RINGKASAN

Hubungan Pemaparan Pestisida dengan Gangguan Kesehatan pada Petani Penyemprot Bawang Merah di Kelurahan Panekan, Kabupaten Magetan

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Gangguan kesehatan yang banyak diderita para petani karena penggunaan pestisida adalah adanya keracunan pestisida.

Angka kejadian keracunan pestisida di beberapa daerah di Indonesia adalah tinggi. Berdasarkan hasil pemantauan cholinesterase darah terhadap 347 pekerja di bidang pertanian dan pembuatan pestisida di Jawa Tengah, ditemukan 23,64 % pekerja keracunan sedang dan 35,73 % keracunan berat. Departemen Kesehatan Republik Indonesia pada tahun 1989 melaporkan bahwa di Tawangmangu, Kabupaten Karanganyar, Jawa Tengah telah terjadi kasus keracunan pestisida sebesar 42,2 %(Hanifa,1997). Di Kabupaten Cianjur pada tahun 1995, didapatkan 41,10 % petani mengalami keracunan dengan 31,5 % termasuk keracunan ringan dan 9,60 % keracunan sedang.(Raini , 1999).

Penelitian ini bertujuan untuk mengetahui hubungan pemaparan pestisida dari jenis fungisida tehadap gangguan kesehatan pada petani penyemprot bawang merah di Kelurahan Panekan, Kecamatan Panekan, Kabupaten Magetan. Pemaparan fungisida dalam penelitian ini meliputi faktor-faktor pemaparan antara lain penggunaan alat pelindung diri, mandi setelah melakukan penyemprotan, mengganti pakaian setelah menyemprot, merokok saat menyemprot, lama menjadi petani penyemprot, luas lahan yang disemprot, lama melakukan penyemprotan, dosis fungisida yang digunakan untuk menyemprot bawang merah.

Gangguan kesehatan meliputi penurunan kadar cholinesterase darah sebelum dan setelah penyemprotan bawang merah termasuk dilakukan identifikasi terhadap gejala dan keluhan keracunan fungisida sebelum dan setelah penyemprotan bawang merah,.

Rancangan dalam penelitian ini adalah longitudinal dengan jumlah sampel sebesar 34 petani penyemprot bawang merah di Kelurahan Panekan, Kecamatan Panekan, Kabupaten Magetan. Pengumpulan data dilakukan dengan pemeriksaan kadar serum glutamat piruvat transaminase (SGPT), kadar cholinesterase darah, wawancara terhadap gejala dan keluhan keracunan fungisida, kelengkapan pemakaian alat pelindung diri, mandi setelah menyemprot, mengganti pakaian setelah menyemprot, merokok saat menyemprot, pemakaian obat nyamuk semprot, jenis dan formulasi pestisida yang digunakan, lama menjadi petani penyemprot, luas lahan disemprot, lama melakukan penyemprotan, dosis semprot.

Analisa data pada penelitian ini digunakan beberapa uji statistik yaitu uji komparasi dan uji asosiasi dengan taraf signifikansi (α)=0,05.

Hasil penelitian menunjukkan bahwa angka keracunan pada petani penyemprot bawang merah sebesar 11 orang (32,35 %). Hasil uji *Wilcoxon match -paired test* didapatkan ada perbedaan gejala dan keluhan keracunan sebelum dan setelah penyemprotan bawang merah dengan p=0,033. Hasil uji *paired t-test* didapatkan perbedaan rata-rata kadar cholinesterase darah sebelum dan setelah penyemprotan bawang merah dengan p=0,000. Hasil uji regresi linier ganda didapatkan pemakaian alat pelindung diri, mengganti pakaian setelah menyemprot

dan lama melakukan penyemprotan secara bersama-sama mempengaruhi penurunan kadar cholinesterase sebelum dan setelah penyemprotan bawang merah dengan nilai probabilitas masing-masing p=0,003 ; p=0,000 dan p=0,007.

Dapat disimpulkan ada perbedaan gejala dan keluhan keracunan pestisida sebelum dan setelah penyemprotan bawang merah, ada rata-rata perbedaan kadar cholinesterase darah sebelum dan setelah penyemprotan bawang merah, pemakaian alat pelindung diri, mengganti pakaian setelah menyemprot dan lama menyemprot secara bersama-sama berpengaruh terhadap penurunan kadar cholinesterase darah. Mandi setelah menyemprot, merokok saat menyemprot, lama menjadi petani penyemprot, luas lahan disemprot, dosis semprot secara bersama-sama tidak berpengaruh terhadap penurunan kadar cholinestearse darah petani penyemprot bawang merah. Juga tidak didapatkan adanya pengaruh antara pemakaian obat nyamuk semprot dan kadar SGPT terhadap penurunan cholinesterase darah.

Dengan hasil penelitian di atas kepada pihak Puskesmas atau Dinas Kesehatan untuk memberikan penyuluhan tentang bahaya kesehatan dan memantau kadar cholinesterase darah secara berkala 1 bulan sekali akibat penggunaan pestisida. Kepada pihak Dinas Pertanian diharapkan bersedia memberikan bimbingan teknis terhadap pentingnya penggunaan alat pelindung diri dan kebersihan perorangan sehingga pemaparan terhadap fungisida dapat dicegah.

SUMMARY

The Relationship between Pesticide Exposure and Health Disorder of Shallot Sprayers at Panekan District, Magetan Regency

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Health disorder which is a lot of suffered by farmer because of pesticide usage is the existence of pesticide poisoned.

The number of occurence of pesticide poisoned in some area in Indonesia is high. Pursuant to result of monitoring of cholinesterase blood to 347 worker in area of agriculture and pesticide industry in Central Java, got 23,64 % severe poisoned and 35,73 % heavy poisoned. Department of Health, Republic Of Indonesia in the year 1989 reporting that in Tawangmangu, Regency Karanganyar, Central Java have been happened the case of pesticide poisoned equal to 42,2 %(Hanifa,1997). In Regency Cianjur in the year 1995, got 41,10 % farmer experience of the poisoned, where 31,5 % inclusive of mild poisoned and 9,60 % severe poisoned (Raini , 1999).

This research aim to know the relationships between the fungicide exposure and health disorder of shallot sprayers in Village Panekan, Subdistrict Panekan, Regency Magetan. Fungicide exposure in this research cover the exposure factors for example using of personal protective equipment, take a bath the having taken steps spraying, changing clothes after spraying, smoking cigarette at the moment spray, old become the shallot sprayer, wide of sprayed farm, duration conduct the spraying, fungicide dose used to spray the shallot.

Health disorder cover degradation of rate of cholinesterase blood of before and after shallot spraying, it's also to identified the symptom and sign of fungicide poisoned of before and after shallot spraying.

Research design is longitudinal with the amount sample equal to 34 of shallot sprayers in Village Panekan, Subdistrict Panekan, Regency Magetan. Data collecting conducted with the assessing of rate serum glutamate piruvate transaminase (SGPT), rate cholinesterase, interviewing to symptom and sign of fungicide poisoned, using personal protective equipment, take a bath the having taken steps spraying, changing clothes after spraying, smoking cigarette at the moment of spray, usage medicinize the mosquito spray, the type and formulation of pestiside usage, old become the sprayer farmer, wide of farm sprayed, duration conduct the spraying, dose spray used to spray the shallot.

Data analysis of this research is used some statistical tests that is test the comparation and association with the level of significant (α=0,05).

Result of research indicate that the poisoned number of farmer of shallot sprayer equal to 11 people (32,35 %). Result of the Wilcoxon match - paired test got there is difference of symptom and sign of fungicide poisoned of before and after shallot spraying by p=0,033. Result of paired t-test got difference of mean of rate of cholinesterase blood of before and after shallot spraying by p=0,000. Result of multiple regression test duplicate got a using personal protective equipment, changing clothes after spraying and duration conduct the spraying by together influence degradation of rate of cholinesterase blood by p=0,003; p=0,000 and p=0,007.

We conclude there is difference of symptom and sign of before and after shallot spraying, there is mean of difference of rate of cholinesterase blood before and after spraying, using personal protective equipment, changing clothes after spraying and duration conduct the spraying by together have an effect on degradation of rate of cholinesterase blood. Take a bath the having taken steps spraying, smoking cigarette at the moment spray, old become the shallot sprayer, wide of farm sprayed, dose of fungicide used to spray the shallot have no an effect on degradation of rate of cholinesterase of blood. Usage medicinize the mosquito spray and the rate of SGPT have no an effect on degradation of rate of cholinesterase of blood.

With the research result to party of Puskesmas or Public Health Service to give the counselling of health disorder because of pesticide exposure and monitor the periodical rate of cholinesterase blood 1 month of pesticide usage. To party on Agriculture Service or Balai Penyuluhan Pertanian expected to vouchsafe the technical tuition to using personal protective equipment and personal hygiene to prevent of fungicide poisoned.

ABSTRACT

The Relationship between Pesticide Exposure and Health Disorder of Shallot Sprayers at Panekan District, Magetan Regency

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The research is intended to find out the relationship between pesticide exposure and health disorder among shallot sprayers. In this research a longitudinal research design was used on 34 samples randomly obtained. The data was collected by measuring the volume of cholinesterase blood, Serum Glutamate Piruvate Transaminase (SGPT) making interviews using questionaires to get information of symptoms and pesticide poisoning complaints, wearing personal protective equipment, taking shower, changing clothes after spraying, extent of sprayed area, dosage of fungicide and use of mosquito spray at home.

The collected data was analyzed using some statistical tests e.i. differential test (Wilcoxon match-paired test and paired t-test) and relational test (multiple regression test) using significant level (α) =0,05. From the findings it was found out that the rate of fungicide poisoning was 11 people (32,35 %).

From the research test of Wilcoxon-match paired test it was found out there was difference between symptoms and complaint of pesticide poisoning before and after spraying shallots with probability value (p) =0,033. From the paired t-test it was found out there was difference in the average volume of cholinesterase blood before and after shallots spraying with p-value (p) =0,000. The result of multiple linier regression test showed there was an influence of wearing personal protective equipment, changing clothes after spraying and duration of spraying on the difference or decrease of blood cholinesterase with p-value (p) each of which is p=0,003; p=0,000; p=0,007.

It is concluded that there is a difference between symptom and pesticide poisoning complaint before and after spraying shallots and there is a difference of average blood cholinesterase volume before and after spraying shallots. There is an influence of personal protective equipment, changing clothes after spraying and duration of spraying on the difference or decrease of blood cholinesterase volume on shallot sprayers. There is no influence of taking shower after spraying or smoking while spraying, duration of being a shallots sprayer, the extent of sprayed area, dosage of used fungicide, and using mosquitos spray at home on the difference or decrease of blood cholinesterase volume of shallot sprayers.

On the findings, it is suggested that Dinas Kesehatan of Magetan Regency or the Public Health Service at Panekan gives guidance on the danger of using pesticide to health and give montly monitoring to know blood cholinesterase volume so that early action of preventing pesticide poisoning can be done. It is also suggested that technical guidance be given by Balai Penyuluhan Pertanian about the use of personal protective equipment to prevent from pesticide exposure.

Key words: pesticide, health disorder.