million people in Nepal are believed to be at risk of the disease. Update 9360 cases and 190 deaths from the disease have been reported and this figure may be low than actual cases. The case incidence is about 43/100,000 population at risk and case fatality rate ranges from 0.23% to 13.6%. The situation is made were complex in lack of regular insecticidal spray activity and emergence of the disease in adjoining boarder states of INDIA with which there is regular movement of people from both side. HIV/AIDS is also emerging as a major public health problem in NEPAL. The disease has now affected all sector of the society. In visceral leishmania endemic district the HIV situation is made were complex by movement of people looking for job and increase in commercial sex trade. The cumulative number of HIV/AIDS by August 1999 is 1312 infection and 265 AIDS. These figure may not represent the true number as there is no regular reporting system for HIV/AIDS. Recent study carried out reveal 16%

positive rate among commercial sex workers and 56% in intra-venous drug users. As co-infection of HIV and visceral leishmania have been reported from African countries, this need closer look and surveillance in NEPAL, in view of increasing number of VL and HIV cases. The estimated number of HIV for the year 1999 is 30,000 and there is strong evidence of increasing HIV infection among migrant workers both from VL endemic and non-endemic area.

3. Objective: -

To study the prevalence of visceral leishmanias and HIV – Co-infection.

4. Methodology :-

4.1 Hospitals based study.

- Serum samples were collected from suspected cases of VL from patients admitted to hospital.
- Diagnosis of VL was established by demonstration of parasite in bone marrow and serological tests.
- All VL positive cases were screened for HIV.

4.2 Field based study :-

- Serum samples were collected from clinically suspected cases.
- VL is suspected in endemic area with a history of fever for 15 days or more and clinically palpable spleen.
- All serum samples positive for formal gel test, IFAT and K39 antigen dip -stick were screened for HIV.

4.3 HIV – surveillance based study :-

- All samples positive for HIV were subjected to formal gel test and K39 antigen dip -stick test for VL.
- Positive samples for HIV were collected from private clinics and SACTS.

5. Testing procedure for VL + HIV: -

VL: -

- Bone marrow.
- Immuno-fluorescent Absorption Test (IFAT)
- Formal-gel Test.
- K39 antigen.

HIV: -

- All samples were screened by two different ELISA Test Kits.

6. Result: -

Sample size:

- Hospital based study sample - 56
- Field based study sample - 576
- HIV – surveillance based sample - 136

Tables of the result I – V

Table I – Age wise distribution

Age group	Total sample	Total – VL positive	HIV +ve
15 – 19	94	19	X
20 – 29	376	176	2
30 – 39	182	102	1
40 – 49	76	22	X
49 +	40	2	X
Total	766	321	X

Table II – Sex wise distribution

Age group	Total sample		Total – VL positive		HIV +ve	
	Male	Female	Male	Female	Male	Female
15 – 19	71	23	16	3	X	X
20 – 29	284	92	146	30	2	X
30 – 39	154	28	84	18	X	1
40 – 49	58	18	18	4	X	X
49+	36	4	2	X	X	X
Total	603	165	266	55	2	1

Table III – Analysis of Hospital Based samples

Sample size	LD Bodies Positive		IFAT		K39		HIV	
	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve
56	44	12	42	14	44	12	1	55

Table IV – Analysis of Field Based samples

Sample size	Formal-gel Test		IFAT		K39		HIV	
	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve
576	270	306	270	302	277	296	2	574

Table V - Analysis of HIV Surveillance Based sample

Total HIV +ve	Formal gel Test	IFAT	K39
136	-	-	-

7. Findings: -

1. Out of 56 clinically subjected cases admitted 44 were positive for L.D. bodies.
2. Out of 44 L.D. bodies positive cases 42 were positive for VL antibodies by IFAT and 44 by K39 antigen dip-stick.
3. Out of 44 cases of L.D. bodies positive VL cases 1 was positive also for HIV.
4. Out of 576 samples collected for VL from field sites 277 were positive by K39 antigen dip-stick, 270 by IFAT and formal-gel test.
5. Out of 277 samples positive by K39 antigen dip-stick test, 2 were positive also for HIV.
6. Out of 321 positive for VL, 3 were also positive for HIV.
7. Out of 3 HIV positive 2 are male and 1 female.
8. Details of VL positive and HIV co-infection.

Total - 3

No. 1 Age - 24

Sex - Male

Profession - migrant worker.

Residence - Endemic area for VL.

Positive for L.D. bodies, IFAT, Formal gel test and K39 antigen dip-stick.

Splenomegaly - Yes

On treatment for VL - Yes

History of sexual contact with commercial sex workers - Yes.

No. 2 Age - 26

Sex - Male

Profession - Laborer

Residence endemic area for VL.

Positive by IFAT formal gel & K39 antigen dip-stick.

Fever present - Yes

Splenomegaly - Yes.

History for sex contact with commercial sex worker - Yes.

No. 3 Age – 30

Sex – Female

Profession – Cross boarder sex worker

Residence – Endemic area.

Fever Present – Yes

Splenomegaly – positive.

On treatment for pulmonary tuberculosis – Yes

8. Observation:

- Out of 632 suspected samples 321 were found positive for VL.
- Positive rate for VL amongst suspected samples in study group is 50.79%.
- VL and HIV co-infection was detected among 2 male and 1 female.
- VL and HIV co-infection was seen among migrant worker and commercial sex worker from VL endemic area.
- Large Number of young males are in move from endemic VL area to urban center in Nepal and also in India. Most of them are either illiterate or only have school level education.
- Access to these people for AIDS Prevention education campaign is either limited or not adequate.
- Frequent visit to commercial sex workers by these migrant people is quite common.
- All city centers in India or in Katmandu where migrant people from endemic area move for seeking job, HIV prevalence amongst commercial sex worker is quite high.
- Large number of people from VL endemic area move to urban centers both in Nepal and India and practice unsafe sex with commercial sex workers, thus risk of VL and HIV – co-infection is quite significant.

Recommendation:

1. As this is a preliminary study to asses the situation of VL and HIV co-infection and already three cases of co-infection have been found, this study should be continued.
2. To assess and monitor the situation, this type of study should be continued at least for next two years.
3. Fund and K39 antigen dip-stick should be made available to SACTS to continue this work.

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Abbreviation

VL –	Visceral leishmaniasis.
HIV –	Human Immuno – Deficiency Virus.
AIDS –	Acquired Immuno – Deficiency Syndrome.
SACTS –	STD/AIDS Counselling and Training Service.
CSWs –	Commercial Sex Worker.
IFAT –	Immuno – Flurescent Absorption Test.
+ve –	Positive.

