

Choice of contraception after previous operative delivery at a family planning clinic in Northern Nigeria

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ABSTRACT

Context: Effective contraceptive use is important after a caesarean or operative delivery because of the possible risks a woman may face in subsequent pregnancies.

Objectives: The objective of the present study was to determine the uptake and choices of contraception among women with previous operative delivery.

Materials and Methods: A retrospective study was conducted at the Barau Dikko Teaching Hospital from 1st January, 2000 to 31st March, 2014. Family planning cards were retrieved, and relevant information was collected and analyzed using the Statistical Package for Social Sciences version 15. Chi-square test was used as a test of association, with significance level established at a *P* value of < 0.05.

Results: Of the 5992 cards retrieved, 164 (2.7%) had previous operative delivery; 152 caesarean sections and 12 laparotomies for ruptured uterus. Only 17.7% initiated contraception within 6 months. More women were spacers (86.6%) rather than limiters (13.4%). Age, education, religion, parity, prior contraception, and interval from the last delivery were significantly associated with the current choice of contraception (*P* < 0.05), whereas breast feeding status was not (*P* > 0.05). Overall, when comparing the pattern among those with a previous operative delivery and those without, there was no significant difference between both the groups; injectables was the most popular method chosen followed by intrauterine devices, oral contraceptive pills, and implants.

Conclusion: Most women with a previous operative delivery were at risk of unwanted pregnancies because they did not initiate contraception within 6 months of their last delivery. Their preferred forms of contraception were injectables and intrauterine devices, which was not significantly different from the methods chosen by other women.

Key words: Contraception; family planning; northern Nigeria; previous caesarean; previous operative delivery.

Introduction

Caesarean section is one of the most common surgical procedures performed worldwide for various indications.^[1,2] Caesarean section rates have generally been on an increase worldwide.^[1] In Nigeria, the caesarean section rate (CSR) is variable. A previous study at the teaching hospital in Zaria estimated the overall CSR to be 11.94% and primary CSR as

8.71%.^[1] Higher rates have been quoted in other parts of the country; in Enugu, CSR has been reported to be 27.6%,^[3] in Oshogbo 35.5%^[2] and in Maiduguri 11.8%.^[4]

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How to cite this article: Mohammed-Durosinlorun A, Adze J, Bature S, Mohammed C, Taingson M, Abubakar A, *et al.* Choice of contraception after previous operative delivery at a family planning clinic in Northern Nigeria. Trop J Obstet Gynaecol 2016;33:238-42.

Access this article online	
Website: www.tjogonline.com	Quick Response Code 
DOI: 10.4103/0189-5117.192236	

Caesarean sections are now much safer than they were in the past due to several reasons such as better antibiotic cover, safe anaesthesia, and blood transfusion practices. Nevertheless, it still carries a higher maternal/perinatal morbidity and mortality than vaginal delivery.^[1] Complications may also occur in subsequent deliveries as a result of previous surgery and have a negative impact.^[1,5] A woman with a previous caesarean is more likely to have a repeat caesarean in the presence of other complications.^[6] Repeated caesarean sections may be associated with adhesions and a higher risk of damage to the bladder, ureters or bowel, and is associated with placenta praevia, placental invasion into the myometrium and peripartum hysterectomy.^[7] Mortality rates increase from 8 per 100,000 deliveries with the first caesarean delivery to 39 per 100,000 deliveries with the fourth caesarean delivery.^[7]

In the Nigerian context, a woman with a previous caesarean may be faced with additional dangers due to the societal pressures to prove her womanhood by having a vaginal birth. Hence, despite being at higher risk for complications, she may still attempt vaginal delivery outside the health care facility.^[1,5]

The World Health Organization (WHO) recommends a birth-to-pregnancy interval of at least 24 months to reduce the risk of adverse maternal, perinatal, and infant outcomes.^[8] A delivery less than 2 years from previous caesarean birth is one of the factors associated with a decreased likelihood of a successful vaginal birth after caesarean (VBAC). Therefore, the use of effective contraception is important after a caesarean, and the contact with health personnel during the caesarean should ideally involve adequate counseling and should be an additional motivation for contraceptive uptake.

With the general low contraceptive usage in the country, this study was conducted to determine the uptake and choices of contraception by women who have had a previous caesarean section in this setting, as well as factors that may contribute to their choice of contraception.

Materials and Methods

This was a retrospective study conducted at the Barau Dikko Teaching Hospital (BDTH), a 240-bed secondary/tertiary care hospital located in Kaduna and catering to the metropolis and its environs. We retrieved all available client cards from the family planning clinic from 1st January, 2000 to 31st March, 2014. Information was collected on demographics, reproductive and contraceptive history. Data of a subset of women with previous operative delivery were extracted. Approval for the study was obtained from the Kaduna state ministry of health. There was little or no risk to clients whose

information was kept confidential. Data was analyzed using the Statistical Package for Social Sciences version 22 (IBM SPSS statistics 22.0). Missing responses were stated as such and excluded from analysis. Chi-square was used as a test of association, with significance level established at a *P* value of <0.05.

Results

A total of 5992 case files were retrieved within the study period, but only 164 (2.7%) had a past history of operative delivery; 152 were previous caesarean sections and 12 were laparotomies for ruptured uterus.

As shown in Table 1, analysis of the subset of women with a past history of operative delivery revealed that all women were married, majority were between the ages of 20 and 34 years (80.5%), however, all 12 women with a previous ruptured uterus were aged between 25 and 29 years of age. Table 1 also shows that a majority of women had completed their secondary education (70.7%), were of lower parity (less than 4 deliveries) and were Muslims (51.8%). Approximately 58.5% of women were currently breastfeeding and only 17.7% initiated contraception within 6 months of their last delivery. More of the women were spacers (86.6%) rather than limiters (13.4%).

Table 1 also shows that 49 women (29.9%) had used contraception in the past, which were most commonly oral contraceptive pills. However, their current choice of contraception was most commonly the injectable methods (48.2%). A high percentage of women were also using intrauterine devices (37.2%). There was no record of condom use or use of permanent methods of contraception.

As shown in Table 2, age, education, religion, parity, prior contraception and interval from last delivery were significantly associated with the current choice of contraception in this subset of women with previous operative delivery (*P* < 0.05), whereas breast feeding status was not (*P* > 0.05). Younger women preferred to use oral contraceptive pills and injectables whereas older women preferred intrauterine devices. The higher the educational status, the higher the likelihood of contraceptive use, most commonly injectables followed by intrauterine devices. Less educated women preferred to use oral contraceptive pills. Muslims were more likely to use injectables whereas Christians were more likely to use intrauterine devices. Those of lower parity were more likely to use injectables whereas those of higher parity were more likely to use intrauterine devices. Only those using injectable methods of contraception were more likely to initiate contraception

Table 1: Demographic characteristics of family planning clients with previous operative delivery

Variable	Frequency	%
Age		
<20	8	4.9
20-24	34	20.7
25-29	38	23.2
30-34	60	36.6
35-39	10	6.1
40-44	14	8.5
45-49	0	0
≥50	0	0
Education		
None	8	4.9
Some primary	5	3
Completed primary	13	7.9
Some secondary	22	13.4
Completed secondary or more	116	70.7
Religion		
Islam	85	51.8
Christianity	79	48.2
Others	0	0
Parity		
1-2	94	57.3
3-4	53	32.3
>4	9	5.5
Missing	8	4.9
Currently breastfeeding		
Yes	96	58.5
No	47	28.7
Missing	21	12.8
Last pregnancy ended		
<6 months	29	17.7
6-15 months	110	67.1
>15 months	25	15.2
Reason for contraception		
limiters	22	13.4
Spacers	142	86.6
Prior contraception		
Oral contraceptive pills	19	11.6
Injectables	16	9.8
Intrauterine devices	14	8.5
Implants	0	0
Missing	115	70.1
Current contraceptive choice		
Oral contraceptive pills	21	12.8
Injectables	79	48.2
Intrauterine devices	61	37.2
Implants	3	1.8
Missing	0	0
Total	164	100

within 6 months of their last delivery. Those who had used prior contraception were more likely to choose intrauterine devices as their current method.

Overall, when comparing the pattern among those with a previous operative delivery and those without, there was no significant difference among both groups [Table 3]; injectables was the most popular method chosen followed by intrauterine devices, oral contraceptive pills and implants.

Discussion

Number of women seen at the family planning clinic with a past history of operative delivery (2.7%) was low. This is despite higher caesarean rates in the country.^[1-4] BDTH is a tertiary center, and family planning services are available at the primary and secondary healthcare centers. Hence, while women may have caesarean section at secondary/tertiary healthcare centers, they can access family planning care at lower level facilities. Table 1 shows the demographic characteristic of the clients with previous operative delivery, and Table 2 compares these and other factors with their contraceptive choices. Age, education, religion, parity, when last pregnancy ended and prior use of contraception significantly affected the choice of contraception whereas breast feeding did not. Majority were in the age group of 20–34 years (80.5%), which is within the reproductive age when most women get pregnant and may want to delay pregnancy. Most had been educated up to the secondary level (70.7%); a positive correlation between increasing education and higher uptake of contraception is well documented.^[9-11] Educated women are more likely to be aware of as well as accept contraceptive services and understand its benefits by dispelling myths.

Most of the women in this study with previous operative delivery were of lower parity (less than 4 deliveries). Perhaps those of higher parity may have opted for sterilization during caesarean section. There are no specific guidelines for choice or contraindication to use of different contraceptive methods in women with previous operative deliveries. More women (58.5%) were breastfeeding, and exclusive breastfeeding can be used as a reliable form of contraception within the first 6 months postpartum.^[12] However, only 17.7% of these women sought contraception within 6 months of their last delivery. This puts them at a high risk of unwanted pregnancies. Though abortion with a previous caesarean in early pregnancy is fairly safe except for a risk of uterine rupture^[13] it is still illegal in Nigeria. The usual concerns and contraindications in the immediate postpartum period, especially for hormonal contraception before lactation is established, also apply for women with previous caesarean birth.^[12] More women changed their preferred method of contraception from oral contraceptive pills to injectable methods after operative delivery but there was also an increased use of intrauterine

Table 2: Cross tabulations of demographic factors of clients and their contraceptive choice

Variable	Oral contraceptive pills	Injectables	Implants	Intrauterine devices
Age (n=164)				
<20	3	0	0	0
20-24	13	21	0	0
25-29	0	30	3	5
30-34	0	28	0	32
35-39	0	0	0	10
40-44	0	0	0	14
Chi square 165.638, degree of freedom 15, P value 0.000				
Education (n=164)				
None	8	0	0	0
Some primary	0	0	0	5
Completed primary	13	0	0	0
Some secondary	0	22	0	0
Completed secondary or more	0	57	3	56
Chi square 194.182, degree of freedom 12, P value 0.000				
Religion (n=164)				
Islam	8	51	3	23
Christianity	13	28	0	38
(Chi square 14.375, degree of freedom 3, P value 0.002)				
Parity (n=156)				
1-2	13	51	3	27
3-4	0	28	0	25
>4	0	0	0	9
Chi square 27.411, degree of freedom 6, P value 0.000				
Breastfeeding (n=143)				
Yes		44	3	41
No	8	27	0	20
Chi square 6.243, degree of freedom 3, P value 0.100				
Interval from last delivery (n=164)				
<6 months				
6-15 months	1	23	3	0
>15 months	20	54	0	36
Chi square 80.294, degree of freedom 6, P value 0.000				
Prior contraception (n=49)				
Oral contraceptive pills	-			
Injectables	-	-	0	19
Intrauterine devices	-	-	3	13
Chi square 6.591, degree of freedom 2, P value 0.037				

Table 3: Comparison of patterns of contraception among those with a previous operative delivery and those without

Previous operative delivery?	Oral contraceptive pills	Injectables	Implants	Intrauterine devices	Total
No (row %)	652 (12.4%)	2344 (44.6%)	220 (4.2%)	2035 (38.8%)	5251 (100%)
Yes (row %)	21 (12.8%)	78 (48.2%)	3 (1.8%)	61 (37.2%)	164 (100%)
(Chi square 2.714, degree of freedom 3, P value 0.438)					

devices. However, intrauterine devices can be inserted even at the time of a caesarean delivery and are safe and effective, but is associated with higher perforation and expulsion rates.^[14] While this method is still safe and may have been ideal for women, especially as most women in this environment are lost to follow up and majority of caesarean sections done

in this part of the world are emergencies;^[1] hence, women may not have received adequate counselling to consent to intraoperative insertion of intrauterine devices.

Overall, the preferred form of contraception among women with a previous operative delivery was the "injectables;" most

commonly Depot provera (DMPA) and Noristerat. There were no significant differences between the methods of contraception chosen by women with a previous operative delivery and those without. National surveys and those done in Zaria and Kano show that injectable contraception was the most commonly accepted method of contraception, which is consistent with our finding.^[15-18] Injectable methods of contraception are effective, do not require daily dosing and in our environment, are not very obvious to a potentially disapproving spouse.^[12]

Conclusion and Recommendations

Most women with a previous operative delivery were at risk of unwanted pregnancies because they did not initiate contraception after 6 months of their last delivery. Their preferred forms of contraception were injectables and intrauterine devices, which was not significantly different from methods chosen by other women. To increase the uptake of intrauterine devices during caesarean, awareness and training need to be increased. Better counseling and specific guidelines needs to be developed for this subset of women in view of possible complications that they may face in future pregnancies. Prospective and qualitative studies may help further explore the findings.

Limitations of the study

While the overall sample was large, the subset of women with previous operative delivery is small, which may reduce the power and generalizability of the study. The study had a cross-sectional retrospective design, some variables were missing and others cannot be fully explored. The number and timing of previous cesareans were not stated.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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