Qat Consumption among Women Living in Yemen

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Qat (also known as Khat, Kat), is a green-leaved plant (Catha edulis) that is chewed for its stimulant effect in Yemen and some other countries in the Arabian Peninsula and the Horn of Africa.¹ There is concern that people who consume Qat are at high risk of pesticide exposure. It has been estimated that 70% of pesticides that are imported or smuggled to Yemen are used on Qat.² Studies conducted in Yemen indicated that some globally and nationally banned pesticides such as DDT, lindane, parathion, and dimethoate were still used on Qat as late as 2007.³,⁴ However, it has recently been reported that some banned and restricted pesticides are smuggled into Yemen and are available in pesticide retail shops from where they are still bought and used by Yemeni Qat farmers (AR Thabit, personal communication, 2010). As Qat is a crop of high economic value; farmers tend to use pesticides and fertilizers heavily on Qat trees to protect them from pests, to ensure healthy plant growth and thus, to increase the yield and income.⁵ Therefore, Qat maybe a potential source of pesticide exposure for consumers.

In 2003, a survey of residents in a randomly selected district of Yemen’s capital city, Sana’a, was conducted to estimate the prevalence of Qat chewing. Through the use of self-administered questionnaires, it was estimated that 80% of men and 50% of women aged ≥13 yrs chew Qat.⁷ However, the response fraction for this study was 30% and only 34 women were surveyed. Therefore, data on the nature and extent of use of Qat among Yemeni women was limited. We therefore conducted this study to investigate the amount and frequency of Qat consumption among women living in Yemen.

Ethical approval was granted for this study by the University of Western Australia Human Research Ethics Committee (UWA: RA/4/1406). A formal letter of support from the Ministry of Education in Yemen was presented to the schools visited, when requesting permission to carry out the study.

Participants included in this study were 410 married women who took part in a cross-sectional study of pesticide exposure among women living in Yemen between December 2011 and January 2012. The study population was defined as women who had a daughter enrolled in a school from year 10 to year 12, and living in the city of Sana’a or Sana’a governorate. Full details of the study population, questionnaire design and recruitment methods used have been published elsewhere.⁶ The included women completed a questionnaire that obtained information on pesticide exposure including Qat consumption.

Of respondents, 55% were aged between 20 and 39 yrs; 45% were aged ≥40 yrs.⁶ Qat consumption among women was very high with 278 out of 410 (67.8%, 95% CI: 63.3%–72.3%) women having ever consumed Qat during their lifetime. The

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Characteristics of Qat consumption by participants are shown in Table 1. Among those who chewed Qat, the majority started consuming it after marriage (89%) and more than half of the women (54%) had consumed Qat for five years or more. The frequency of Qat consumption was variable, with 39% of women consuming it monthly or occasionally, while a further 33% consumed it almost daily. Most of the women always or almost always (61%) used water to wash their Qat before consumption. Twenty-nine percent of women reported that the family spends more than 5000 Yemeni Riyals (~ US$ 23) weekly on Qat.

Due to the extensive use of pesticides...
on Qat, there are concerns that people who consume Qat before any treatment (eg, washing) may ingest significant quantities of pesticides. Health problems such as weakness, a runny nose or congestion, headache, and gingivitis have been reported in men after chewing contaminated Qat.

This study provides preliminary data suggesting that women in regions where Qat chewing is common are possibly exposed to pesticides. Therefore, research is needed to identify the extent of pesticide exposure of Yemeni women who chew Qat.

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