INCIDENCE AND TIME TREND OF CAESAREAN SECTION IN MATERNITY AND CHILD HOSPITAL IN BASRAH

[1]Hind Elia Jeorges, [2]Narjis A.H Ajeel

ABSTRACT

This is a cross sectional record based study aimed at studying the incidence and trend of caesarian section in Basrah Maternity and Child Hospital during the period extending from 1997-2003. In addition a sample of 150 women who were delivered by caesarean section in the same hospital over the period extending from the 1st of June to the 15th of September 2004 were also included to study the indication for Caesarean section. The results of the study showed that, the overall incidence rate of caesarean section over the period 1997-2003 was 15.25%. The annual incidence of caesarean section in the 7 years period showed a steady increase from 10.8% to 21.3%. The commonest indication for elective caesarean section was previous two scars (33%), while for emergency cases abnormal presentation and lie was the commonest indication (27%).

INTRODUCTION

Caesarean section C/S is a major obstetric operation that remained a matter of controversy for several years and gained popularity in recent decades with a dramatic rise in the rate of caesarean deliveries all over the world.[1] This trend is more apparent in the developed than the developing countries.[2] The rising number of indications for C/S, the use of fetal monitors, the current medico legal climate, the importance of avoiding damage to the baby, and the increased safety of the C/S itself are some of the reasons cited for this trend.[3] Mc Garry in his review in 1987 found that over the preceding fifteen years, the caesarean section rate has increased in many countries and in different rates.[4] The rate of caesarean section deliveries in the United State has increased from 5.5% in 1970 to 22.7% in 1985(5). During 1984 caesarean delivery became the number one hospital operative procedure in USA and accounted for 21% of deliveries of all live births. In 1988 the figure climbed to 24.7% and it was projected then to reach 30% in year 2000.[6] In England, the C/S rate doubled from 4% in 1970 to 9% in 1980, the rate almost doubled again during the 1990s with an estimated rate of 16% in 1995 and 19% in 1999.[7] In Jordan during a six-year review from 1991 to 1997 at Queen Alia Military Hospital, Amman, the incidence rate was 7.7 %.[8] In Al-Shaty Hospital in Jedda, Saudi Arabia the C/S rate was found to be 9.9% during 1994.[3] However, in Basrah, a study was carried out in Al-Tahreer Hospital during the year 2000, found a very high incidence rate of C/S at 24 %.[9] The present study was carried out to study the incidence, trend and the main indications of C/S in Basrah Maternity and Child Hospital.

METHODOLOGY

This study is a record based study aimed at studying the incidence and trend of caesarian section in Basrah Maternity and Child Hospital. Data about deliveries which took place in Basrah Maternity and Child Hospital during the period from 1997-2003 were obtained from the delivery records, which were available in the department of statistics of the same hospital. In addition a total of 150 women who were delivered by C/S in the same hospital over the period extending from the 1st of June to the 15th of September 2004 were also included in the study. A total of 91 elective and 59 emergency C/S cases were included. Information on past and present obstetric history, fetal presentation and lie, type of birth (singleton or multiple), fetal state at birth, indication of C/S (as recorded in the case sheets of patients), and duration of pregnancy at time of delivery were obtained by direct interview of cases. All cases were interviewed by one of the authors.

RESULTS

Incidence and trend of C/S

The total number of deliveries in Basrah Maternity and Child Hospital from 1997 to 2003 was 92688, of these 14137 were delivered by C/S giving an overall incidence rate of 15.25%. The annual incidence rates of C/S for the 7-year period from 1997 to 2003 are shown in Table-1. The table shows a gradual increase in the incidence rate of C/S mainly in the last three years.

[1]MBChB, FIBMS, Basrah Directorate General of Health
[2]MBChB, Msc, PhD, Department of Community Medicine, College of Medicine, University of Basrah, Iraq

Table 1. ***Annual incidence rate of C/S IN Basrah Maternity and Child Hospital 1997-2003***

Years	No. of deliveries	No. of C/S	Incidence rate %
1997	13846	1498	10.8
1998	14020	1821	12.9
1999	13907	1546	11.1
2000	12603	1992	15.8
2001	12473	2154	17.3
2002	12748	2351	18.4
2003	13091	2784	21.3

Table-2, shows the indications for C/S whether elective or emergency. The commonest indication for elective C/S was previous two scars (33%), followed by the presence of two or more risk factors (14.3%). While for emergency cases the table shows that abnormal presentation and lie was the commonest indication (27%), followed by the presence of two or more risk factors (20.3%).

Table 2. ***Indications for caesarean section***

Indication	Emergency		Elective	
	No.	%	No.	%
Failure to progress in 1st and 2nd stage	7	11.9	-	-
Pre-eclampsia	2	3.4	8	8.8
Foetal distress & decrease foetal movement	8	13.6	10	11.3
Placenta praevia	4	6.8	5	5.5
Abruptio-placenta	2	3.4	-	-
Previous two scars	5	8.5	30	33.0
Two or more risk factors	12	20.3	13	14.3
Abnormal presentation & lie	16	27.0	12	13.2
cephalo pelvic disproportion	3	5.1	7	7.7
Prolonged pregnancy	-	-	4	4.4
Others	-	-	2	2.2
Total	59	100.0	91	100.0

Type of birth & birth status

A relatively high percentage of newborns delivered by C/S required admission to the intensive care unit because of respiratory distress (21.3%) and 3 (2%) were still births.

DISCUSSION

The results of the present study showed that the incidence rate of CS in Basrah Maternity and Child Hospital has doubled over 7-year period. This is similar to the results of many other studies in many developed and developing countries.[1,2,10] In Scotland in the United Kingdom (UK), C/S rates increased from 5% to 20% in 30 years from 1971–2001; the overall UK rate also increased from just 4% to 20%–24 %.[11] The rate in the United States of America was similar at 23.5%.[12] In Sweden the incidence of C/S has increased more than 10-fold over the past three decades[2]. In India, during 1957-1998, the C/S rate in one maternity hospital has increased from 1.9% to 16% with the most significant rise over the past decade. [10] Similarly in Saudi Arabia, the obstetric unit of the Armed forces Hospital in Al-Riyadh reported that the incidence rate of C/S has increased from 7% in 1979 to 13% in 1998.[13] Another study in Saudi Arabia showed that C/S birth accounted for approximately 10% of all births reaching 20% in tertiary centers. [14] The reasons for the marked increase in the rate of C/S in Basrah and in many other countries have not been completely evaluated but among the possible explanations are: breeches which are now delivered by C/S; the decline in forceps deliveries; and repeat C/S. Other reasons which may have contributed to the increase in C/S rate in Basrah Maternity and Children Hospital were the impact of self financing policy and the referred cases from district hospitals and rural areas since it is the main obstetric hospital in Basrah governorate (tertiary referral center). In the present study the main indications for C/S were abnormal presentation and repeat C/S. Similarly a study in Jordan which looked at trends in the indications for C/S found that breech presentation and fetal distress increased significantly from 1990 to 2001 as indications for C/S.[15] Fetal distress became an important indication because intrapartum fetal heart monitoring may unnecessarily increased C/S rates due to incorrect interpretation of tracings and diagnosis of fetal distress. [16] While in USA repeat C/S is the commonest indication for C/S.[17] In conclusion, the results of the present and other studies suggest that the rate of C/S has increased steadily in Basrah and in many other countries.

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