

Water Pipe and Pregnancy



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Introduction

Waterpipe smoking (WTS), also known as Nargileh, Hookah, or Hubble Bubble, is an old tradition in the Middle East. It was perceived initially as a symbol of aristocracy and gentry (Images 1, 2 and 3), then became common among middle class older male adults. In the mid 1990's, there was a shift in practice of WTS and it became prevalent among all socio-economic groups, among younger generation and among young females. Social acceptability and misconceptions about water pipe smoking play a role in increasing its use, especially among women in the reproductive age group.

Prevalence of WTS in pregnancy

Smoking among pregnant women is common in Lebanon and is more prevalent than other Middle Eastern countries. Lebanon has the highest rate of smoking among females in the region, equal to almost one third of females 18 years or older smoking some form of tobacco. The largest proportion of females continue to smoke in pregnancy. In a study conducted in Beirut and its suburbs, one in five women reported smoking in pregnancy, with 30% of those exclusively smoking waterpipe (6% of pregnant women) (Chaaya et al, 2003). The same authors found similar results from a study on 864 pregnant women from all regions of Lebanon in 2004 (Chaaya et al 2004). In 2008, Tamim et al, reported a prevalence of exclusive WTS in pregnancy to be 4.4%. The most recent study to report on magnitude of smoking among pregnant women in Lebanon

dates to 2013 by Rachidi et al. The authors surveyed 500 pregnant women from maternity clinics during prenatal checkup. Eight percent of pregnant women were active waterpipe smokers. The previously reported prevalence figures are expected to have increased since then since the proportions of young females who are waterpipe smokers is continuously increasing. A recent study published in 2016 on a cohort of adolescents in Lebanon revealed that female represented 53.8% of waterpipe smokers compared to 8.3% of cigarette smokers, (Bahelah et al 2016), which indicates a social acceptability of waterpipe among female in a Middle Eastern context.

Why do women continue to smoke during pregnancy?

In general, there is a lack of knowledge regarding harmful effects of WTS and there are misconceptions about its safety. Some of the common myths and misconceptions about WTS are: 1. It is less harmful than cigarette smoking



because the nicotine content is lower; 2. Tobacco toxins, including nicotine, are filtered out by the water in the vase; 3. It is less irritating and therefore less toxic to the respiratory tract; 4. Fruits added to the tobacco makes WTS a healthy choice. However, WTS smoke has the same harmful components found in cigarette smoke, including carbon monoxide, heavy metals, potentially cancerous tar fractions, and nicotine (Shihadeh, 2003). Unlike popular belief, nicotine is present in considerable amount in waterpipes smoke as water filtration of nicotine is incomplete. Tar compounds, which are not water-soluble, are present in higher concentrations in argileh smoke than in cigarette smoke. It is also irritating to the lung as users inhale a large amount of smoke that contains considerable amount of carbon monoxide. Several systematic reviews have been published since 2010 providing good evidence of the deleterious effects of waterpipe smoking on several health outcomes on all users irrespective of gender: cardiovascular diseases, cancer, periodontal diseases, respiratory illness, and others. Moreover, these reviews have consistently reported a harmful effect of waterpipe smoking on pregnancy outcomes, with the strongest evidence on low birthweight, newborn pulmonary problems, childhood asthma, and sudden infant death syndrome.

Mothers do not only increase their risk of developing several diseases and exacerbating physical symptoms by smoking waterpipe before and during pregnancy but also expose their unborn children and the newborn to serious health risks. The study on the effects of WTS on pregnancy outcomes have been reported by two studies that were conducted in Lebanon by Nuwayhid et al (1998) and Tamim et al in 2008.

There is in general poor knowledge about WTS among pregnant women who also have permissive attitudes towards it. A study investigating knowledge of pregnant women regarding WTS revealed that they underestimated its addictive properties. Around 40% knew that WTS produces harmful gases and contains carcinogens respectively. Around two thirds (74%) thought that smoking WTS in lesser quantity decreases harmful effect on fetus.



Moreover, pregnant women were partially knowledgeable about the health risks of WTS. Regarding attitudes, a small proportion of pregnant women in the Bekaa and North of Lebanon supported banning waterpipe smoking for people younger than 18 years of age.

Pregnant women with lower educational level, multiparous women, women who were less knowledgeable and have permissive attitudes towards smoking are more likely to continue to smoke waterpipe during pregnancy. Factors associated with smoking in pregnancy are modifiable and public health professionals could intervene, targeting those factors to address maternal smoking.

How to Intervene?

During pregnancy, especially in the first three months, women suffer from alteration in taste and cravings, which make the flavors in the water pipe more attractive to them. Pregnancy is an opportune time to address smoking and other unhealthy habits. As contact with the health care system increases, the likelihood is that expectant mothers will change behaviors to protect their fetuses. However, the health care system in Lebanon has nonetheless failed to address properly the issue of smoking during pregnancy. A smoking history is often overlooked in antenatal care clinics and hence smoking cessation rarely discussed. While 95% of pregnant women in the Lebanese population attend prenatal care clinics and most initiate prenatal visits at an

early stage of pregnancy, a good proportion of them do not discuss smoking habits with their obstetricians nor receive adequate information on the harmful effects of smoking cigarettes or waterpipe smoking. A study reported that 22% of surveyed pregnant women did not recall the type of information received regarding tobacco use or exposure, 66% remembered receiving general information, and only 12% reported having received specific information on harmful effects of smoking such as low birth weight, or the effect on lungs and other body organs of the baby and the mother. Smoking cessation strategies are not discussed either.

Some health care providers may lack sufficient understanding of the pathophysiology underlying smoking addiction, have themselves poor knowledge about WTS and may be unfamiliar with common cessation methods. Lack of awareness of WTS harmful effects, the high prevalence of smoking in general, the lack of subsidized smoking cessations interventions, in addition to the poor law enforcement of tobacco control policies especially the ones related to waterpipe smoking present serious challenges to reduce smoking, especially among pregnant women. Therefore, there should be strict regulations to decrease exposure to smoking in pregnancy and more commitment of healthcare providers involved in providing prenatal services and maybe having counseling prior to conception as waterpipe smoking has been also linked to infertility. Involving the husband to support his pregnant wife to stop smoking is also one strategy for smoking cessation.

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