The Mode of Delivery of the Maternal Mortality Cases: A Nation – wide study from Turkey

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Objective

The present study aimed to evaluate the mode of delivery of the maternal mortality cases between 2012 -2014 in Turkey. We also evaluated the indications of cesarean deliveries (CD) to provide a further explanation about the risks of maternal deaths attributable to CD.

Methods

Maternal Mortality Surveillance has been conducted by the Government of Health since 2007. All maternal deaths in our country are first evaluated by the committees in the local areas. The records of the local committees are reported to the Preliminary Investigation Committee for Maternal Deaths at the Ministry of Health of Turkey. Medical hospital records, death certificates, autopsy reports, local and national registries, reports of involved health care providers and verbal autopsies are the tools used to evaluate each maternal death and to determine the cause of death, risk factors, pregnancy related conditions, management and their preventability. In this retrospective study, case files of all maternal deaths recorded between January 1, 2012 and December 31, 2014 in Turkey were reviewed. Information on the demographic and health characteristics, pregnancy, delivery, and maternal and perinatal outcomes of individual women were recorded. Indications and type of CD, whether antepartum or intrapartum, were also recorded.

Results

Between 2012 and 2014, a total of 628 maternal deaths were determined. Seventy eight (12. 4%) of these cases occured during the gestational period. There were 24 (3. 8%) deaths after spontaneous abortion and 14 (2. 2%) deaths after medical abortion. On the other hand, 512 (81. 6%) women died in the postpartum period. Of these women, 141 (27. 5%) women died after spontaneous vaginal birth; 2 (0. 39%) after vaginal birth with vacuum extraction; 369 (72. 0%) after cesarean section. In the group with CD, operation was performed in 101 cases after the onset of labour and in 268 women before the onset of labor because of different indications (Table 1). Among the maternal mortality cases, 135 (21. 5%) had a history of myomectomy or cesarean section. In 13 cases, maternal death was gestational, whereas post-abortional in 12 and after vaginal delivery in 7. Maternal death occured in one case (with a previous cesarean section) after uterine rupture and immediate hysterotomy. Moreover, in this group of patients with previous uterine scars, 102 delivered with cesarean section. There was no maternal deaths in women with CD with the indication of maternal request over the three years' period. Table 1. Emergency CD cases Indication of CD Number of Cases Previous CD, in labour 4 (1. 1%) Fetal distress 54 (14. 6%) Maternal unfavorable condition 79 (21. 4%) Severe preeclampsia/eclampsia/HELLP 69 (18. 7%) Malpresentation 25 (6. 8%) IUGR 3 (0. 8%) Placenta previa 6 (1. 6%) Ablatio placenta 19 (5. 2%) Perimortem 32 (8. 7%) Cephalopelvic dysproportion/arrest of labour 20 (5. 4%).

Conclusion

The present study is the first national population-based study that have evaluated and reported the maternal mortality cases according to the mode of delivery. CD is increasingly accepted as a low risk procedure and this attitude results in the increase of CD rates. Our results show that compared to spontaneous vaginal delivery, CD was associated with more maternal deaths. However, it should be clarified whether cesarean delivery is the result or cause of the maternal deaths as preexisting disease or the indication for cesarean section instead of the surgery itself may be the cause of death. Further studies with larger sample sizes are needed to establish the relationship between maternal death and mode of delivery.