

Overuse of cesarean delivery at Al-Saudi Hospital, Hajjah, Yemen

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ABSTRACT

Background: The prevalence of cesarean section delivery continues to rise in most of the settings including the developing countries. Different indications for cesarean delivery might be responsible for this rise.

Methods: The study was conducted during one year period of first May 2012 through 30 of April 2013 at Al-Saudi Hospital in Hajjah city, Yemen to investigate incidence, indications and type of cesarean delivery. The medical files were reviewed and medical and obstetrics data were retrieved from the files (age, parity, education, and mode of delivery).

Results: Out of 1728 deliveries, 1211 (70%) were vaginal (include 1.3% instrumental deliveries) and 517 (30%) were cesarean deliveries. The vast majority of the cesarean deliveries were emergency ones (410; 79.3%). The different indications of cesarean deliveries were; hypertensive disorder of pregnancy (27.1%); repeated cesareans (22.8%), antepartum hemorrhage (14.5%), obstructed labor (10.6 %), cephalopelvic disproportion (10.6 %), bad obstetric history (1.4 %), others (2.5 %) and combined indications (5%).

Conclusion: There is a high incidence of cesarean deliveries in this setting. Measures have to be taken (increase instrumental delivery, trial of labour and trial of scar) to reduce this high incidence of cesarean deliveries.

Keywords: pregnancy; cesarean delivery; indications; Yemen.

World Health Organization recommended a cesarean delivery rate of 10–15%¹. There is a variation in the prevalence of cesarean delivery which reflects contradictions where a low rate of a cesarean delivery in some circumstances in countries with low resources and unnecessary intervention and high rate in others². Generally the prevalence of cesarean section deliveries continues to rise in most of the settings including the developing countries^{3,4}. Although the reasons for the global increase beyond the recommended rate, some attributing factors may take on more importance than others in specific contexts.

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The implications of this trend may be reflected negatively on the health of women and the perinatal outcomes in developing countries which are characterized by high fertility and substandard health care that might increase the short and long-term risks of cesarean deliveries⁵. Furthermore these limited resources can be diverted from other necessary and effective interventions⁶.

Different indications for cesarean delivery have been investigated and these might be behind the increase of the procedure. These indications may vary considerably among different settings but generally these include malpresentation /malposition⁷, antepartum hemorrhage and repeated scars⁸⁻¹⁰. Therefore, it is highly recommended to document the indications for cesarean delivery especially in developing countries¹¹. Generally there are few published data on cesarean delivery in Yemen. It has been shown that -in a population and hospital-based studies -cesarean delivery rates for the 18 Arab countries Yemen, Mauritania, Sudan, and Algeria have population cesarean section rates below 5%¹². The current study was

conducted to investigate the incidence and indications of cesarean delivery at Al-Saudi Hospital, Hajjah, Yemen.

Methods:

The study was conducted during one year period from first May 2012 through 30 of April 2013 at Al-Saudi Hospitals in Hajjah city, Yemen. Hajjah Hospital is a tertiary hospital that cares for women (antenatal, postnatal and during delivery) who receive free antenatal care at the hospital. Usually women with high risk pregnancy are referred to this hospital. However, criteria for referral are not strictly adhered to, and many women without any significant complications can be treated at the hospital.

The study received ethical clearance from the ethical committee of the hospital. Medical files were reviewed a synonymously without referred to their names or revealing any personal data. The data retrieved from the files were age, parity, education, antenatal care and mode of delivery.

Statistics:

Data were entered in computer using SPSS for Window version 16.0 and double checked before analyses. Chi square test was used to compare proportions and $P < 0.05$ was considered significant.

Results:

During the study period there were 1728 deliveries. Out of these 1728, 517 (30%) were cesarean deliveries. Twenty four (1.3%) women were delivered by instrumental deliveries and these were analyzed with the vaginal delivery group. The vast majority of the cesarean deliveries were emergency ones (410; 79.3%). In comparison to women who delivered by elective cesareans, women who delivered by emergency cesareans were elder, had high parity and illiterate, Table 1.

The different indications of cesarean deliveries were; hypertensive disorder of pregnancy (140; 27.1%); repeated cesareans (118; 22.8%), antepartum hemorrhage (75;14.5%), obstructed labor (55; 10.6 %), cephalopelvic disproportion (55; 10.6 %), bad obstetric history (7;1.4 %), others (13; 2.5 %) and combined indications (26; 5%), Figure 1.

Discussion:

The main finding of the current study was the high incidence of cesarean delivery (30%). The majority of cesarean deliveries was emergency ones. Although this were a one hospital data and it might not reflect the national level of cesarean delivery, it show higher incidence than that recommended by WHO (up to 15%)¹. The previous reports showed that the overall cesarean delivery in Yemen as documented by the National Survey was below the 5% that is recommended by the WHO¹². The difference of incidence of cesarean delivery between the National Survey and different institutions is very obvious in some countries such as Ethiopia, where the national population-based incidence of cesarean delivery was 0.6% and the overall institutional rate was 18%, which varied between 46% in the private and 15% in the public sector¹³. Previous studies have shown that the majority of countries with low resources have a low incidence of cesarean delivery (e.g., the incidence of cesarean delivery is just 4.5% in the Congo¹⁴ and it is less than 1% in Kenya, Rwanda, Southern Sudan, and Uganda¹⁵. The study area - Al-Saudi Hospital in Hajjah city, Yemen- is a charity hospital where all serves including the cesarean delivery itself were free of charge and this may be the main reason for this high incidence of cesarean delivery. The policy of free cesarean deliveries, which was recommended and adopted by many countries to improve access to emergency obstetric care, was found to increase the incidence of cesarean delivery^{16,17}.

The current study showed that 79.3% of these cesarean deliveries were emergency ones, and hypertensive disorder of pregnancy, repeated cesareans, antepartum hemorrhage, obstructed labor were the main indications of cesarean delivery. Generally obstructed labor, cephalopelvic disproportion, previous cesarean deliveries were the most observed indications for cesareans in low resources countries^{18,19}. Unfortunately it seems that there is no standard classification system for cesarean indications, and indications are not standardized in developing countries^{20,21}.

Table 1 : Comparing socio-demographic characteristics between women who delivered by elective and emergency cesareans

	Elective cesareans (n=107)	Emergency cesareans (n=410)	P
Age group			
< 18 years	31(29.0)	110(26.8)	0.039
19-36	53(49.5)	161(39.3)	
>36 years	23(21.5)	139(33.9)	
Parity groups			
Primiparae	37(34.6)	155(37.8)	< 0.001
Second parity	49(45.8)	72(17.6)	
≥ Three parity	21(19.6)	183(44.6)	
Residence			
Rural	87(81.3)	317(77.3)	0.431
Urban	20(18.3)	93(22.7)	
Educational level			
Illiterate	82(76.6)	344(84.0)	0.088
Educated	25(23.4)	66(16.1)	

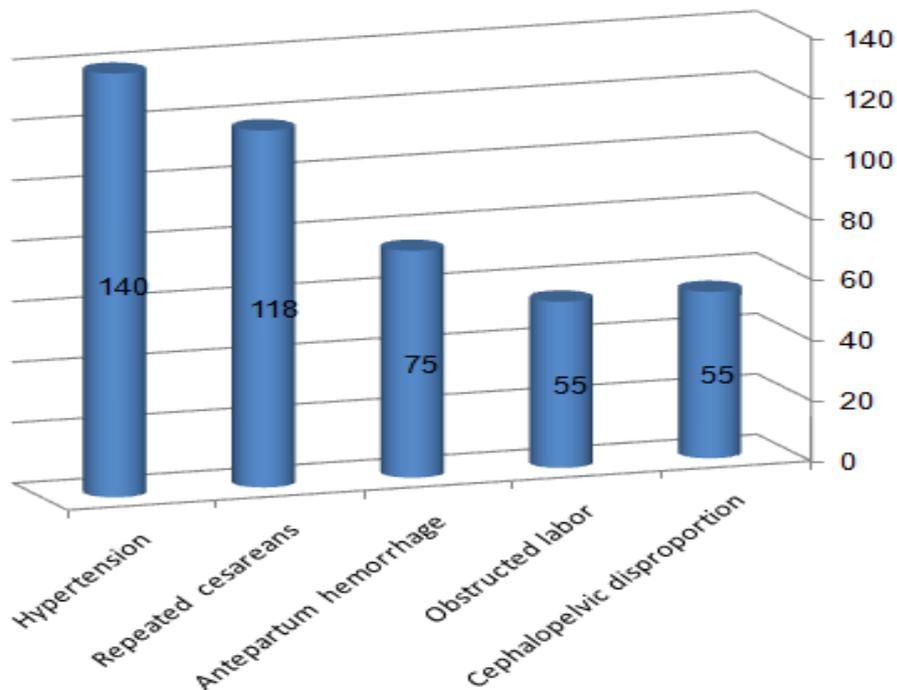


Figure 1: Main indication of cesareans deliveries at Hajjah, Yemen.

Therefore, many cesarean deliveries appear to be decided on inappropriate/inaccurate indications or rather unclear indication²².

Conclusion:

There is a high incidence of cesarean deliveries in this setting. Measures have to be taken (increase instrumental delivery, trial of labour and trial of scar) to reduce this high incidence of cesarean deliveries.

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