KALA-AZAR ELIMINATION PROGRAMME IN INDIA (AN OVERVIEW)

DR. S.N.SHARMA
NODAL OFFICER, KALA-AZAR
NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAMME
(MINISTRY OF HEALTH AND FAMILY WELFARE)
GOVT. OF INDIA
MILESTONES

- **1953, 1958**
  - Insecticide Residual spraying with DDT under National Malaria Eradication Programme resulting in marked decline in disease incidence

- **1970s**
  - Resurgence of Kala-azar subsequent to withdrawal of IRS
  - Initially reported in four districts of Bihar and then from other parts

- **1992**
  - High incidence at 77102 cases and 1049 deaths
  - Launched centrally sponsored Kala-azar Control Programme
MILESTONES

- **2000**
  - Recommendation for elimination of Kala-azar by Expert Committee

- **2002**
  - National Health Policy set the goal for Elimination of KA by 2010

- **2005**
  - Tripartite Memorandum of Understanding signed between India, Bangladesh and Nepal for elimination of Kala-azar by 2015
KALA-AZAR ENDEMIC AREAS (52 Districts)

- 33 districts, Pop. – 62.3 million
- 4 districts, Pop. – 6.7 million
- 11 districts, Pop. – 50.0 million
- 4 districts, Pop. – 11.0 million
More than 90% of VL cases occur in five countries (Bangladesh, Brazil, India, Nepal and Sudan).

In SEA Region, VL is reported from 96 contiguous districts bordering Bangladesh, India and Nepal.

Approx. 147 million people at risk in these three countries with an estimated 100,000 new cases each year.

This is 20% of the global incidence.
During 1970s, four districts in Bihar reported Kala-azar.

Presently, 33 districts endemic in Bihar, 11 districts in West Bengal, 4 districts each in Jharkhand & UP.

About 80% disease burden in country contributed by Bihar.

9 districts out of 33 districts in Bihar contributes 65-70% of Kala-azar cases.
STRATEGY: THREE-PRONGED

VECTOR  →  CONTROL

✓ Indoor Residual Spraying with DDT up to 6 feet height from the ground twice annually.

✓ Hygiene and environmental sanitation

Advocacy / Promotion for use of Insecticide treated bed nets.
STRATEGY: THREE-PRONGED

PARASITE ELIMINATION

✓ Early case detection and complete treatment
STRATEGY: THREE-PRONGED

PARASITE ELIMINATION

✓ Introduction of Kala-azar rapid test - rk39 for use at peripheral level

✓ Introduction of oral drug – Miltefosine on pilot basis as first line treatment

✓ Strengthening of referral services
SUPPORTING INTERVENTIONS

- Communication for Behaviour Impact
- Inter-sectoral collaboration
- Capacity Building
- Operational research
- Close monitoring and supervision with periodic reviews/evaluations

Expert Committee on Kala-azar under the Chairpersonship of the DGHS, Govt. of India, reviews Programme policy and strategies
<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection SSG</td>
<td>1st line drug for treatment 20 mg. per kg. body weight daily for 20 days</td>
</tr>
<tr>
<td></td>
<td>Maximum 8.5 ml per day</td>
</tr>
<tr>
<td>Injection Amphotericin-B</td>
<td>2nd line drug 1 mg. per kg. body weight alternate days (15 injections)</td>
</tr>
<tr>
<td>Capsule Miltefosine</td>
<td>50 mg. below 12 years</td>
</tr>
<tr>
<td></td>
<td>100 mg. above 12 years 2.5 mg. 1 kg body weight (56 tablets) for 28 days</td>
</tr>
<tr>
<td></td>
<td>(adult Dose)</td>
</tr>
</tbody>
</table>
Trend of Kala-azar in India

Year: 1990 to 2007

Cases:
- 1990: 57,742
- 1992: 6,1670
- 1993: 77,102
- 1994: 60,6
- 1995: 838
- 1996: 1,419
- 1997: 710
- 1998: 384
- 1999: 277
- 2000: 1,174
- 2001: 2,550
- 2002: 225
- 2003: 1,475
- 2004: 2,850
- 2005: 1,180
- 2006: 1,550
- 2007 (up to Sept.): 1,870

Deaths:
- 1990: 687
- 1991: 300
- 1992: 838
- 1993: 1,300
- 1994: 1,800
- 1995: 2,300
- 1996: 2,800
- 1997: 3,300
- 1998: 3,800
- 1999: 4,300
- 2000: 4,800
- 2001: 5,300
- 2002: 5,800
- 2003: 6,300
- 2004: 6,800
- 2005: 7,300
- 2006: 7,800
- 2007 (up to Sept.): 8,300

*2007 (up to Sept.)
Trend of Kala-azar

Bihar

[Graph showing cases and deaths for Bihar from 2001 to 2007*]

Jharkhand

[Graph showing cases and deaths for Jharkhand from 2001 to 2007*]

Uttar Pradesh

[Graph showing cases and deaths for Uttar Pradesh from 2001 to 2007*]

West Bengal

[Graph showing cases and deaths for West Bengal from 2001 to 2007*]

*2007 up to May
Proportion of Kala-azar cases in four endemic States

- Bihar
- Jharkhand
- WB
- UP
Kala Azar Endemic Districts in Bihar

> 1400 cases (5)
1000-1400 cases (2)
600 - 1000 cases (3)
200-600 cases (10)
< 200 cases (11)
Nil report (7)
Kala-azar affected villages

2005

Gopalganj

2006

Gopalganj

Cases 2005
- <= 2
- 3 - 9
- >= 10
Pilot districts for use of miltefosine & rK 39

- Bihar
  - Muzzafarpur
  - Vaishali
  - East Champaran
  - Saran
  - Samastipur
  - Darbhanga

- West Bengal
  - Murshidabad
  - 24 – Parganas (South)

- Jharkhand
  - Godda
  - Pakur
## Financial Assistance from GOI

<table>
<thead>
<tr>
<th>Year</th>
<th>Approved B.E. (Rs. in crores)</th>
<th>Expenditure (Rs. in crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-04</td>
<td>37.00</td>
<td>30.79</td>
</tr>
<tr>
<td>2004-05</td>
<td>50.00</td>
<td>40.48</td>
</tr>
<tr>
<td>2005-06</td>
<td>58.86</td>
<td>26.50</td>
</tr>
<tr>
<td>2006-07</td>
<td>20.00</td>
<td>22.59</td>
</tr>
<tr>
<td>2007-08</td>
<td>20.86</td>
<td></td>
</tr>
</tbody>
</table>
Support from Govt. of India to States

**Infra-structure Strengthening**

- Appointment of National / State / Regional Coordinators from WHO support.

- Appointment of data entry operators.

- Appointment of Kala-azar technical supervisors at district level from world bank support (under consideration)

- Identification of kala-azar activist / Sainanies
Technical

- **Guidelines**
  - Diagnosis & Treatment
  - Vector Control
  - Kala-azar Fortnight
  - Road-Map
  - Use of rK39
  - Use of Miltefosine
  - IEC Tool Kit / Prototypes
  - Patient Coding Scheme

- **Training Modules**

  For ASHA / Kala-azar Activist/ Health Worker / Medical Officer / Private Practitioner / AWW / NGOs / CBOs / FBOs
Logistics

- rK39 diagnostic for kala-azar for 10 pilot districts
- Miltefosine capsule for 10 pilot districts
- SSG
- Amphotericline – B
- Stirrup pumps
- DDT 50 % wdp
Financial

• Cash assistance

• Release of Operation cost on spray men wages

• Incentive to patient and attendant

• Incentive to Kala-azar activist / ASHA
Capacity Building

• Medical Officers
• Para-medical staff
• Spray men
• Private Practitioners
Supervision and Monitoring

- Central Monitoring Teams
- State Mobile Teams
- District monitoring teams
- Block level monitoring supervision
Kala-azar Elimination Programme (Strengths)

- New Tools i.e. rK39 - diagnostic kit & oral drug miltefosine introduced.
- Arrears of spray wages given.
- Free diet to patient and one attendant.
- Incentive to patient @Rs. 50/- per day towards loss of wages during treatment.
- Incentive to kala-azar activist for referring a case and ensuring complete treatment.
- Construction of pucca houses for mushar community in collaboration with Ministry of Rural Development.
Strength

- Patient Coding Scheme
- Guidelines on Diagnosis and treatment, vector control, roadmap, kala-azar fortnight, use of rK39 and Miltefosine
- GIS mapping for focused interventions.
- Identification of Kala-azar activist for involvement in cases detection and IRS.
Kala-azar Elimination Programme (Weakness)

- Lack of supervision and monitoring at all levels of implementation.
- Delay in release in funds at State to Districts / PHCs level.
- Delay in submission of SOEs & UCs by States.
- Very Poor Advocacy for community awareness.
- Delayed Spray Schedules.
- Route chart not followed up.
- Active case search not done on regular basis.
- Proper case management is needed.
Preparation of spray suspension
Spray man operating stirrup pump
Stenciling of house & spray team moving to other village
Publicity vans for advance intimation
Inaccessible area of Raghopur PHC approachable by temporary bridge over Ganga and kucha (muddy) house of Musahar community
KALA-AZAR WARD OPENED AT DEEN DAYAL UPPADHAYA HOSPITAL, VARANASI
VISIT TO KALA-AZAR AFFECTED VILLAGE TEWAR
BICHLAPUR
Constraints

- Inadequate dedicated staff
- Lack of interest by PHC Medical Officers
- Prolonged treatment schedules
- Non-compliance by the patients
- Development of resistance
- Inadequate information on vector bionomics
- Asymptomatic carriers
THANKS