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Species diversity and susceptibility tests of mosquitoes in a cleaned area with the potential for transmission of malaria in southwest of Iran

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Iran is in the process of eliminating malaria, but due to the existence of the malaria epidemic risk in the eastern border areas of the country there will be the risk of movement of patients from eastern parts toward cleaned areas.

Sample collection of malaria vectors was carried out based on common methods of adult mosquitos'. Mosquitoes were exposed to DDT (5%), malathion (4%), deltamethrin (0.05%) and permethrin (0.75%) as recommended by WHO.

Totally 2587 female mosquitoes were collected and identified using valid identification keys. The results showed: *Anopheles stephensi, An. dthali, An. superpictus, An. fluviatilis* and *An. pulcherrimus*. The most seasonal activity of species occurred between July and October. The mortality rate of 458 examined An. stephensi to malathion (4%), permethrin (0.075%), deltamethrin (0.05%) and DDT (5%) was 98.3, 98.9, 100 and 0% respectively. The mortality rate of tested afore mentioned insecticides against 313 An. Dthali was calculated as 100, 98.3, 98.9 , 100% and against An. superpictus as 100, 100, 100 and 98.9 respectively for DDT, malathion, permethrin and deltamethrin respectively.

According to the report of Izeh health center about positive cases of malaria imported from eastern neighboring countries in recent years, the possibility of malaria epidemic is not unexpected due to the possibility of vectors contact with these cases; therefore, knowledge of the current status of the susceptibility of mosquitoes to commonly used insecticides is important and provided plans and programs are important for control.