P188 CROSS SHIFT CHANGES IN LUNG FUNCTION AMONG PALESTINIAN FARMERS DURING LOW AND HIGH-EXPOSURE PERIODS TO PESTICIDES: A LONGITUDINAL STUDY

Farid Abu Sham'a,[1] Marit Skogstad,[2] Khaldoun Nijem,[3] Espen Bjertness,[1] Petter Kristensen[2] *[1]University of Oslo, Oslo, Norway; [2]NIOH, Oslo, Norway; [3]Hebron University, Hebron, Occupied Palestinian Territory*

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Objectives The purpose of this paper is to study cross-shift changes of lung function in relation to pesticides among a sample of male Palestinian farmers.

Methods One-hundred and ninety-five male farmers, from a total of 250 farmers performed lung function tests both pre- and post-shift during high and low pesticide exposure periods (September 2006 and April 2007, respectively). During the high exposure period in September 2006, all 195 farmers performed lung function tests pre-shift and 180 did post-shift tests. In 2007, 161, out of the initial 195 farmers, did a pre-shift and 134 did post-shift lung function test. Finally, a total of 115 (59%) farmers performed lung function tests on all four occasions. Manoeuvers were acceptable according to the ATS/ERS guidelines.

Results There were no associations between lung function differences across-shift and indicators of pesticides or dust. However, the cross-shift reduction in FEV1 (ΔFEV1) was more pronounced during the high-exposure period in comparison to the low-exposure period, +50 ml with 95% CI = (+24, +76) and +17 ml (CI= -13, +48) respectively. Among young (age ≤ 50) non-smoking farmers the cross-shift ΔFEV1 was +77 ml (CI= +23, +130) during the high-exposure period as compared to an increase of 8 ml (CI= -64, +50) during the low-exposure period.

Conclusions The reduction in FEV1 cross-shift in the high-exposure season was more evident, suggesting a possible obstructive effect of pesticide exposure on lung function among this rural male population in Palestine.

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