The Practice of Prescribing Antidepressants during Pregnancy and Breastfeeding among Mental-Health Practitioners in Tertiary Care Centers in Oman

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Abstract

Objectives: To determine the confidence level of mental-health practitioners in Oman regarding antidepressant use in pregnancy and breast-feeding; their knowledge and need for further training in this area and their existing pattern of prescribing or avoiding the use of anti-depressants during the above periods.

Methods: This questionnaire-based survey conducted from May 2017 to June 2017 included all the practitioners in the psychiatry specialty including medical officers authorized to prescribe medications at Sultan Qaboos University Hospital (SQUH), Behavioral Medicine Department and Al Masarrah Hospital. The data were analyzed using the statistical software SPSS statistics version 22. The categorical variables are presented as numbers and percentages.

Results: 42 practitioners (response rate = 89.40%) responded to the questionnaire. Of them, 10 (23.8%) have had no experience; while 30 (71.4%) have experience in prescribing during both pregnancy and breastfeeding periods. Almost 27 respondents (64.3%) felt that they are confident in prescribing antidepressants for women during their perinatal period while about 30% were neutral. Moreover, 83.3% (n=35) of the participants thought that they would benefit from more training in this area. Furthermore, 81% (n=34) felt more training is needed in perinatal psychiatry in the psychiatry curriculum. There is no consistent prescribing pattern (either prescribing or avoiding) among our participating practitioners during 1st trimester of pregnancy and breast-feeding periods. The drug Fluoxetine was the drug of choice in ~85% of the practitioners in the 1st trimester of pregnancy but avoided by 10% of practitioners in the same period; followed by Amitriptyline (50% vs. 23%); Sertraline (50% vs. 9%), Imipramine (28% vs. 84. During breast-feeding, the drug Paroxetine was the drug of choice in ~74% of the practitioners but avoided by 15% of practitioners; followed by Sertraline (50% vs 8%). Safety, evidence-based and low teratogenicity are the most common reasons for prescription during pregnancy; while low levels in breast milk, being safe and evidence-based are the main reasons for prescription during breastfeeding. On the other hand, high teratogenicity, neonatal side effects, limited data and evidence-based are among the most common reasons behind avoiding prescribing during pregnancy, while, high levels in breast milk, neonatal side effects, having limited evidence and being unsafe are the most common reasons during the breastfeeding period.

Conclusions: There is inconsistency among mental-health practitioners in taking decisions for prescription and their prescribing patterns

Keywords: Antidepressant; Pregnancy; Breastfeeding; Prescribing Patterns; Mental Health Professionals.

Introduction

Depression in pregnancy is quite common and it is estimated to affect between 10-15% of pregnant women [1]. The use of antidepressants during pregnancy has been increasing in recent years [2]. However, antidepressant use during pregnancy has been limited due to predicted risks to the fetus. Therefore, understanding and weighing the risks and benefits of antidepressant use during pregnancy is crucial for the physician's prescription decision[3]. In treating women with mental illness during pregnancy, the clinician should be up-to-date in his or her understanding of the objective data in the medical literature and should pay attention to his or her personal biases [4].

A recent review noted the inconsistencies between knowledge, attitudes, and decision-making in different studies. It highlights the need for improved dissemination of evidence-based treatments and supports increased training in psychopharmacology relevant for pregnancy and breast-feeding. It referred to findings from different studies that documented that though about 70% of physicians reported reading relevant scientific literature or engaging in additional training or conferences on the subject, many healthcare providers reported interest in more training [5]. One qualitative study done in Scotland amongst psychiatrists concluded that there is uncertainty among psychiatrists in prescribing for mothers and the emphasis on more training in this area for psychiatrists and also the incorporation of perinatal psychiatry in the psychiatry training curriculum [6]. In India, up to 71% of psychiatrists sampled reported some education about psychopharmacology during pregnancy during their training [7] while in Australia between 29% and 56.1% of providers reported that they had adequate training related to antidepressant use during pregnancy [8]. Many healthcare providers reported encountering incorrect information regarding the safety of antidepressants during pregnancy [5]. The present study was undertaken to collect baseline information about the confidence of psychiatrists in Oman regarding antidepressant use in pregnancy and breastfeeding; their knowledge and need for further training in this area and their existing pattern of prescribing or avoiding the use of anti-depressants during the above periods.

Methods

This survey was conducted from May 2017 to June 2017. The study included all the practitioners in the psychiatry specialty including medical officers authorized to prescribe medications. The two tertiary care centers in Oman providing psychiatric outpatient and inpatient services for patients from all over the country, namely Sultan Qaboos University Hospital (SQUH), Behavioral Medicine Department and Al Masarrah Hospital were the centers of study. These are also the main training centers for medical students (undergraduate) and psychiatric residents (postgraduate) in Oman.

A questionnaire was designed specifically for this study's purpose based on available guidelines in the literature. Two questions were asked about the designation and experience in perinatal psychiatry of the respondent. The responses to the next three questions had Likert-type options as strongly agree, agree, neutral, disagree and strongly disagree. These questions included: whether respondents are confident in prescribing antidepressants to the women during their perinatal period; whether respondents felt they would benefit from more training in this area of perinatal psychiatry and whether respondents felt more training needed in perinatal psychiatry in psychiatry curriculum. In addition, eight multiple-choice questions allowed respondents to provide more than one answer if required from the list of options given. These included drugs of choice during the 1st trimester; drugs avoided during the 1st trimester; reasons for choosing antidepressants during pregnancy; reasons for avoiding antidepressants in pregnancy; drugs of choice during breastfeeding; drugs avoided during beast-feeding; reasons for choosing antidepressants in breastfeeding and reasons for avoiding antidepressant in breastfeeding. The questionnaire was distributed to all the eligible participants. Statistical analysis

The data were analyzed using the statistical software SPSS statistics version 22. The categorical variables are presented as numbers and percentages. Ethics Approval

This study was reviewed and approved by the Ethics Committee, College of Medicine & Health Sciences, Sultan Qaboos University (MREC#1438).

Results

A total of 42 practitioners (response rate was 89.40%) responded to the questionnaire (2 Consultants, 7 senior specialists, 12 specialists, 3 senior house officers, 4 medical officers, and 14 residents). Regarding experience in perinatal psychiatry, we found that 23.8% of the participating practitioners (n=10) have had no experience; one each has experienced only during pregnancy or breastfeeding while 30 practitioners (71.4%) have experience in prescribing during both pregnancy and breastfeeding periods. Almost two-thirds of the practitioners who participated in the study (64.3%; n=27) felt that they are confident in prescribing antidepressants for women during their perinatal period while about 30% were neutral regarding their confidence in prescribing. Moreover, 83.3% (n=35) of the participants thought that they would benefit from more training in this area. Furthermore, 81% (n=34) of them felt more training is needed in perinatal psychiatry in the psychiatry curriculum. The responses of specialists and above versus others (trainees) showed no statistically significant differences for three key items , namely, whether confident in prescribing antidepressants for women during their perinatal period (p=0.100) ; whether they would benefit from more training in this area (p=0.508) and whether more training is needed in perinatal psychiatry in the psychiatry curriculum (p=0.412).

Figure 1 shows the proportion of participating practitioners who prescribed and avoided prescribing different types of antidepressants during 1st trimester of pregnancy and breastfeeding periods.

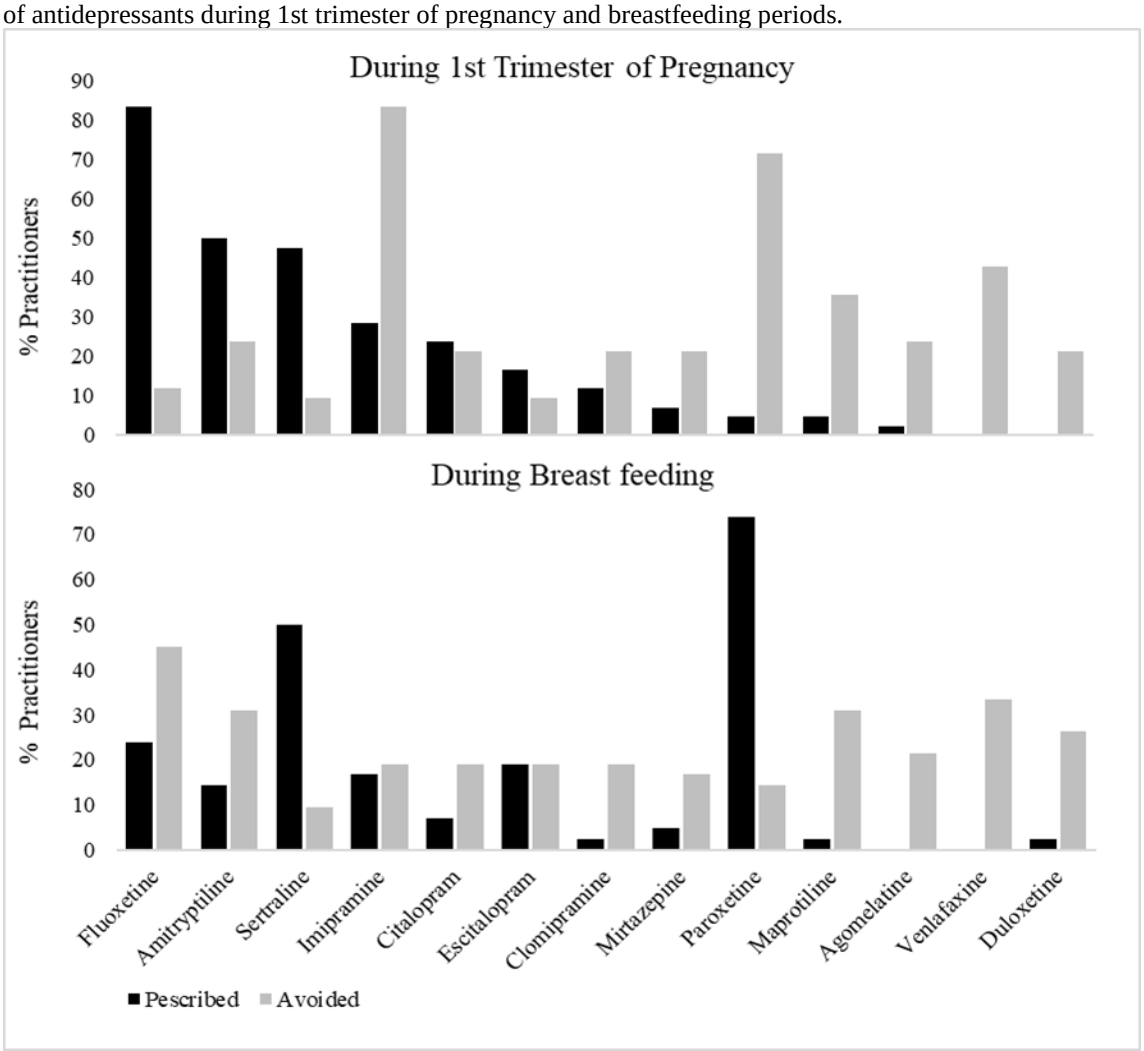

Figure 1: The proportion of participating practitioners who prescribed and avoided prescribing different types of antidepressants during 1st trimester of pregnancy and breast-feeding periods.

The drug Fluoxetine was the drug of choice in ~85% of the practitioners in the 1st trimester of pregnancy but avoided by 10% of practitioners in the same period; followed by Amitriptyline (50% vs. 23%); Sertraline (50% vs. 9%), Imipramine (28% vs. 84%), Citalopram (25% vs. 22%); Escitalopram (18% vs. 9%); Clomipramine (10% vs. 20%) and Paroxetine (5% vs. 71%). Other drugs like Mitrazepine, Maprotiline and Agomelatine were minimally prescribed whereas Venlafaxine and Duloxetine were avoided.

During breastfeeding, the drug Paroxetine was the drug of choice in ~74% of the practitioners but avoided by 15% of practitioners; followed by Sertraline (50.% vs 8%). The prescribing patterns of the other drugs were as follows: Fluoxetine (23%. vs 45%), Amitiyptiline (14%. vs 30%), Imipramine (16%. vs 17%), Citalopram (5%. vs 18%); Escitalopram (18%. vs 18%); Clomipramine (1%. vs 18%). Other drugs like Mirtazapine, Maprotiline and Duloxetine were minimally prescribed whereas Agomelatine and Venlafaxine were avoided.

The most common reasons for choosing or avoiding antidepressants during pregnancy and breastfeeding are shown in Table 1. Safety, evidence-based and low teratogenicity are the most common reasons for prescription during pregnancy; while low levels in breast milk, being safe and evidence-based are the main reasons for prescription during breastfeeding. On the other hand, high teratogenicity, neonatal side effects, limited data and evidence-based are among the most common reasons behind avoiding prescribing during pregnancy, while, high levels in breast milk, neonatal side effects, having limited evidence and being unsafe are the most common reasons during the breastfeeding period. Among the respondents, 3 (7.1%) of them had no psychiatric experience in prescribing, as a result, they would avoid prescribing antidepressants during pregnancy and the same holds for 11 practitioners (26.2%) during breastfeeding. In addition, one of the participants prescribed the antidepressant because he/she has seen other doctors prescribing the antidepressants.

Table 1: The reasons for choosing and avoiding prescribing different types of antidepressants during pregnancy and during breastfeeding among mental health practitioners (n = 42).

Reasons for *choosing* antidepressants	
During pregnancy n (%)	**During breastfeeding n (%)**
Safety 37 (88.1%)	Low levels in breast milk 30 (71.4%)
Evidence-based 31 (73.1%)	Safe 24 (57.1%)
Low teratogenicity 31 (73.1%)	Evidence-based 22 (52.4%)
Well tolerated by mother 13 (31.0%)	Less neonatal side effects 16 (38.1%)
Can be continued to breastfeeding 10 (23.8%)	Effective 11 (26.2%)
Efficacy 9 (21.4%)	Well tolerated by mother 8 (19.0%)
Experience 8 (19.0%)	All antidepressants have low risk 4 (9.5%)
Less drug interactions 3 (7.1%)	Practitioner experience 3 (7.1%)
Seen other doctors 1 (2.4%)	Low risk in overdose 2 (4.8%)
	As for pregnancy 2 (4.8%)
	Seen other doctors use it 1 (2.4%)
Reasons for *avoiding* antidepressants	
During pregnancy n (%)	**During breastfeeding n (%)**
High teratogenicity 28 (66.7%)	High levels in breast milk 30 (71.4%)
Neonatal side effects 26 (61.9%)	Neonatal side effects 29 (69.0%)
Limited data 25 (59.5%)	Limited evidence 19 (45.2%)
Evidence-based 21 (50.0%)	Unsafe 19 (45.2%)
Unsafe 19 (45.2%)	Limited practitioner experience 11 (26.2%)
Obstetric complications 13 (31.0%)	Maternal side effects 9 (21.4%)
Toxic in overdose 8 (19.0%)	Toxic in overdose 5 (11.9%)
No practitioner experience 3 (7.1%)	Cardiotoxic 5 (11.9%)
	Not Effective 3 (7.1%)

Discussion

This is the first study in Oman on the psychiatrists' attitude toward prescribing antidepressants during pregnancy and breastfeeding. There is no consistent prescribing pattern (either prescribing or avoiding) among our participating practitioners during 1st trimester of pregnancy and breastfeeding periods. For example, in the 1st trimester of pregnancy, we document discrepancies in prescribing and avoidance of drugs like Fluoxetine, Amitriptyline and Imipramine by the practitioners. A similar contrast is noted in those who avoid prescribing Paroxetine as compared to a majority who recommend it during breastfeeding. During breastfeeding, similar contrasting patterns are seen in the proportions of those who prescribe and those who avoid. This above finding could be attributed to about half of our respondents being senior and experienced whereas the other half less experienced, being senior house officers, medical officers, and residents who would be less experienced. We noted with concern a small number of practitioners had no psychiatric experience in prescribing during pregnancy and breastfeeding; as a result, they would avoid prescribing antidepressants during pregnancy. In addition, one of the participants would prescribe the antidepressant because he/she has seen other doctors prescribing the antidepressants. Although these are few in numbers, still raise the issue of the safety of their practice. We however need to factor in the fact that the choice of antidepressants for the practitioners is limited at times by the availability in the treating center. For example, while both Fluoxetine and Paroxetine are available at both sites, Sertraline, which is approved for use during pregnancy and breastfeeding, is not available in the sites. The above findings highlight the importance of the need for training in this area of practice. Further, with the erosion of 'chemical depletion hypothesis' for depressive illness and observed poor efficacy of antidepressants as documented in recent a systematic umbrella review, juridical use of such compounds during pregnancy and breastfeeding is warranted [9].

Our current study is a replication of Kean et al study [6] done in Scotland on prescribing antidepressants for mothers among psychiatrists. The response rate of our study was higher than 71.6% in this study. In both studies, the majority of practitioners felt confident in prescribing (64.3% vs. 63.2%), and felt would benefit from training (83.3% vs. 61.7%) and more training needed for psychiatrists in this area (81%. vs 47.2%). Again, in both studies, the majority of the psychiatrists would favor fluoxetine but avoid paroxetine during pregnancy. Interestingly, we found that there are still some of our participants who recommend using Paroxetine during pregnancy though, international guidelines and other studies showed its risk of causing congenital cardiac defects [3]. Imipramine has been documented to be relatively safe during pregnancy and even lactation [10]. Though it was one of the most chosen drugs during pregnancy in the Scottish study [6], in our study it was among the most avoided antidepressants because of the cardiac toxicity and other side effects of the class of antidepressants (TCAs) that this drug belongs to [11]. However, in both studies, the majority would recommend avoiding Paroxetine during pregnancy. In both our and Kean et.al.[6] studies, most of the participants prescribe the antidepressant according to its safety during pregnancy and avoid the medication because of the risk of teratogenicity. Paroxetine and sertraline were the antidepressants of choice prescribed by our participants during the breastfeeding period. Both drugs of choice though similar to that noted in the Scottish study, our proportion of those prescribing the same was much higher than that noted in the Scottish study in which sertraline (~31%) was the most chosen compared to paroxetine (~17%). We cannot ascribe any specific reason for this. In both studies, Fluoxetine was the most avoided drug during the lactation period and the participants would decide to prescribe or avoid specific antidepressants according to their level in the breast milk.

This study highlights the variability in the reasons for choosing and avoiding antidepressants during pregnancy and breastfeeding and in prescribing patterns. In the present era of evidence-based practice guidelines and protocols, this discrepancy needs to be addressed, and attributing the discrepancy to being senior/ junior and experienced/less experienced cannot be justified.

Conclusion

There is inconsistency among the practitioners in taking decisions for prescriptions and their prescribing patterns. There is an urgent need towards improving training in perinatal mental health for psychiatry practitioners and incorporating perinatal psychiatry in the curriculum of psychiatry training.

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