Abstract

Aim: To determine the prevalence of near miss (severe maternal morbidity) and maternal mortality in obstetric, identify the characteristic of near miss cases and comparatively analyzed the nature of near miss events and its association between the leading causes with ICU utilization and demographic data in Hospital Serdang, a tertiary maternity hospital in Malaysia. It is a known as a recognized tool to identify women at highest risk of mortality and allocate available resources to reduce severe morbidity especially in developing countries.

Methods: Retrospective review of near miss and maternal mortality cases in Hospital Serdang over a 2-year period, from 1 January 2010 until 30th December 2011. Near miss cases were defined based on clinical and management criteria, which were modified from Filippi and Mantel et al 1998. The prevalence of near miss and maternal mortality in obstetric were calculated, and the maternal near miss mortality ratio (MNMR), maternal near miss ratio and mortality indices were determined. Near miss morbidities were described with respect to demographic features and disease profiles. The association between causes of near miss morbidities and ICU utilization and some demographic data were analyzed through Chi-square test.

Results: There were 18731 deliveries, 160 near miss cases and 5 maternal deaths. The prevalence of maternal near miss morbidity was 854 cases per 100,000 live births and the prevalence of maternal mortality was 26 cases per 100,000 live births with maternal near miss ratio (MNMR) was 8.5 cases per 1000 live births; giving maternal near miss mortality ratio of 53:1 and a relatively low mortality index of 1.89%. Demographic features of cases of near miss and maternal death were comparable. Hypertensive disorder and major obstetric haemorrhage were the two main causes of near miss morbidities, responsible for 51.5% and 25.6% of the cases respectively. ICU admission was accounted for 17.6% among near miss cases and eclampsia was significantly associated with ICU utilization (p<0.001). Grandmultiparae and advanced maternal age (age>35) were highly associated with hysterectomy. Besides that, anemia (haemoglobin < 11g/dL) showed significant relationship with eclampsia and obstetrics haemorrhage (p<0.005).

Conclusion: The quality of obstetric care received by near miss patients in this centre was optimal. Study on obstetrics near miss provides valuable information on obstetric care to improve quality of maternal care in Malaysia. Severe maternal morbidities can be potentially reduced by further improving the resources in managing severe morbidities especially due to hypertensive disorder and obstetrics haemorrhage.