

Abstract

Objectives: - This study was designed to describe the work related selected health problems among male agricultural workers in the Dambulla MOH area.

Methodology: - Study design was a cross sectional descriptive study. A structured interviewer administered questionnaire and the rapid "field" test (Edson's modified method) to determine blood choline esterase levels were the two study instruments used. Using cluster sampling technique a total of 640 farmers were selected for the questionnaire from 16 GN areas. Blood levels were determined among 53 farmers who sprayed organophosphate pesticides within the previous three months.

Results:-Only 395 (61.7%) farmers had engaged themselves in the spraying of pesticides within the previous three months. Of them 228 (57.7%) had experienced one or more symptoms of acute pesticide poisoning. Commonly experienced symptoms were burning sensation of skin (17.5%), burning sensation of eyes (16.7%), headache (14.9%), difficulty in breathing (10.9%), nausea (10.4%) and vertigo (5.1%). The least known preventive measure was wearing of boots during spraying (32.5%). There was a significant association between knowledge on preventive measures with (a) educational status ($p < 0.01$), (b) experience in agricultural work ($p < 0.01$) and (c) being involved in spraying ($p < 0.01$). Less than 30% of the farmers engaged in spraying, practiced any of the given preventive measures "always". It was revealed that practice of preventive measures was significantly associated with the level of knowledge on preventive measures ($p < 0.01$). Knowledge on first aid measures following pesticide poisoning was significantly associated with educational status ($p < 0.01$) of the agricultural workers.

Snake bite incidence among agricultural workers was 1.6% for one year period. Only 3 bites (30%) were venomous. The least known preventive measure was "treading the feet heavily when walking at night" (66.9%). Only less than 30% of the farmers practiced any one of the listed preventive measures "always". Least known first aid measure was "avoidance of application of a tourniquet above the bitten site" (23.9%).

A total of 56 (8.8%) agricultural workers had experienced injuries while at work within the previous three months. All reported injuries were minor injuries involving upper and

lower limbs. There was a statistically significant association of occurrence of injuries with the educational status ($p < 0.05$). The least known first aid measure for bleeding wounds was “raising the affected body part above the level of the heart” (66.4%).

In blood choline esterase level estimation, blood levels were reduced to 87.5% of the normal levels only among 9 (17%) farmers. All of them had engaged themselves in spraying during the previous one week. The time lapsed since exposure and the reduction of choline esterase levels had a statistically significant association.

Conclusions and Recommendations: -Acute pesticide poisoning, snake bites and injuries are important health problems. The knowledge and practices on preventive measures on pesticide spraying was not adequate. The practices that should be avoided following a snake bite were not known by a significant number of farmers. Recommend programmes to increase awareness and demonstrations to improve the skills on application of preventive and first aid measures. Recommend follow up studies with a component on observation of practices.

Key words: - agricultural workers, acute pesticide poisoning, snake bites, injuries, choline esterase levels