Editorial

Growing Rate of Cesarean Section in Iran: Dimensions and Concerns

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Evidence on global rising rates of cesarean section (CS) is abundant, of which Iran is no exception.[1]In the current issue of *Archives of Iranian Medicine*, Badakhsh et al. have highlighted a significant six-fold rise in the rate of CS in a referral hospital in Tehran during the past 30 years, which is far beyond previous estimates.[2–4] The current rate of CS in this study and in accord with previous reports is much higher than WHO recommendations. As stated in a WHO report from 1985, rates above 15% are associated with high rates of inappropriate CS, which endanger maternal and neonatal health and impose a financial burden on the health system.[5] On the other hand, CS rates lower than the needs of communities are likewise associated with increased risk of maternal mortality and morbidity.[6–8] Because of high socio-economic inequalities in developing countries, both patterns of extremely low or high rates are usually observed. Together with lower safety of the procedure in developing countries compared to the developed world, rates of CS at both ends of the spectrum aggravate the undesirable outcomes of healthcare at regional and national levels.[7] However, intrinsic risks related to CS can only be assessed by a randomized controlled trial, which is ethically and practically impossible.[9]

The underlying factors for inappropriate CS are numerous. The diversity of demographic profiles across communities leads to controversies over ideal CS rates.[10] Womens' preferences are also among the main reasons cited in several studies.[11] The role of obstetricians in this regard is not negligible either. Obstetricians may opt for CS as a defensive practice against legal consequences and may even direct women's preferences.[12] Obstetricians' choices originate from their perception of the safety of CS and largely depends on their adherence to practice guidelines.[13] However, there is a considerable debate over appropriateness of indications for CS among experts. In their previous study, Ostovar et al. have used a modified version of the RAND Appropriateness Method (RAM) to generate scenarios from valid clinical guidelines and demonstrated that although experts considered over 60% of scenarios as "appropriate" they agreed on just 32%.[14] These results show the variability of practice guidelines for CS. Another important finding in this study is that a remarkable proportion of "equivocal" scenarios at first glance have been labeled as "inappropriate" upon second inspection. This fact implies that the initial assessment of obstetricians, which can make them choose CS in "equivocal" scenarios, is in fact ultimately considered as "inappropriate" by experts and the border between appropriate and inappropriate CS is quite vague.

In a more recent study by Ostovar et al., published in the current issue of this journal, medical records of 250 women who underwent CS in eight Tehran hospitals have been assessed by experts based on the criteria developed in their previous study. Results showed that 36.4% of CS were inappropriate, 16.4% were equivocal, and just 47.2% of the total were appropriate. Appropriateness of CS was reported to be higher in public versus private hospitals. Additionally, all repeated CS which accounted for 30% of the total CS were performed exclusively because the patient had a previous CS. A total of 80% of repeated CS have been considered as "appropriate" by experts, which was quite high compared to rates reported in studies from the United States and Europe.[15] These results have indicated that even experts' perception of appropriateness may be far from universal standards.

In conclusion, the results of these two studies signify a steep rise and inappropriateness of obstetric practice in Iran, which necessitate the attention of government officials. As mentioned by Ostovar et al., in order to hinder the growing rate of CS, a wide range of strategies should be adopted that include increasing public awareness, setting guidelines and ensuring their translation into practice, and modification of health policies at the national level. Yet, despite all the controversial evidence, it is also essential to mention that the overall maternal mortality rate has actually decreased during the past three decades in Iran, which means perhaps not quite all of judgments on quality of maternal care are based on reality. Let's hesitate for a moment before reacting!

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