

Knowledge, Attitude and Practice of Herbal Remedies in A Group of Infertile Couples

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Received: 2 Dec. 2012; Received in revised form: 30 Dec. 2012; Accepted: 15 Jan. 2013

Abstract- The aim of this study was to evaluate knowledge, attitude and practice of herbal remedies (HRs) in infertile patients. This was a cross sectional study in a referral infertility care center. Three hundred and six outpatients, both women and men, presenting for the first time with complaint of infertility at Arash hospital, were recruited. Verbal consent for participation was received. A self administered questionnaire was used. Main outcome measure was knowledge, attitude and practice of patients toward herbal medications. 47.3% of participants were knowledgeable of HRs with female gender and lower educational background being the associated factors in knowledge. 43.4% of patients with significant female dominance had positive attitude toward HRs. 31% of participants were using HRs. Only 3.2% of those using HRs informed their physician. The most common health condition promoting herbal use was psychological (33.3%) and gastrointestinal (30.8%) disorders. 3.5% of participants used HRs as fertility treatment which was significantly observed in women and those with lower levels of formal education. A considerable proportion of our population had used HRs without sufficient knowledge and had positive attitude toward HRs. More importantly, patients did not disclose their use of HRs to physicians. Therefore, physicians should inquire about the use of alternative remedies and provide patients with appropriate information.

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Acta Medica Iranica, 2013; 51(3): 189-194.

Keywords: Attitude; Herbal Remedies; Infertility; Knowledge; Practice

Introduction

Worldwide, the use of complementary and alternative medicine (CAM) has increased considerably over the last decade (1-5). Widespread popularity is also observed in Iran (6,7). Herbal remedies (HRs) are the most frequently used and acknowledged methods among other modalities of CAM (1,6,7). Sociodemographic characteristics of CAM users and the health problems leading to its consumption differ geographically and from country to country (6-9). According to several surveys, herbal medications seem to be mostly preferred for chronic health conditions which lower quality of life. Anxiety and depression are some of the associated problems with using HRs (2,6,7,8). Infertility affects about 8% of couples in Iran (10). The stigma, marital distress, depression and anxiety are considered as some aspects of the psychological burden on infertile couples (1-15). Under such pressure, especially in developing countries, people seek any kind of medical or

nonmedical therapy concordant with their culture and financial status (16). As the number of couples seeking infertility care rises with increased age at conception, so do the costs and failed attempts at assisted reproduction technology (ART) methods (17).

People may choose CAM because they may believe it to be effective with fewer side effects (16,18,19). One of the rationales of infertile couples for trying an alternative method might be dissatisfaction with the outcome of ART and also its cost (4,16). In addition, there are some lay publications about effectiveness of CAM for enhancing fertility (20). Getting relief from depression and anxiety imposed on them by infertility might be another reason making this population vulnerable to non-orthodox medications such as HRs as an alternative or complementary therapy for infertility (21).

Attitudes and behaviors of patients toward non-conventional methods of treatment, remains a great area of concern for policy makers and physicians as there is

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too little scientific validation of their safety and efficacy. There is misconception among people that HRs are safe as they are natural regardless of the fact that herbs, with potential pharmacological components, might interfere with other medical treatments (18,22,23). As cited by many studies in this field, patients don't seem to disclose the use of HRs to their physicians (6,20,24-27). In infertility care systems, the problem becomes more serious as failure(s) would result in massive costs both financially and psychologically. There have been reports of less successful ongoing pregnancies and live births associated with cohorts using CAM during infertility treatments (28, 29). Interactions discovered between some HRs and contraceptives have been published as well (30,31,32). In male infertility, there are also speculations about gonadal toxicity by some HRs(20). Concerns also grow when surgical procedures are needed. For instance, probability of interaction between anesthetics and herbs has attracted attention (26). An increase in perioperative events has also been reported as a result of the administration of CAM by patients (33). Observations of pregnancies have reported the possibility of fetal distress due to taking herbal medications concurrently (34). The aim of this study was to assess the knowledge, attitude and practice of infertile couples, attending a referral infertility clinic in Tehran, Iran, during their infertility care program.

Materials and Methods

This was a cross-sectional questionnaire-based study, conducted during 2010-2011 in Arash infertility care center, Tehran, Iran. Arash is a referral infertility care center which provides the patients with diagnostic procedures, consultations and required assisted reproductive technologies.

Subjects were recruited from infertile patients (both women and men) in their first attendance of the clinic if they agreed to fill out the questionnaire. Infertility was defined in our study as no success in conceiving after 12 months of unprotected intercourse without any concurrent use of contraception (35). Consent was obtained verbally after explaining the purpose of the study and assuring confidentiality of entered information.

We used a self-administered questionnaire that the reliability and validity has been checked in a prior pilot study ($\alpha=0.85$)

Demographic characteristics were demanded at the initial part of the questionnaire. Second part of the

questionnaire consisted of 34 questions mainly focused on knowledge, attitude and practice of participants about herbal medicine. There were also some questions regarding the sources of access and problems leading to the use of herbal remedies. Two trained examiners supervised the procedures and gave instructions where needed. Ethics approval was obtained from research ethics committee of Tehran University of Medical Sciences.

Statistical analyses were done by performing Fisher's exact and Chi-squared tests using SPSS 17 software.

Results

Three hundred and six individuals (149 female and 150 male) took part in this study. The mean ages of female and male participants were 33.56 ± 11.45 and 40.24 ± 14.15 years respectively (Mean \pm SD). The mean duration of infertility of participants was 8.64 ± 6.76 years (Mean \pm SD).

Knowledge

Based on positive responses to questions attributed to knowledge on the questionnaire, 47.3% of participants were familiar with HRs. Of the knowledgeable participants, 10% knew of some sort of herbal medication for male infertility and 9.6% were aware of some types of HRs for female infertility.

Fisher's exact test revealed that women were more acquainted with HRs than men ($P<0.0001$).

In addition, lower educational status was significantly associated with higher acquaintance with HRs (Chi-squared test, $P=0.03$). Most of the participants attained their information from their entourage; while, as the educational level increased, information sources significantly changed to different methods like reading books and pamphlets, searching on the internet, etc. (Chi-squared test, $P=0.0004$).

Attitude

Motivation for HR utilization and beliefs about its safety, efficacy and scientific basis, are presented in table 1.

43.4% of participants preferred to use HRs and the majority (90.8%) thought the use of HRs should be under the observation of their physicians. Fisher's exact test showed that women prefer using HRs more than men ($P=0.0056$). There was no significant relation between "preference for HRs

utilization “and “educational level, occupation and dwelling place”.

Practice

31% of participants declared that they have used some sort of herbal remedy. Main causes for consuming HRs were psychological problems (33.3%), gastrointestinal (GI) diseases (30.8%), common cold (15.4%) and 11.5% of users reported infertility as a reason. Only 3.2 % of users informed their physicians of concurrent consumption of HRs. The rationales for not informing their physicians were as follows: not being asked by the doctors (75.6%), forgetting to declare (23.1%) and on purpose (1.3%). 4.8% of users were consuming HRs with doctors' prescriptions. As reported, users most frequently prepared the HRs as tisane (78.2%). The majority (91.8%) of users provided herbal medications from Attari (i.e. the traditional Iranian herbal medicine shop) and only 5.8 % purchased them from pharmacy. Fisher's exact test showed that women used herbal medication for infertility significantly more than men ($P=0.03$). It was also considered that the use of HRs for infertility decreases as the educational level rises (Chi-squared test, $P=0.04$). There was no significant relation between the patient informing the physician of concurrent use of HRs and patient gender, occupation, educational status and dwelling. No significant relation was also noted between the use of HRs under doctor's advice and gender, occupation, educational status or dwelling.

Discussion

To our knowledge, this is the first study of Knowledge, Attitude and Practice (KAP) of HRs in the population seeking infertility treatment in Iran and the previous studies were either attributed to the general population or pregnant subjects (6,7,36). The use of HRs as part of CAM in infertile populations is investigated through limited studies abroad (16,20,37) while data about the knowledge of HRs is even more rare (7,38). We found that around half of our population was knowledgeable about HRs and this is a lower figure compared to reports from another study in Tehran (94%) and Nigeria (85%) both of which were conducted on respective general populations (7,38). On our questionnaire, subjects, who claimed to be familiar with HRs, were asked to document the exact name of the HRs. This might have encouraged the participants to answer more cautiously to the questions about

knowledge and explains the lower awareness percentage of HRs in our study. The majority of our subjects had negative attitude toward safety and scientific basis of HRs, nevertheless, 20-25%, which is congruent with an Australian study, believed that HRs were safe and scientific (27). This latter percentage is not negligible and requires more attention by health care providers and policy makers in providing people with appropriate information. As proposed by some studies, positive attitude might influence future use of these alternatives (22,37). Regardless of their attitude toward safety issues, 43.4% of our target population preferred HR use in treatment of different health problems (18,20,26).

Although the majority of our participants believed that the use of HRs should be under the observation of doctors, only 3.2% of users informed their physicians of the concurrent use of HRs. This finding is also observed in other studies and the reasons given for not disclosing this information to health care providers seem to be the same. Therefore, it is of benefit if physicians consider asking about CAM utilization and discussing the harms and benefits of such treatments with their patients. About 31% of our population has used HRs for various health problems, which is in line with an Australian study on infertile subjects (29%) (27). This figure is lower than an Irish study on patients undergoing *in vitro* fertilization (38-46%) (26). Regional studies on the general population in Iran reported that about 50% of subjects were using HRs (6,7). This is what we expected in comparison with the general population because our study population may be more cautious in choosing treatment options due to heightened awareness of their situation. Pregnancy, as well, could be a comparable situation with patients undergoing ART, as in both groups, the main concern is the outcome. This can be seen in a report of lower HR use during pregnancy in Kazerun (a city in south of Iran) (36).

3.5% of our population used HRs for treating infertility which is congruent with studies in the UK (3.5%) Canada (6%) and US (6.3%), whereas 29% of infertile patients in a Turkish study used HRs as a form of treatment (20,37,39,40). The target population of the Turkish study was infertile couples attending primary family planning clinics. In our study, subjects are outpatients of a highly specialized infertility care clinic; therefore, the patients have already accepted use of the ART methods that the clinic offers.

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Another reason for this inconsistency might be the location of the two studies; this study was conducted in metropolitan Tehran compared with Van which is a small city near the border of Turkey. As reported previously, Iran is in the advanced stage of infertility treatments due to general acceptance of ART despite its religious conflicts, along with the foundation of some highly recognized infertility research organizations like Royan institute in Iran (16,41). With the development of such research organizations and their satellite affiliates all around the country, we take the accessibility of modern infertility services for granted, even if the cost is still an obstacle to overcome for many people with lower socioeconomic status (42-44).

A considerable proportion of our population has used HRs without sufficient knowledge and holds a positive attitude toward HRs. More importantly, patients did not disclose their use of HRs to physicians; therefore, physicians should ask patients about the use of alternative remedies and provide them appropriate information about side effects and possible drug interactions.

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