

Caesarean sections at Queen Alia Military Hospital, Jordan: a six-year review

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العمليات القيصرية في مستشفى الملكة علياء العسكري بالأردن: عرض لخبرة ست سنوات
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خلاصة: على مدى ست سنوات بين أول آب/أغسطس 1991 وآخر تموز/يوليو 1997 أجريت في مستشفى الملكة علياء العسكري، بعثان، الأردن، 1339 عملية قيصرية من بين 17 392 من الولادات، أي بمعدل وقوع إجمالي قدره 7.7%. لقد كانت دواعي العمليات القيصرية متباينة. وكثيراً ما أولي اهتمام بالغ بما إذا كانت العملية متكررة أو تُجرى للمرة الأولى. إن الجهود الرامية إلى تجنب العمليات القيصرية غير الضرورية يجب أن تركز على تخفيض تواتر العمليات التي تُجرى للمرة الأولى.

ABSTRACT In the 6-year period from 1 August 1991 to 31 July 1997, at Queen Alia Military Hospital, Amman, Jordan, 1339 caesarean sections were performed out of a total 17 392 deliveries, representing an overall incidence of 7.7%. Indications for the caesarean sections were variable. Whether the operation was a primary or repeat procedure was often a major consideration. Efforts to prevent unnecessary caesarean sections should focus on reducing the frequency of first-time procedures.

Césariennes effectuées à l'Hôpital militaire Reine Alia en Jordanie: bilan de six années

RESUME Durant une période de 6 ans allant du 1^{er} août 1991 au 31 juillet 1997, 1339 interventions césariennes ont été réalisées à l'Hôpital militaire Reine Alia d'Amman (Jordanie) sur un total de 17 392 accouchements, ce qui représente une incidence globale de 7.7%. Les indications de la césarienne étaient variables. Le fait qu'il s'agisse d'une première intervention ou d'une césarienne itérative était souvent une considération majeure. Les efforts visant à éviter les césariennes inutiles devraient se concentrer sur la réduction de la fréquence des premières interventions.

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Introduction

While the global incidence of caesarean sections is unknown, it is clearly increasing [1]. The trend, first noticed in the United States (US) and Europe and now manifesting itself worldwide, has made it difficult to identify cases of caesarean sections performed unnecessarily, especially in economically underdeveloped and developing countries.

One factor contributing to the increase in industrialized countries is fear of litigation. Litigation concerning infant delivery has become a relatively common phenomenon in the US. US insurance companies now require much higher premiums of obstetricians compared with most other medical practitioners.

The purpose of this study was to review the caesarean sections performed at Queen Alia Military Hospital (QAMH) over a 6-year period.

Materials and methods

The records of all patients undergoing abdominal delivery at QAMH, Amman, Jor-

dan between 1 August 1991 and 31 July 1997 were analysed.

The ages and parity of the women, indications of the procedures, postoperative complications and perinatal mortality were recorded. The decision to undertake an abdominal delivery was in every case made by a specialist. The procedure itself was performed by specialists or by residents under the supervision of specialists. All operations performed during the period of the study were lower uterine segment caesarean sections. No classical caesarean sections were performed. The duration of hospital stay was a minimum of 3 days. All patients received three doses of postoperative prophylactic antibiotics.

Results

During the period of study, there were 17 392 deliveries at QAMH, of which 1339 were by caesarean section, an incidence of 7.7%. Of these 1339 patients, 1033 (77.15%) were multigravidae (parity range: 1-13). The remainder (306) were primigravidae. Table 1 shows the number of caesarean sections for individual years during

Table 1 Total infant deliveries by type and year, Queen Alia Military Hospital, 1991-97

Type	1991	1992	1993	1994	1995	1996	1997	Total
Normal	553	1761	2287	2633	2882	3079	1732	14 927
Caesarean	31	149	172	260	264	296	167	1339
%	4.8	7.1	6.5	8.3	7.9	8.3	8.5	7.7
Vacuum	34	101	66	120	95	78	25	519
Breech	10	46	36	49	48	45	12	246
Forceps	10	22	36	29	21	29	6	153
Twins	6	28	34	29	39	50	22	208
Total	644	2107	2631	3120	3349	3577	1964	17 392

Table 2 Association between maternal age, parity and number of caesarean sections, Queen Alia Military Hospital, 1991-97

Age (years)	No.	%	Parity	No.	%
≤20	122	9.1	Primipara	306	22.9
21-25	307	22.9	1-3	530	39.5
26-30	563	42.1	4-6	421	31.5
>31	347	25.9	>7	82	6.1
Total	1339		Total	1339	

the period of the study. Patients who had caesarean sections were categorized according to age and parity (Table 2). Most abdominal deliveries were performed on women in the age group 26-30 years, and those who were parity 1-3. There were 981 (73.3%) repeat caesarean sections (Ta-

ble 3). The indications for primary caesarean section are shown in Table 4, and overall indications for caesarean section in Table 5.

The total perinatal mortality rate for the duration of the study was approximately 17 per 1000, the main causes being prematurity, congenital abnormalities and infection. Although there were no maternal deaths during the period of the study, a number of maternal complications occurred following the operation (Table 6).

Discussion

The decline in maternal, and to a lesser extent fetal, mortality is mainly due to the tremendous impact that delivery by caesarean section has had on obstetrics. The procedure has, however, come to be abused. Many unnecessary operations are performed on a daily basis all over the world,

Table 3 Indications for repeat caesarean section, Queen Alia Military Hospital, 1991-97

Indication	No.	%
Failure to progress	182	18.6
Two or more caesarean sections previously	178	18.1
Fetal distress	163	16.6
Cephalopelvic disproportion	150	15.3
Antepartum haemorrhage	111	11.3
Failed induction of labour	55	5.6
Bad obstetric history	46	4.7
Breech presentation	29	3.0
Abnormal lie	26	2.7
Multiple pregnancy	17	1.7
Cord prolapse	12	1.2
Pre-eclampsia	12	1.2
Total	981	

Table 4 Indications for primary caesarean section, Queen Alia Military Hospital, 1991-97

Indication	No.	%
Failure to progress	69	19.3
Fetal distress	64	17.9
Antepartum haemorrhage	57	15.9
Cephalopelvic disproportion	57	15.9
Pre-eclampsia	29	8.1
Bad obstetric history/old primigravida	21	5.9
Failed induction of labour	19	5.3
Breech presentation	13	3.6
Abnormal lie	12	3.4
Multiple pregnancy	8	2.2
Cord prolapse	7	1.9
Eclampsia	2	0.6
Total	358	

Table 5 All indications for caesarean section, Queen Alia Military Hospital, 1991-97

Indication	No.	%
Failure to progress	251	18.8
Fetal distress	227	16.9
Antepartum haemorrhage	198	14.8
Two or more caesarean sections previously	178	13.3
Cephalopelvic disproportion	177	13.2
Failed induction of labour	74	5.5
Bad obstetric history/old primigravida	67	5.0
Breech presentation	42	3.1
Pre-eclampsia	41	3.1
Abnormal lie	38	2.8
Multiple pregnancy	25	1.9
Cord prolapse	19	1.4
Eclampsia	2	0.2
Total	1339	

Table 6 Maternal complications, Queen Alia Military Hospital, 1991-97

Maternal complication	No.	%
Atelectasis	228	17.0
Fever	121	9.0
Urinary tract infection	94	7.0
Respiratory tract infection	56	4.2
Wound infection	54	4.0
Blood transfusion	32	2.4
Deep vein thrombosis	13	1.0
Ruptured uterus	4	0.3
Caesarean hysterectomy	2	0.2
Pulmonary embolism	1	0.1

to a degree not often seen in other surgical procedures [2,3].

While the introduction of intrapartum monitoring has increased the proportion of caesarean sections compared to total deliveries — not only in Jordan but all over the world — the rise has not resulted in more favourable perinatal outcomes [2].

The indications for caesarean section are usually maternal, fetal or physician-related factors — or a mixture of the three. In our study, the most common indications were failure to progress, fetal distress and cephalopelvic disproportion. These findings agree with other recently published data [2,3]. Multiple pregnancy and breech presentation are additional factors contributing to the rise in abdominal deliveries [3] (a sad reflection, perhaps, on the “progress” of obstetrics) — although neither of them is an absolute indication. Each case should be thoroughly evaluated to determine the possibility for normal vaginal delivery.

Fetal macrosomia, a problem common to diabetic mothers, presents a dilemma as to the appropriate mode of delivery [4-6]. Expert, well-considered opinion should be sought, rather than taking the often more convenient option of exposing the mother to an unnecessary operation.

The routine use of prophylactic antibiotics is associated with fewer postoperative complications — especially in emergency procedures and high-risk patients [7].

If the patient has already had one caesarean section, most obstetricians are only too willing to perform an abdominal delivery at the first hint of a problem, an attitude that should be discouraged. Vaginal delivery following a previous caesarean section is *not* inappropriate, provided the reason for the previous section is not a recurrent one [8,9].

Lieberman et al., in a recently published study, noticed an increase in the number of males born by caesarean section compared with females [10]. Another recent study re-

ports an increased risk of lowered fertility, uncompleted pregnancy (ectopic pregnancy, possible miscarriage), complications in the next pregnancy (including placental complications), and health problems in the next infant [11].

Because of the previously mentioned tendency of obstetricians to almost auto-

matically decide for caesarean section if the patient's previous delivery was also by caesarean section, it will be difficult to substantially decrease the current high rate of repeat caesarean births. Preventive efforts should therefore be directed to decreasing the incidence of primary caesarean deliveries [12].

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