Rising Rates of Caesarean Delivery at Mansoura University Hospital: A Reason for Concern

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Abstract

Objectives: To study the rates and indications of Caesarean delivery at Mansoura University Hospital in Egypt.

Patients and methods: This retrospective study collected data on caesarean delivery rates and indications from the medical records of 34598 women admitted to both emergency and high risk obstetric units over a 5-year period (January 2006-December 2010).

Results: The overall rate of caesarean delivery was 47.25%. Rates at the high risk and the emergency units were 79.33% and 29.15% respectively. The annual rate of caesarean delivery increased significantly (p<0.01) from 42.65% in 2006 to 55.33 % in 2010, mainly due to an increase in the rate of caesarean at the emergency unit. The most common causes were repeat caesarean (35.78%), medical disorders complicating pregnancy (14.25%), failure to progress in labor (10.37%) and malpresentations (9.9%). Vaginal birth after caesarean (VBAC) was attempted in 2078 women and was successful in 22.23%.

Conclusion: The overall rate of caesarean delivery at Mansoura University hospital was 47.25%. This high rate was mainly attributed to previous caesarean delivery, low rate of successful VBAC and the very low rate of attempted instrumental delivery.

Keywords: Caesarean section rates; indications

Introduction

The rates of delivery by Caesarean Section (CS) vary widely among different countries. In a recent study [1], 54 countries had rates of less than 10%, whereas 69 countries showed rates of more than 15%. There is an observed inverse association between rates of caesarean delivery and maternal and neonatal mortalities [2,3]. In the Eastern Mediterranean Region [4], the average rate of CS is around 10%. The data, however, are often not representative, being mostly hospital rather than community based. In Africa [5], the median caesarean delivery rate was 8.8%. In Ethiopia [6], the national population-based caesarean delivery rate was 0.6%, with regional rates varying from 0.2% to 9%.

In Egypt [7-9], data on rates and indications of CS are variable based on the level of experience and on the whether the delivery was carried out at a private or a public setting. In USA [10], the caesarean delivery rate has increased by more than 10 % (from 26% to 36.5%) in a short time. In this study, we aimed to assess the rates and the indications of caesarean delivery and to find out why the rate is continuously increasing at a tertiary health care University Hospital in Egypt.

Patients and Methods

This retrospective study was carried out at Mansoura University Hospital, a major tertiary referral hospital in the delta region in Egypt. Data were collected on caesarean delivery rates and indications from the medical records of 34598 women delivered over a 5-year period (January 2006 - December 2010). The main indication for CS documented in the notes was recorded. In case of absence of an indication, maternal request or more than one indication, the cause was recorded as other indications.

The department of Obstetrics and Gynaecology in Mansoura includes 2 units, the emergency unit and the high risk obstetric unit. The emergency unit accepts referrals from private and public units as well as self referred cases with obstetric emergencies. Cases in the emergency unit are therefore a mix of low and high risk cases as many women just turn up for normal delivery. Women with high risk obstetric complications admitted through the emergency unit were referred after delivery or after 24 hours into the high risk unit for further management. The high risk obstetric unit accepts women referred with high risk obstetric complications either from the emergency unit or the antenatal clinics. Both units operate independently with 24 hour working shifts. Dedicated obstetric staffs (Registrars, senior registrars and consultant level staff members) are on call for 24 hours. All caesarean sections were carried out after consultation with and approval of the obstetric consultant on call.

Ethical approval to publish the results of this study was obtained from the ethics committee of Mansoura Faculty of Medicine. Statistical analysis used SPSS (version 10), The chi square, Mann-Whitney U and Kruskal-Walles tests were performed to identify significant differences between both units and between rates at different years of the study.

Results

Table 1 shows the number and percentage of vaginal and caesarean deliveries at both the emergency and high risk units. Table 2 shows that while the percentage of caesarean deliveries remained nearly the same over the study period in the high risk unit; it showed a steady increase in the emergency unit. Table 3 shows that the most common indication for caesarean delivery was repeat caesarean, followed by medical disorders complicating pregnancy, failure to progress in labour and malpresentations. Caesarean hysterectomy was indicated in 0.3% of cases because of morbid placental adhesions after previous caesarean deliveries. Table 4 shows that the percentage of successful

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Received March 04, 2013; Accepted April 25, 2013; Published April 29, 2013


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Kruskal-Wallis test; *significant

were low risk. Indeed, some women in this unit were referred with life

units does not mean that cases admitted to the emergency unit

region in Egypt.

obstetric complications from a wide geographical area within the delta

countries [1-5]. This unacceptably high rate may be attributed to the

Discussion

Vaginal Birth after Caesarean Delivery (VBAC) was 22.23% and was

Table 1: Overall rates of Caesarean delivery (2006-2010).

Table 2: Annual rates of Caesarean delivery over 5 years (2006-2010).

Table 3: Indications of Caesarean delivery at the emergency and high risk obstetric units.

Table 4: Attempted vaginal birth after caesarean delivery (VBAC) (n=2078).

It is obvious that instrumental delivery is a lost art among Egyptian hospitals. Indeed, there were no reported cases of failed or even attempted instrumental deliveries in cases of acute fetal distress with the cervix fully dilated or in cases of prolonged second stage with the head engaged. By international standards, Vaginal Birth After Caesarean (VBAC) is successful in rates close to 90% with a very low complication rate [14,15]. In Egypt, VBAC has also been found to be safe [16] with 90% success rate without complications compared with only 22.23% in this study. The reason of this low success rate of VBAC at Mansoura University Hospital is currently under investigation in a separate study.

The most common indication for CS in the present study was previous delivery by one or more Caesarean sections. The National Collaborating Centre for Women’s and Children Health in the UK [17] listed malpresentations, cephalopelvic disproportion and acute fetal distress as main indications for CS. In this study, the reported rate of CS due to acute fetal distress in labor was very low (3.82%). This may be explained by the lack of electronic fetal monitoring during labour in Mansoura University hospital and in Egyptian public hospitals in general. Attempts at reducing the CS rate are necessary and should start by reducing the number of primary cesareans to deal with the problem where it originates [18]. Unless measures are instituted to reverse the rapidly rising CS rate, the rates of maternal morbidity and mortality will continue to rise [19,20]. Although it is difficult to estimate an acceptable rate of CS at a tertiary referral obstetric hospital, the current rate at Mansoura University hospital seems to be unacceptable high.

References


