

# **A Prospective Study of Abortions and its Complications at Prasuti Griha (Maternity Hospital), Kathmandu**

**15<sup>th</sup> Baisakh-14<sup>th</sup> Kartik 2056  
(28<sup>th</sup> April-31<sup>st</sup> October 1999)**

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## EXECUTIVE SUMMARY

This is a prospective study of abortion and its complications among patients admitted at Prasuti Griha (Maternity Hospital, Kathmandu) during the 6 month period from 15<sup>th</sup> Baisakh to 14<sup>th</sup> Kartik, 2056 (28<sup>th</sup> April to 31<sup>st</sup> October, 1999).

Out of 1652 patients admitted for gynaecological problems, 729 (44.1%) showed features of abortion and its complication. Since 60 patients turned out to be threatened abortions, they were sent home with pregnancy in progress. Among the remaining 669 patients (40.5% of all the gynaecological cases), 633 patients (94.6%) had spontaneous abortion and 36 patients (5.4%) had induced abortions. Various characteristics of 669 abortion patients were analysed and reported here. Out of 669 patients with abortion, 617 patients (92.2%) required postabortion care (PAC).

The major factors associated with abortion cases were low literacy, low socio-economic status and lack of awareness on family planning. Having too many children (75.0%) and short birth interval (8.3%) are two other major factors associated with induced abortion. Almost 41.6% of the induced abortions were performed by traditional birth attendants, 30.6% by doctors, and 27.8% by nurses and paramedicals. The methods used for inducing abortions were dilatation and curettage in 50.0%, application of foreign bodies in 33.3% and others in 16.7%. Of these, 3 patients developed major complications requiring two laparotomies and one hysterectomy. However, there was no maternal mortality due to abortion during this study period.

Based on the findings of the study, it is highly recommended that family planning awareness and knowledge to prevent unwanted pregnancies should be increased to prevent induced abortions.

Postabortion care services should be available and decentralized at all levels of health care systems.

Training of all the categories of health care providers should be done for postabortion care service (PAC).

This type of study should be carried out throughout Nepal to find out the prevalence of induced abortion and to prevent serious complications and death due to unsafe abortion.

## Introduction

Maternal mortality is the leading cause of death among women of reproductive age (15–49 years) in the developing countries. It has been estimated that 15–30% of the maternal mortality can be attributed to the complications of incomplete spontaneous or septic abortions. However, proper data on maternal deaths due to legal or illegal abortions in Nepal are limited.

According to World Health Organization (WHO),<sup>(1,2)</sup> 10–15% of pregnancy related maternal deaths are due to abortions only, while in some countries it goes up to 50%. WHO estimates that world wide, 20 millions unsafe abortions occur each year and 70,000 women die each year as a result of various complications following unsafe abortions. In fact, 1 in 8 pregnancy related deaths are due to unsafe abortion<sup>(3)</sup>

Nepal is one of the least developed countries where the latest reported maternal mortality rate is 539/100,000 live births<sup>(4)</sup>, which is one of the highest in the world.

Since abortion is still illegal in Nepal, most of the women have no access to safe abortion. Thus, death due to the unsafe abortion is still a major public health problem in Nepal, besides this, socio-economic and other factors have found to be related to abortions in Nepal<sup>(5)</sup>.

About 1400 women attend the Maternity Hospital, Kathmandu (Prasuti Griha, Thapathali) for the treatment of complications of incomplete abortion annually<sup>(6)</sup> and they are treated either by manual vacuum aspiration or by dilatation and curettage method. This present hospital based study on abortion at Prasuti Griha the largest maternity hospital of Nepal, with nearly 15000 deliveries per year is carried out with a view to identify the factors related to abortions both spontaneous and induced.

Abortion has been observed as one of the common problems among patients attending Prasuti Griha, Maternity Hospital. Out of 3868, total gynecological admissions in the year 1998, 1645 i.e. 42.5%<sup>(7)</sup> patients were admitted for abortion and its complications. A good proportion of these cases were due to induced abortions.

Septic abortion is one of the leading causes of maternal deaths as observed at Prasuti Griha, Since majority of the women attending this hospital come from low socio-economic status, a detailed study of abortion cases attending this hospital would help in identifying factors related to abortions in Nepal.

## Objectives of the study

The main objectives of the study are to find out :

- ◆ the proportion of abortion cases among the patients admitted for gynaecological problems
- ◆ the factors related to spontaneous and induced abortion and its complications
- ◆ the methods of management of abortion cases
- ◆ the type of family planning methods acceptance

## **Materials and Methods**

- ◆ All abortion cases attending Prasuti Griha during the six months period from 15<sup>th</sup> Baisakh 2056 to 14<sup>th</sup> Kartik 2056 (28<sup>th</sup> April 1999 - 31<sup>st</sup> October 1999) were included in this study
- ◆ Informations including the methods of management of abortion and type of family planning acceptance were taken in detail
- ◆ All these findings were analysed.

# Results

During the 6 months period of study, 729 patients were admitted with history and clinical features of abortions. 60 patients later on turned out to be only threatened abortions and sent home in good condition. Out of remaining 669 patients, 633 patients had spontaneous and 36 patients had induced abortions. The number of abortion complication cases represent 40.5% of all gynaecological cases admitted during the period. The details are given in Table 1

Table 1: Distribution of gynaecological and abortion cases admitted in the 6 months period.

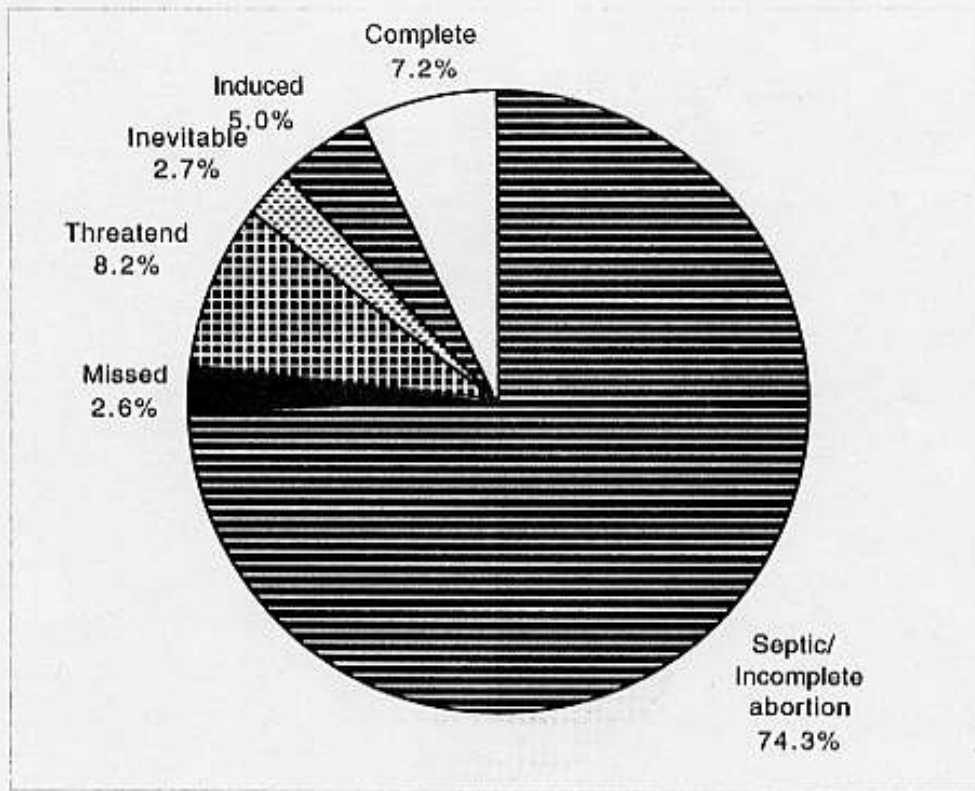
Total number of gynaecological cases	1652
Suspected total number of abortion or its complication cases	729
Total number of threatened abortion	60
Total number of abortion complication cases	669
Total number of spontaneous abortion	633
Total number of induced abortion	36
Total number of post abortion care cases	617

Total number of abortion complication cases-669 i.e. 40.5% of all the gynaecological patients. Out of 669 patients with abortions 617 patients (92.2%) required postabortion care service



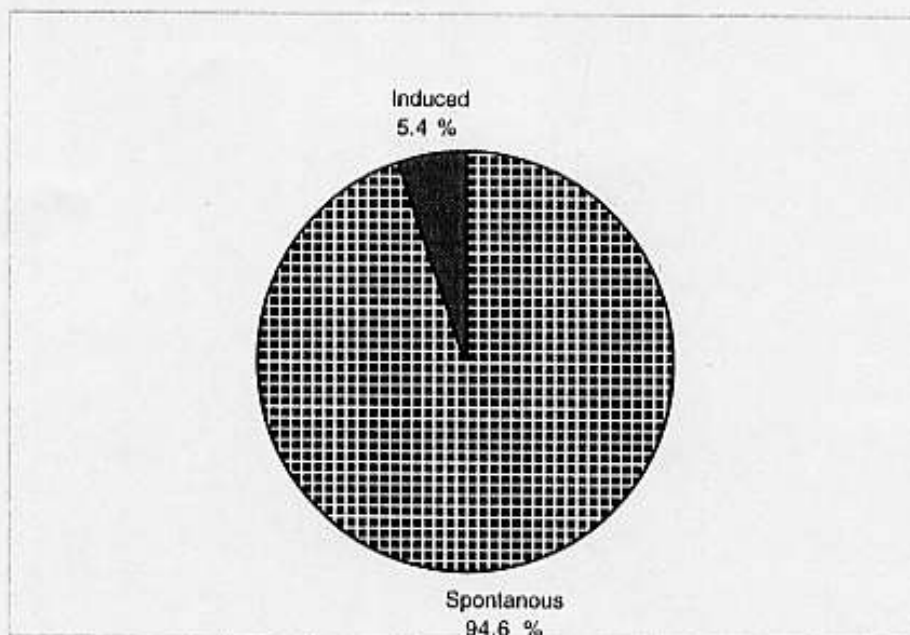
74.3% constituted septic/ incomplete abortion whereas 5.4% were induced abortion and 8.2% were threatened abortion. The details are shown in Figure 1

Figure 1: Distribution of 729 abortion cases by provisional diagnosis at admission



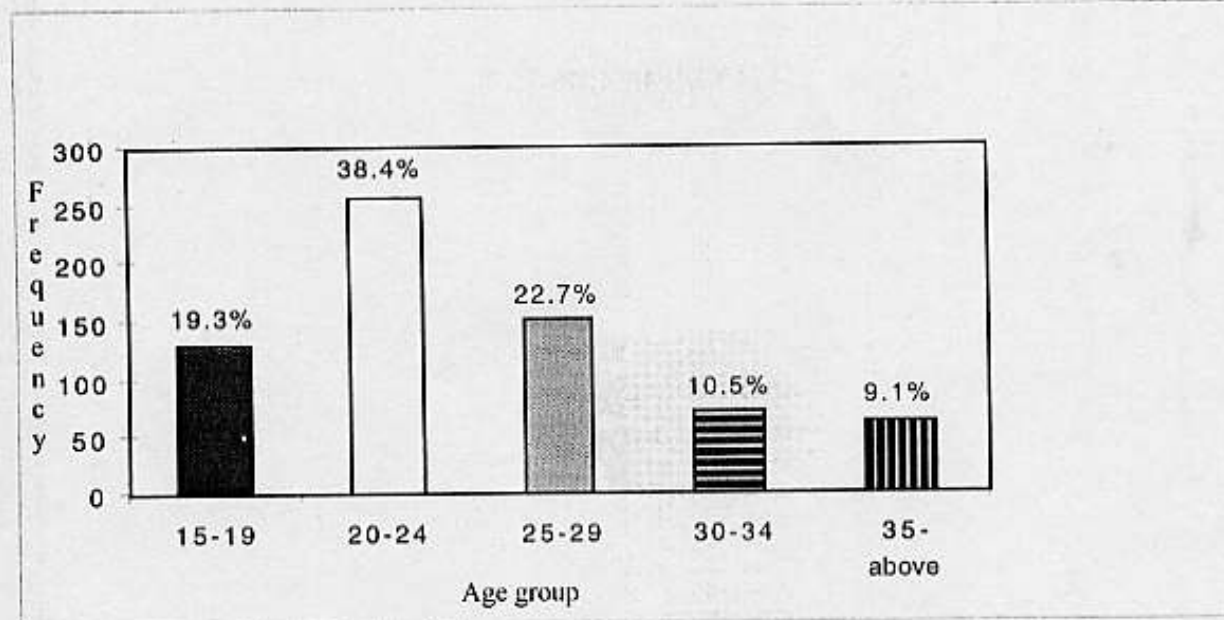
Out of 669 cases, 633 (94.6%) were spontaneous abortion, whereas 36 (5.4%) were induced abortion. The details are shown in Figure 2

Figure 2 : Distribution of 669 cases of abortion by type



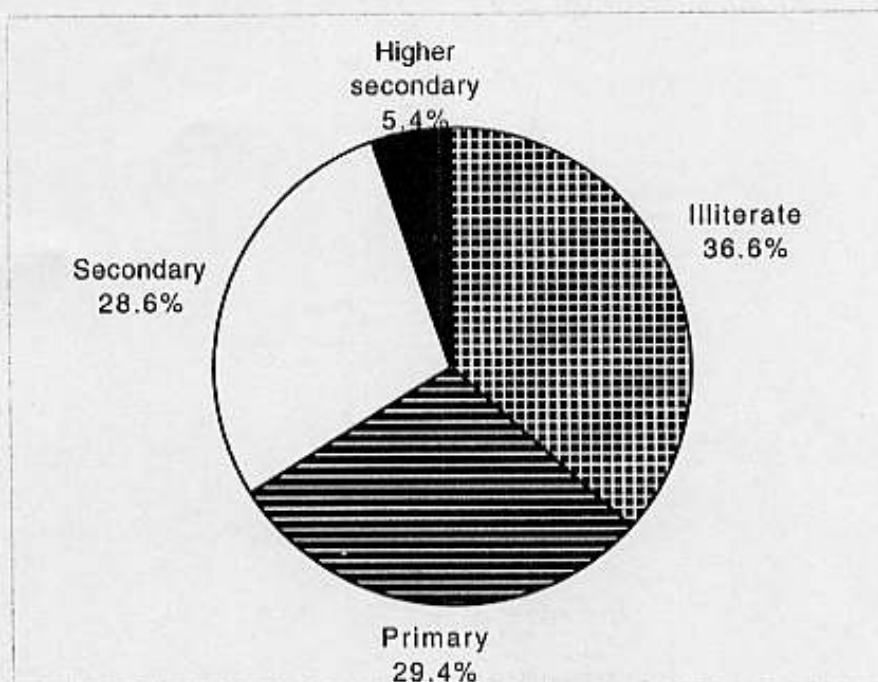
The majority of abortion patients (38.4%), as expected were in the age group of 20-24 year although significant proportion of abortions (19.3%) were in the age group of 15-19 years. The details are shown in Figure 3

Figure : 3 Distribution by age (Total 669)



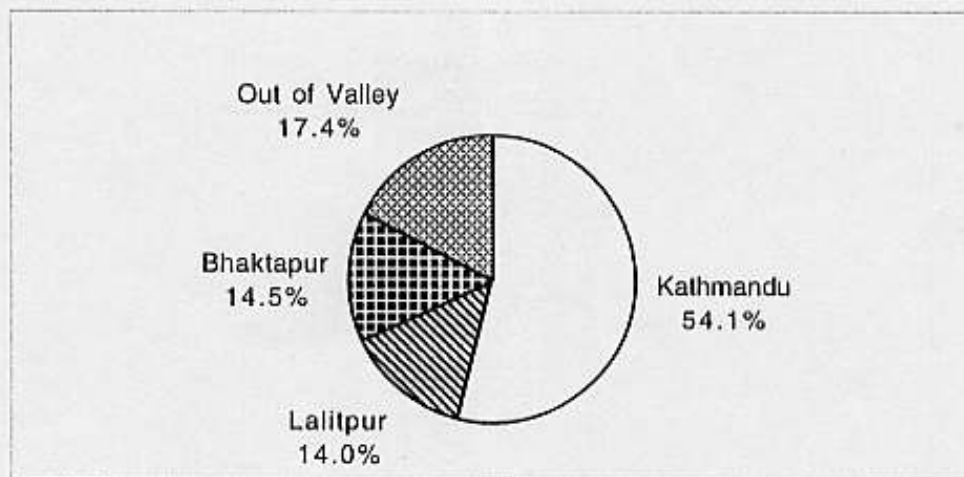
36.6% was found to be illiterate; 29.4 % had primary level; 28.6% secondary level and 5.4% higher secondary level of education. The details are shown in Figure 4

Figure 4 : Distribution by level of education (Total 669)



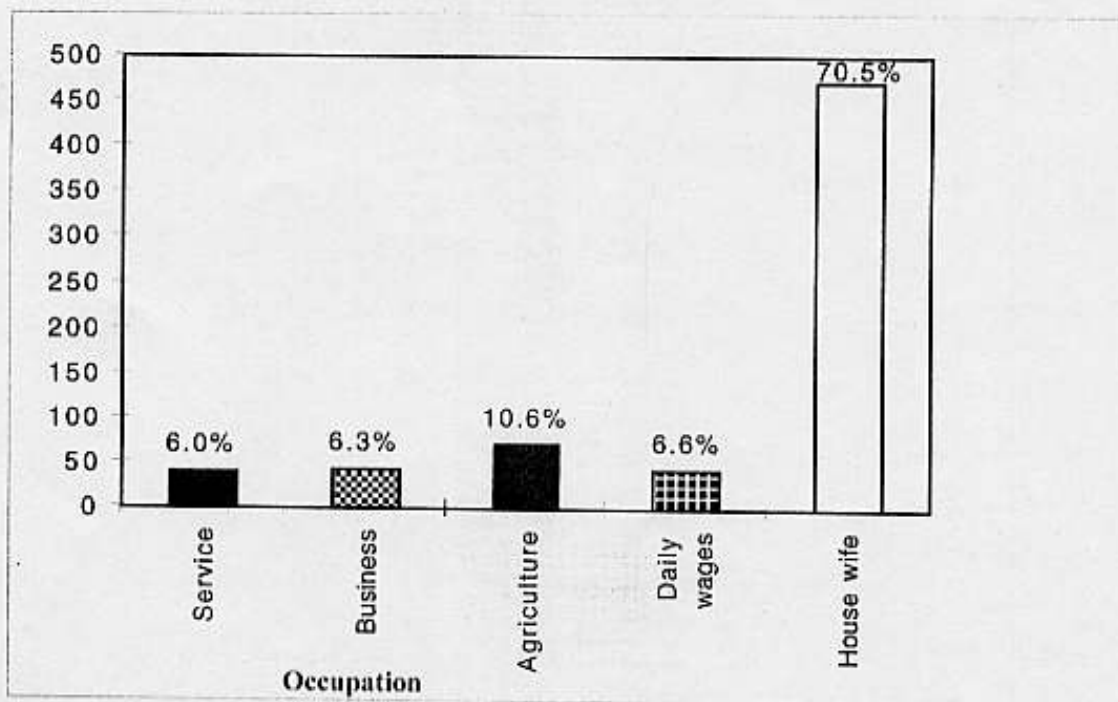
Over half of the cases were from Kathmandu, nearly one sixth of the patients i.e. 17.4% from out side valley, the rest are from Lalitpur and Bhaktapur. The details are shown in Figure 5

Figure 5 : Distribution by address (Total 669)



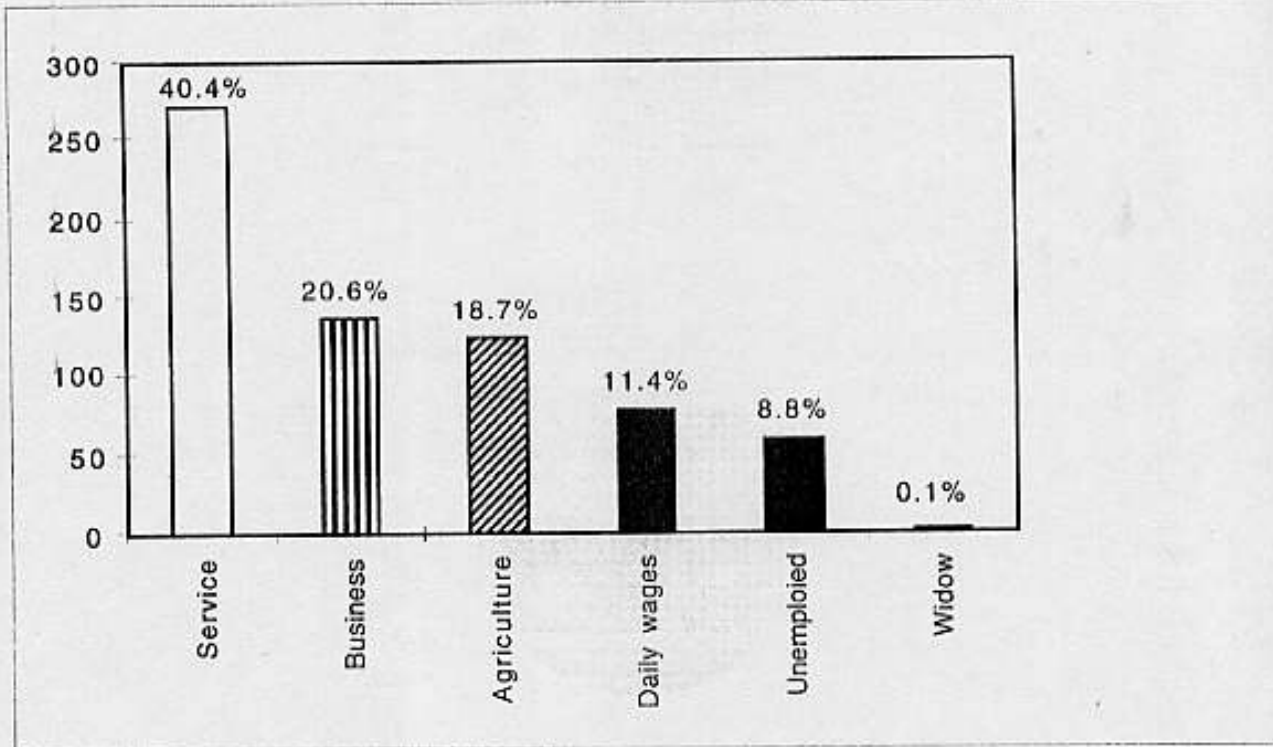
Majority of the patients with abortion during the study period were house wives, agriculture workers farmed the second largest group. The details are shown in Figure 6

Figure 6 : Distribution by women's occupation (Total 669)



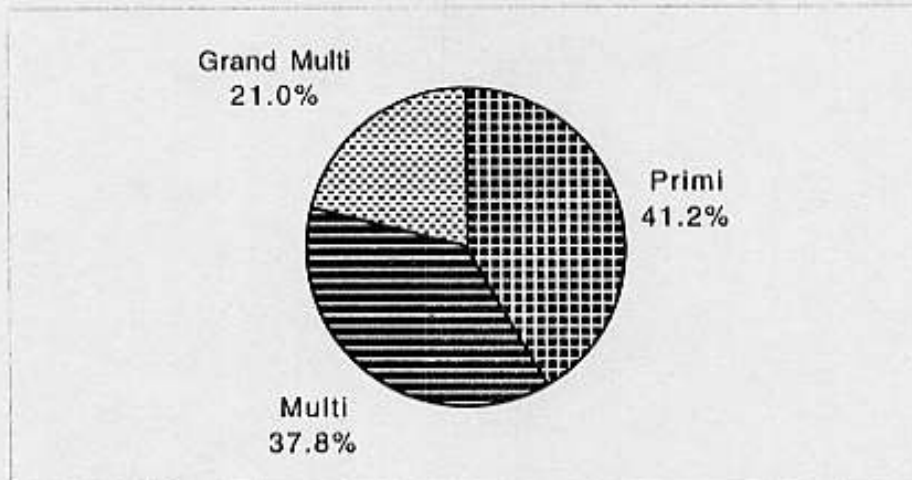
40.4% husband were service holder whereas 20.6% were business men. The details are shown in Figure 7

Figure 7 : Distribution by husband's occupation (Total 669)



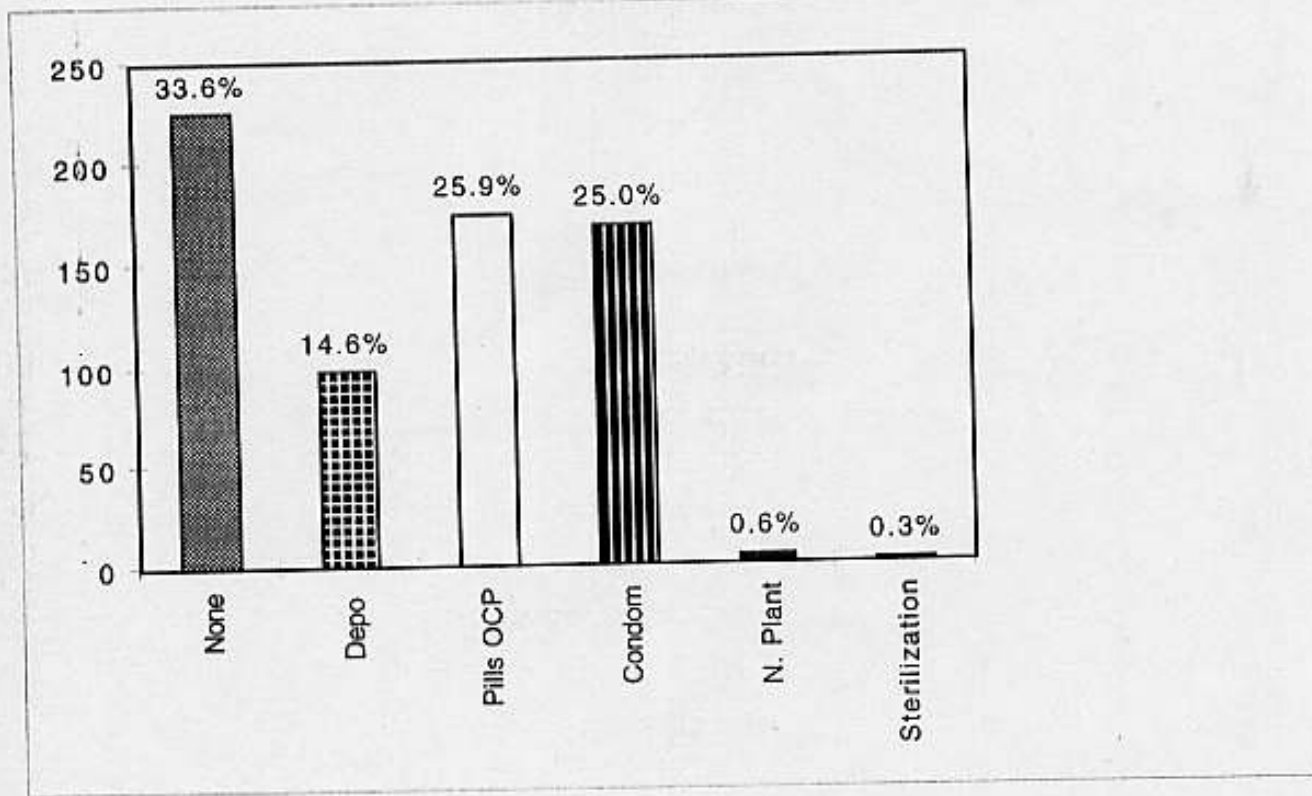
41.2% patients were primi para whereas 21.0% were grand multi. It is shown in Figure 8

Figure 8 : Distribution by parity (Total 669)



33.6% patients did not have any family planning methods whereas 25.8% have oral contraceptive pills and 0.5% have Norplant insertion.

Figure 9 : Distribution by family planning (Total 669)



444 patients (66.4%) had family planning methods and 225 (33.6%) had not used any family planning methods It is shown in Table 2

Table 2 : Distribution of 669 patients by acceptance of family planning methods.

Family planning methods	No	%
Family planning methods	444	66.4
Not used family planning methods	225	33.6
Total	669	100.0

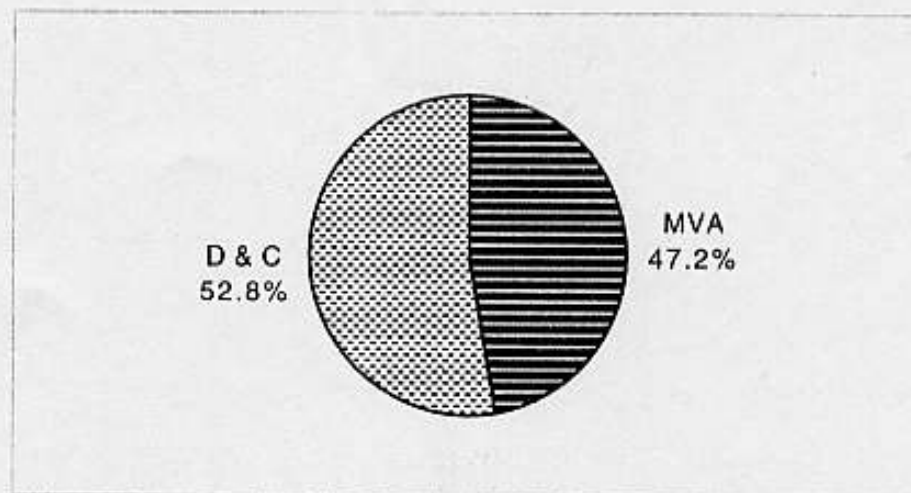
375 patients (84.5%) have family planning methods following manual vacuum aspiration (MVA) whereas 69 patients (15.5%) have not used any family planning methods. The details are shown in Table 3

Table 3 : Distribution of 444 patients (66.3%) of all abortion complication cases 669 by acceptance of family planning methods.

Procedure followed by family planning	Number	%
Manual vacuum Aspiration (MVA)	375	84.5
Dilatation and Curettage (D and C)	69	15.5
Total	444	100.0

326 (52.8%) including 20 induced patients were managed by dilation and curettage (D and C) whereas 291 (47.2 %) including 16 induced patients were managed by Manual Vacuum Aspiration (MVA). The details are shown in Figure 10

Figure 10 : Distribution of 617 post abortion care cases by the type of management.



19 patients (77.6%) have no medical illness although 127 patients(19.0%) were naemic. The details are shown in Table 4

Table 4 : Distribution of patients by medical illness (Total 669)

Medical Illness	Number	%
None	519	77.6
Chest Infection	10	1.5
Anaemia	127	19.0
Heart disease	-	-
Renal disease	1	0.1
Other	12	1.8
Total	669	100.0

499 patients (74.6%) have uterine size up to 12 weeks. The details are shown in Table 5

Table 5 : Distribution by uterus size (Total 669)

Uterus Size	Number	%
Up to 6 Weeks	155	23.2
7-12 Weeks	344	51.4
13 above	170	25.4
Total	669	100.0

473(70.7%) patients did not have ultrasonogram examination whereas 196 (29.3%) patients had ultrasonogram examination. It is shown in Table 6

Table 6 : Distribution by USG (Total 669)

USG	Number	%
Yes	196	29.3
No	473	70.7
Total	669	100.0

169 patients (25.3%) were not anaemic whereas 22 patients (3.3%) were severely anaemic and 52 patients (7.8 %) did not have any haemoglobin examination. The details are shown in Table 7

Table 7 : Distribution of 669 patients by hemoglobin level

<b>Hemoglobin Level / gm %</b>	<b>Number</b>	<b>%</b>
11 and above	169	25.3
8 - <11	352	52.6
>5 - <8	74	11.0
5 and < 5	22	3.3
Not done	52	7.8
<b>Total</b>	<b>669</b>	<b>100.0</b>

624 patients (93.3%) have no blood transfusion and 45 patients (6.7%) have blood transfusion. It is shown in Table 8

Table 8 : Distribution of 669 patients by blood transfusion

<b>Blood Transfusion</b>	<b>Number</b>	<b>%</b>
Yes	45	6.7
No	624	93.3
<b>Total</b>	<b>669</b>	<b>100.0</b>

230 patients (34.4%) discharged within 24 hours, whereas 181 patients (27.0%) discharged after 3 days . The details are shown in Table 9

Table 9 : Distribution of 669 patients by duration of stay

<b>Duration of stay</b>	<b>Number</b>	<b>%</b>
1 day	230	34.4
2 days	258	38.6
3 days	181	27.0
<b>Total</b>	<b>669</b>	<b>100.0</b>



104 patients (15.5%) had history of complications in previous pregnancy.

Table 10 : Showing complications observed in previous pregnancy (Total 104)

Previous Pregnancy	Number	%
Still birth	20	3.0
Neonatal death	28	4.2
Abortion	51	7.6
Premature birth	5	0.7
Total	104	15.5

453 patients (67.8%) were Brahmin, Chhetri and Newar with almost equal numbers of distribution. The details are shown in Table 11

Table 11 : Distribution by ethnic group (Total 669)

Ethnic Group	Number	%
Brahmin	152	22.7
Chhetri	153	23.0
Newar	148	22.1
Tamang	30	4.5
Magar	29	4.3
Rai	21	3.1
Other	136	20.3
Total	669	100.0

456 patients (68.1%) did not have any check up during whereas 39 patients (5.8%) have antenatal check up of more than 3 times. The details are shown in Table 12

Table 12: Distribution by ANC (Total 669)

ANC	Number	%
Nil	456	68.1
1 to 2	174	26.0
3 to 7	39	5.8
Total	669	100.0

2/3 of the patients belonged to social class III, (7.0%) of the patients belonged to social class I. The details are shown in Table 13

Table 13 : Distribution by social class (Total 669)

Social Class	Number	%
I	47	7.0
II	167	25.0
III	455	68.0
Total	669	100.0

### Referral of the patients

#### **I. Referred from other health institutions**

Table 14 : Showing 19 patients (2.7%) referred from other health institution

Health institution	Number	%
Other hospital	13	1.9
Police hospital	1	0.1
Health post	1	0.1
Private clinic	4	0.6
Total	19	2.7

#### **II. Referred to other health institution**

One patient was referred to Infectious Disease Hospital, Teku because of development of jaundice

## Analysis of induced abortion :

Total number of induced abortion cases - 36 i.e. 5.4% of all abortion cases

15 patients (41.6%) had induced abortion by nurses and paramedicals whereas 11 patients (30.6%) by doctors, and 10 patients (27.8%) by traditional birth attendants (TBA) It is shown in Table 15

Table 15 : Distribution of induced abortion cases by type of personnel who performed (Total 36)

Done by	Number	%
Doctor	11	30.6
Nurse	8	22.2
Paramedical	7	19.4
Sudeni (TBA)	10	27.8
Total	36	100.0

18 patients (50.0%) had dilatation and curettage for inducing abortion and 12 patients (33.3%) had foreign body insertion. The details are shown in Table 16

Table 16 : Showing method used for inducing abortion (Total 36)

Methods	Number	%
Dilatation and curettage (D and C)	18	50.0
Foreign body	12	33.3
Oral medicine	6	16.7
Total	36	100.0

Majority of the patients (75.0%) gave the reason of having too many children for inducing abortion and 3 patients (8.3%) gave reason of having small babies. The details are shown in Table 17.

Table 17 : Reasons given for induced abortion (Total 36)

Reasons	Number	%
Too many children	27	75.0
Small baby	3	8.3
Widow	2	5.6
Health reason	1	2.8
Husband left	2	5.6
To continue study	1	2.7
Total	36	100.0

### **Major complications**

3 patients developed major complications requiring laparotomy in 2 patients and hysterectomy in one patient.

One patient developed peritoneal abscess following insertion of a foreign body by a 'sudeni' (TBA) for inducing abortion. Laparotomy was done and peritoneal abscess was drained.

Another patient showed features peritonitis following dilatation and curettage by a doctor. Laparotomy with bilateral tube ligation was performed.

Third patient required hysterectomy for complications due to insertion of a foreign body for inducing abortion.

## Discussion

Abortion is a major health problem among women of reproductive age. In our present study at the Maternity Hospital, 729 patients were admitted as abortion complication cases on the basis of clinical features. Excluding 60 threatened abortion patients, who were sent home in good condition, there were a total of 669 abortion and its complication cases which constituted 40.5% of 1652 total gynaecological cases admitted during the study period.

It was observed that, the main factors related to abortion were among women of low literacy, low socio-economical status with too many children and lack of proper awareness about family planning methods.

Among the total 36 cases of induced abortions, 15 abortions (41.6%) were induced by nurses and paramedicals, 11 abortions (30.6%) by doctors and 10 abortions (27.8%) by the traditional birth attendants (TBA). The main reasons for induced abortion were for having too many children (75%) and short birth interval (8%). The methods of induction were by traditional dilatation and curettage (D&C) in 18 cases (50%), insertion of a foreign body in 33.3% while 6 abortions (16.7%) were induced by oral medicine. Among the total 617 post abortion care patients, 291 (47.2%) including 16 induced abortion cases were managed by Manual Vacuum Aspiration (MVA), whereas 326 (52.8%) including 20 induced abortion cases were managed by dilatation and curettage operation (D&C).

Interestingly the morbidity due to abortion has been low in this study. Only 6.7% of these cases required blood transfusion and 0.4% required major surgical intervention like hysterotomy and hysterectomy.

While 76% of abortion cases managed by MVA had family planning counseling and methods, only 34% of abortion cases after D&C had such counseling due to lack of proper provision of family planning counseling and methods in the operation theatre.

However, it was noteworthy that no maternal death was observed during this study, although abortion has been reported to cause 1/3 to 1/2 of the maternal deaths in Nepal.

## Conclusions

- In the six month period of study, out of a total of 1652 gynaecological patients 669 patient were treated for abortion and its complications at Prasuti Griha, Kathmandu, out of 669 abortion cases, 94.6% were spontaneous and 5.4 % were induced abortions.
- The major factors associated with spontaneous and induced abortions were illiteracy, low socio-economic condition and lack of awareness about family planning methods.
- Majority of induced abortion (72.2%) were performed by nurses or doctors and the rest by traditional birth attendants.
- Majority of induced abortions were performed by dilatation and curettage and nearly 1/3 of induced abortions were performed by applications of foreign bodies and almost all of them were done by untrained persons.

## **Recommendations**

The findings of this study indicate that abortions constitute a very significant proportion of problems among women attending Prasuti Griha, Kathmandu.

- Family planning awareness among the public should be increased to prevent unwanted pregnancy and the serious consequences of induced septic abortion
- Different type of family planning methods should be made available easily to all men and women.
- Post abortion care services (PAC) should be provided in all health care facilities throughout the country.
- Training to different categories of health care service providers on PAC services should be given regularly in all health care facilities .
- A detailed study of induced abortion throughout Nepal should be carried out as the complications due to induced abortions are high and the maternal death due to induced abortion represent nearly one-third to half of all maternal deaths in the country.

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# Questionnaire

Name  Age  Hospital R.No

SS  Education  Illiterate  Primary  
 Secondary  Higher Secondary & above

Occupation woman  Service  Business  Agriculture  Daily wages  House wife  Other...

Occupation husband  Service  Business  Agriculture  Daily wages  Other...

Ethnic group  Brahmin  Chhetri  Newar  Tamang  Magar  Rai/Limbu  Gurung  Other...

Maternal care  Nil  1-2  3-4  >-4

Medical illness  None  Heart disease  Chest disease  Renal/ Preexisting hypertension  Anaemia  Other...

Parity  Primi  Multi  Other...  
 Grand multi  > 4

Previous Pregnancy  Y  N  SB  Y  N  NND  Y  N  Abortion  Y  N  Prem. delivery  Y  N

LMP  Provisional Dignosis  Complete  Septic  Threatened  Other...  
 Incomplete  Inevitable  Missed

Spontaneous / 2. Induced  If induced why  Un married  Other...  
 Too many children  Health reasons

Induced by  Doctor  Nurse  Self  Other...

Method of Induction  FB  D & C  Herbal Medicine  Other...

General Cond.  Good  Other...  
 Poor  Very poor

I/V  USG  Blood loss  Normal  Severe  
 Moderate  Other...

# Questionnaire

Diagnosis

Date of management

Cervix (F)

BP (mm)

HB (gm)

BL group

VA

D & C

Others

Blood Transfusion

Yes  
 No

Date of admission

Date of discharge

Condition at discharge

Good  
 Fair  Other...  
 Poor

Referred From

Referred To

Family Planning

None  Pills  Norplant  Vasectomy  Other  
 Depo  Condom  IDU  Tubal ligation

Dr. Group

Name of Interviewer

Date

Checked by

Entered by