

Maternal near miss in four governmental hospitals in the West Bank, occupied Palestinian territory, in 2010: a retrospective, facility-based survey

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Background In the past few years maternal near miss (MNM) has gained attention as an important indicator of the quality of obstetric care. Data for MNM in the West Bank, occupied Palestinian territory (oPt), have not been reported. Our aim was therefore to identify the frequency of MNM in four Ministry of Health maternity hospitals in the West Bank and review compliance with national protocols in case management.

Methods We undertook a retrospective, descriptive, facility-based survey to identify maternal complications and suspected MNM cases in a total of 18 849 women admitted during 2010 to four selected Ministry of Health referral hospitals covering the north, middle, and south districts (main areas) of the West Bank. A random, stratified sample of cases was selected from the hospitals according to an allocation sequence generated with WinPepi (version 11.15). The ratio of case selection was proportionate to the number of cases at each hospital. 198 (77 pre-eclampsia, 39 post-partum haemorrhage, 64 anti-partum haemorrhage, and 18 anaemia) of a total 403 suspected cases of MNM (157 pre-eclampsia, 82 post-partum haemorrhage, 130 anti-partum haemorrhage, and 34 anaemia) were selected to identify those meeting WHO's diagnostic criteria. We undertook in-depth interviews with seven MNM cases admitted to intensive-care units (ICUs) according to an interview guide (of open-ended questions developed by the researchers and technical committee, and direct questions adapted from a questionnaire used in Brazil about severe maternal morbidity), and with 46 health-care professionals working in the maternity wards for the knowledge, attitudes, and practices (KAP) survey. In structured interviews of heads of maternity departments and other managers, we assessed the quality of maternal facilities. Because this study was hospital-based, post-partum data after discharge were excluded. The study was reviewed for ethical issues and approved by the UN Population Fund's office for the West Bank and Gaza Strip, and the Palestinian Ministry of Health and Palestinian Society of Obstetrics and Gynaecology, West Bank. We obtained written informed consent from the seven MNM cases. We used descriptive statistics (frequencies, mean, SD) to present the data and χ^2 analysis (SPSS, version 13.0) to test the relation between health providers answering the knowledge questions and other factors in the KAP survey. For the in-depth interviews, the data were transcribed verbatim to describe women's responses to the open-ended questions.

Findings In 2010, in the four hospitals, 403 (2%) of 18 849 births were suspected cases of MNM according to disease-specific criteria. 179 selected cases were analysed; according to WHO's definition, the types of MNM were 75 (42%) pre-eclampsia, 54 (30%) ante-partum haemorrhage, 33 (18%) post-partum haemorrhage, 11 (6%) anaemia, and six (3%) ante-partum and post-partum haemorrhage. Of 179 women included in this study, 37 (21%) were admitted to ICUs. The 39 cases of post-partum haemorrhage were managed with oxytocin or methylergometrine (33 [85%]) and misoprostol (27 [69%]). 31 (79%) women had uterine massage and cervical and vaginal checks. Blood transfusion was administered in 16 (41%) cases, and five (13%) had hysterectomies and internal iliac artery ligation. Moreover, the management of complications showed suboptimum compliance with the Palestinian Ministry of Health's National Obstetrical Emergencies Guidelines and Protocols (November, 2008). In the KAP survey, 31 (67%) of 46 health staff who responded correctly answered questions about case management of post-partum haemorrhage; 12 (26%) correctly answered questions about the management of pre-eclamptic toxemia; and 19 (41%) were able to define the MNM classification according to WHO's criteria. The results of our facility audit showed that the equipment and machines used in the four hospitals were adequate; however, the maintenance of machines was difficult because there are no programmes for all governmental hospitals and no provision of training and monitoring of all staff.

Interpretation We believe that the frequency of MNM in the oPt is higher than that noted in this study because of poor reporting and documentation of cases in hospitals. Therefore, a system of continuous education consisting of a thorough assessment of training needs and a clearly defined training plan, and ethical or legal responsibilities pertaining to proper documentation and management of cases are needed.

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Contributors

AMI was the main researcher for the study. SN was the technical committee lead. ED was the researcher for the KAP portion of the study. WB reviewed case files and was a member of the technical committee. SMH wrote the Abstract and provided research support. SAA, ANS, and SS were members of the technical committee.

Conflicts of interest

We declare that we have no conflicts of interest.

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