HISTOGRAMS
ROUTES OF PESTICIDES ABSORPTION IN FARM WORKERS

- Skin: 74.60%
- Nose: 39.30%
- Mouth: 24.60%
- Eyes: 59.30%
- Other Parts: 10%

Exposed (n=150)
DIFFERENT CROPS RATIO
PRESENT IN ANDHARA PRADESH

□  seasonal crops
□  commercial crops
□  Cotton and mirchi
□  Rice
□  Mango
50%
35%
7% 3%

FILL
USE OF PROTECTIVE DEVICES BY FARM WORKERS

<table>
<thead>
<tr>
<th>Device</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloves</td>
<td>90%</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Goggles</td>
<td>86.79%</td>
<td>13.21%</td>
<td>80%</td>
</tr>
<tr>
<td>Wide brimmed hats</td>
<td>94%</td>
<td>6%</td>
<td>80%</td>
</tr>
<tr>
<td>Oro-nasal masks</td>
<td>89.33%</td>
<td>10.67%</td>
<td>70%</td>
</tr>
<tr>
<td>Boots</td>
<td>96.72%</td>
<td>3.28%</td>
<td>60%</td>
</tr>
<tr>
<td>Post exposure bath</td>
<td>79.49%</td>
<td>20.51%</td>
<td>50%</td>
</tr>
<tr>
<td>Hand washing prior to eating at after work</td>
<td>75.33%</td>
<td>24.67%</td>
<td>40%</td>
</tr>
</tbody>
</table>
STORAGE SITES OF PESTICIDES

- Bed room: 84.70%
- Store room: 8.70%
- In home: 82.70%
- Farm/project store: 8.70%
- Farm: 11.30%
- Other sites: 12.70%

Exposed (n=150)
CLINICAL MANIFESTATIONS OF ACUTE ORGANOPHOSPHATES POISONING (MUSCARINIC AMONG FARM WORKERS)

- Diarrhea: 14%
- Urinary incontinence: 4.67%
- Miosis: 26%
- Brady cardia: 9.33%
- Bronchoconstriction: 0.00%
- Salivation: 14%
- Lacrimation: 56%
- Emesis: 62%
- Hypotension: 39%
- Cardiac arrhythmias: 11.33%
- No events: 0%

Exposed workers (n=150)
Differential leukocyte in control and exposed farm workers

- Neutrophils
- Eosinophils
- Basophils
- Lymphocytes
- Small lymphocytes
- Large lymphocytes
- Monocytes

Controls (n-50)
Exposed (n-150)
clinical manifestations of acute organophosphates poisoning (Nicotonic) among farm workers

- Fasciculation: 18%
- Tremors: 26%
- Muscle weakness: 11%
- Hypertension: 12.67%
- Tachycardia: 18%
- Sweating: 39.33%
- Mydriasis: 40.67%
- Central nervous system: 7.33%
- Respiratory failure: 7.33%

Exposed workers (n-150)
Prevalence of Pesticides Related Symptoms

- Headache: 12.60% (Controls), 15.30% (Exposed)
- Burning sensation in eyes and face: 4% (Controls), 2% (Exposed)
- Weakness: 12% (Controls), 14% (Exposed)
- Fever: 7.33% (Controls), 2% (Exposed)
- Watering eyes: 2% (Controls), 2% (Exposed)
- Blurred vision: 12% (Controls), 10.60% (Exposed)
- Nausea/vomiting: 4% (Controls), 4% (Exposed)
- Cold/breathlessness/chest pain: 4% (Controls), 6% (Exposed)
- Forgetfulness: 4.60% (Controls), 4.60% (Exposed)
- Male impotence: 4% (Controls), 2% (Exposed)

Legend:
- Controls (n=50)
- Exposed (n=150)
OPIDN symptoms in agricultural Workers

- Weakness of Facial Neck muscles
- Proximal Limb Paralysis of Paretheesia of Upper Limb Lower Limb muscles muscles muscles extremities

Bar chart showing the prevalence of symptoms among exposed workers (n=150).
LUNG FUNCTION TESTS

- VC% Prediction: 88.50%
- FVC% Prediction: 84.60%
- FEV1% Prediction: 82.80%
- FEV1/FVC% Prediction: 89.40%
- PEF% Prediction: 84.20%
- PEFR% Prediction: 79.40%

Controls (n-50) vs Exposed (n-150)
Exposed (n=150)

- Organophosphates (ops)
- Carbamates / Dithiocarbamates
- Organochlorines
- Pyrethroids
- Others

- 64.70%
- 20.67%
- 13.30%
- 6.70%
- 0.00%
CONSUMPTION OF TOBACCO/SMOKING/ALCOHOL AND LITERARY LEVELS

- Use: Controls (42%) vs. Sprayers (71.40%)
- No-use: Controls (58%) vs. Sprayers (23.60%)
- Education: Controls (28.60%) vs. Sprayers (66.60%)
- Literate: Controls (18%) vs. Sprayers (82%)
- Illiterate: Controls (36%) vs. Sprayers (18%)

Controls (n=50) vs. Sprayers (n=150)
IN ANDHARA PRADESH
DIFFERENT O.P. PESTICIDES USED
Distribution of OP Pesticides exposure in Human population

- Sprayers: 30%
- Formulators: 25%
- Mixers: 27%
- Housewives: 9%
- Children’s: 9%
Prevalence of bronchial impairment in control and exposed workers (Bronchial obstruction)
Prevalence of mixed respiratory impairment in controls and Exposed workers (Bronchial obstruction)

- Controls (n=50)
  - Mild: 10%
  - Moderate: 9%
  - Severe: 2%

- Exposed (n=150)
  - Mild: 26%
  - Moderate: 14%
  - Severe: 7.33%
Prevalence of Neurotoxicity observed in Agricultural workers

- Exposed workers (n=150)
  - Area 1: Ramachandrapuram
  - Area 2: Cheemalapadu
  - Area 3: Rudravaram
  - Area 4: Kudapa
  - Area 5: Reddygudem
Fig. 1 - Significant correlation of biochemical parameters in the blood samples of subjects (n = 150).

A

\[ y = -0.0179x + 24.563 \]
\[ r = -0.34 \]
\[ p < 0.05 \]

B

\[ y = 0.0266x + 7.3691 \]
\[ r = 0.29 \]
\[ p < 0.05 \]
Prevalence of Babinski sign in exposed workers