Original Article

Retained Placenta still a continuing cause of maternal morbidity and mortality

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Abstract

Objective: To determine the frequency, causes and outcome of patients with retained placenta.

Methods: Descriptive case series. This study was carried out at Liaquat University Hospital, Gynae Unit-I, from January 2005 to December 2007. Two years retrospective and one year prospective analysis of patients was done according to age, parity, causes, place of delivery, person who conducted the delivery, conservative and surgical procedures, maternal morbidity and mortality. Patients were examined and appropriate investigations were done. The patients who came with or developed retained placenta at Liaquat University Hospital were included in the study. The patients having retained placenta due to uterine abnormalities were excluded from the study. All the information was collected on a predesigned proforma and analyzed on SPSS version 10.0.

Results: About 8,782 patients were admitted during the specified period. Ninety patients had retained placenta. Frequency of retained placenta was 37.7% in women of age group 26 to 30 years, 26.6% upto age of 35 years, 22.2% in age 20-25 years, it was low between 36-40 years of age, while the frequency was high in women of low parity (44.4%).

Causes included augmentation by oxytocics in 38.8%, manipulation 38.8%, inertia 14.4% and tumour (fibroid) 7.7%.

Majority of patients (60%) had a home delivery. Delivery by Dai was done in 72.2%. The commonest complication was anaemia 48.8%, followed by puerperal pyrexia 24.4%, hypovolaemic shock 22.2%, acute renal failure 3.3% and hepatic failure in 1.1% respectively.

Conclusion: Retained placenta is a frequent cause of maternal morbidity in Pakistan (JPMA 59:812; 2009).

Introduction

Retained placenta is one of the major causes of primary and secondary post partum haemorrhage, associated with increased risk of maternal morbidity and mortality. Within five to 30 minutes of delivery, the placenta usually follows the same path that that baby just took out of the body. In about one out of every 100 to 200 deliveries, the placenta is "retained" in the uterus and does not deliver-even after 30 to 45 minutes. A retained placenta is often accompanied by heavy bleeding.

There is no consensus as to the length of the third stage after which a placenta should be called retained. Various authorities have suggested any thing between 20 minutes to two hours.[1]

Placenta usually delivers within 10-20 minutes. With active management it takes 5-10 minutes.[2] Causes of retained placenta include uterine inertia, adherence of membranes to uterine wall, congenital uterine malformation, morbidly adherent placenta and contracted cervix.

Usually patients give a history of prolonged labour, oxytocin injection, intrauterine manipulation or previous history of retained placenta. The incidence of placenta percreta has been on the rise during the past decades, coincident with the increase in caesarean deliveries. The placenta percreta may present as an acute abdomen during pregnancy.[3] Antenatal diagnosis of placenta percreta with bladder invasion is essential in the multi disciplinary management of this potentially catastrophic condition.[4] The patients may present in a state of shock due to severe postpartum haemorrhage.

Homozygous sickle cell disease, history of previous caesarian section, grand multiparity and precipitate labour, all are associated with an increase risk of retained placenta.[5-9] Retained placenta is associated with an increased risk of post partum haemorrhage, hypovolaemic shock, infection and anaemia.

Conservative management of adherent placenta increases the maternal mortality, but is still an alternative to hysterectomy when focal defects are present, blood loss is not excessive and preservation of fertility is required.[6]

A morbidly adherent placenta can be of three types.

Acreta: placental villi adherent to myometrium directly due to partial or complete absence of the deciduas basalis; Increta: deep invasion of villi into myometrium; and Percreta: penetration through entire thickness of the uterine wall.

Placenta acreta may involve all of the cotyledons (total

placenta acreta), a few to several cotyledons (partial placenta acreta) or a single cotyledons focal placenta acreta.[10]

Management of retained placenta consists of manual removal. The timing of this procedure depends on the availability of safe anaesthesia and also on the presence or absence of haemorrhage. Oxytocin is as effective as ergometrine, but has less side effects than ergometrine.[11]

Umbilical vein injection of saline solution plus oxytocin appears to be effective in the management of retained placenta.[12,13] A common approach in the management of retained placenta is administration of oxytocin followed by controlled cord traction. Sequential administration of oxytocin and nitroglycerine seems to be as effective and safe procedure in the management of retained placenta.[14]

This study was carried out to determine the frequency, causes and outcome of patients with retained placenta and hence to provide improved obstetric care. All the data was entered in a pre-designed proforma and analyzed for results.

Patients and Methods

This study was carried out at Gynae Unit-I, Liaquat University Hospital from January 2005 to December 2007. About 8782 patients were admitted during the period, 90 had retained placenta. The patients who came with or developed retained placenta at Liaquat University Hospital were included in the study. Patients with retained placenta due to uterine abnormalities were excluded. Detailed examination of women was carried out, vital signs were checked and degree of anaemia assessed. Abdominal and vaginal examination was done to determine size of the uterus, state of uterus (contracted or relaxed) presence of placenta whether separated or attached, cervical os dilated or closed and presence or absence of bleeding.

Results

The frequency of retained placenta in different age groups is shown in Table-1.

Table-1: Frequency of Retained Placenta in patients presenting at a tertiary care hospital at Jamshoro, Sindh.

Age in years	N (%)
20 - 25	20 (22.2)
26 - 30	34 (37.7)
31 - 35	24 (26.6)
36 - 40	12 (13.3)
Total No. of Patients	**90**

Augmentation of labour and manipulation were common among the causes, inertia was found in 14.4% and tumour only in 7.7% of cases (Table-2).

Table-2: Causes of Retained Placenta in patients presenting at a tertiary care hospital at Jamshoro, Sindh.

Causes	N (%)
Augmentation	35 (38.8)
Manipulation	35 (38.8)
Inertia	13 (14.4)
Tumour	7 (7.7)
Total No. of patients	**90**

Table-3: Maternal outcome of Retained Placenta in patients presenting at a tertiary care hospital at Jamshoro, Sindh.

Morbidity	N (%)
Fever	22 (24.4)
Anaemia	44 (48.8)
Hypovolemic shock	20 (22.2)
Acute rental failure	3 (3.3)
Hepatic failure	1 (1.1)
Total No. of patients	**90**

The maternal complications of retained placenta are shown in Table-3. The most common was anaemia.

Discussion

Post partum haemorrhage due to retained placenta is a major cause of maternal mortality. Maternal morbidity and mortality due to retained placenta can be prevented by screening high risk cases at proper time and adequate management of 2nd stage of labour. This study was done to analyze the cases, to determine the causative factors so as to provide better obstetric care to our population.

In our study retained placena was seen more commonly in women of younger age group between 26-30 years and the frequency was lower in women between 34-40 years (13.3%). Incidence was high in women of low parity 44.4% and it was lowest in women with parity more than 6, (20%). Similar results were found in a study done at Nepal Medical College Teaching Hospital[5] in which majority of women (35.2%) were primigravidas and 57.9% belong to the age group 20-25 years.

Risk regarding the retained placenta can be predicted by taking detailed past obstetrical history. In this study 10 patients (11.1%) had previous history of retained placenta removed under general anaesthesia. Patients with such history must be dealt by experienced doctors at a well equipped hospital, because the incidence increases in subsequent pregnancies.

Presence of damaged endometrium caused by previous caesarean section, uterine instrumentation and sepsis is an important risk factor because it increases the chances of morbid adherence and uterine atony In our study, none of these factors were present while 7.7% patients had

fibroid uterus as a causative factor. Retained placenta in the presence of uterine fibroids is either due to attachment of placenta over that site or distortion of uterine cavity. Major causes identified in our study, were augmentation of labour by intramuscular oxytocin and manipulation in 38.8%. Home delivery carried out by a Dai was an important contributing factor found in our study. This was due to the trend of our women who prefer home delivery by a Dai. Birth attendants are usually untrained, they augment labour by giving oxytocic agents intramuscularly without realizing the hazards, they massage the uterus and give cord traction before the placental separation and do not refer cases at an appropriate time.

Placenta acereta can be diagnosed by anatental and postnatal ultrasound. Placenta percreta is a rare yet serious complication of pregnancy. Other diagnostic methods are[15] colour doppler ultrasound by noting normal retroplacental sonolucents clear space and presence of multiple blood vessels beneath the placenta extending into myometrium and magnetic resonance imaging.[16,17]

Regarding morbidity of retained placenta in this study about 48.8% patients had anaemia followed by fever and hypvolaemic shock. Only 3.3% suffered form acute renal failure due to prolonged hypovolaemic shock. Similar, observation was made in the study done at Nepal Medical College University Hospital, where 71.6% were anaemic and 9 cases presented with hypovolaemic shock.[15]

Among 90 patients who were managed in Maternity Unit-I of Liaquat University Hospital with retained placenta when mortality was compared, there were only two maternal deaths. Both patients delivered out side the hospital and were admitted in moribund condition.

Conclusion

Obstetric emergencies are common in our country as compared to developed countries. Retained placenta is one of the major problem in obstetrics. This study showed that retained placenta is still a common problem and is responsible for maternal morbidity and mortality.

Rapid recognition and treatment are essential because heavy blood loss with coagulation problems remains the lethal factor in this disease. Lack of education, absent ante-natal care, poverty, transport problems, poorly staffed primary health care centres, all these factors are responsible for this problem. This can be prevented by mass education, all the resources should be utilized for the proper training of birth attendants, so that the high risk cases can be identified at the right time and referred to a well equipped institution. Active resuscitation and early operative intervention can also improve the outcome.

References

1. Enkin MW, Keirse MJNC, Renfrew MJ, NeilsonJP. A Guide to Effective Care in Pregancy and Chilbirth. 2nd ed. Oxford: Oxford University Press, 1995.
2. Retained placenta. In: Baskett TF, Calder AA, Arulkumaran S, eds. Munro Kerr's Operative Obstetrics. 11th ed. Sydney Toronto, 2007; 237-41.
3. Roca LE, Hoffman MC, Gaitan LF, Burkett G. Placenta percreta masquerading as an acute abdomen. Obstet Gynecol 2009; 113: 512-4.
4. Lee PS, Bakelaar R, Fitpatrick CB, Ellestad SC, Havrilesky LJ, Alvarez Secord A. Medical and surgical treatment of placenta percreta to optimize bladder preservation. Obstet Gynecol 2008; 112: 421-4.
5. Cox SM, Carpenter RJ, Cotton DB. Placenta percreta: ultrasound diagnosis and conservative surgical management. Obstet Gynecol 1988; 71: 454-6.
6. Serjeant GR, Loy LL, Crowther M, Hambleton IR, Thame M. Outcome of pregnancy in Homozygous Sickle Cell Disease. Obstet Gynecol 2004; 103: 1278-85.
7. Taylor LK, Simpson JM, Roberts CL, Olive EC, Henderson-Smart DJ. Risk of complications in a second pregnancy following caesarean section in the first pregnancy: a population-based study. Med J Aust 2005; 183: 515-9.
8. Rayamajhi R, Thapa M, Pande S. The challenge of grandumltiparity in obstetric practice. Kathmandu Univ Med J 2006; 4: 70-4.
9. Sheiner E, Levy A, Mazor M. Precipitate labor: higher rates of maternal complications. Eur J Obstet Gynecol Reprod Biol 2004; 116: 43-7.
10. Orji E, Agwu F, Loto O, Olaleye O. A randomized comparative study of prophylactic oxytocin versus ergometrine in the third stage of labor. Int J Gynaecol Obstet 2008; 101: 129-32.
11. RHL the WHO Reproductive Health Library: Purwar MB. Injection into umbilical vein for management of retained placenta [Electronic] 2002 [Cited Jan 15]. Available from URL: http://www.apps.who.int/entity/rhl/pregnancy_childbirth/.../index.html
12. Revised 1990 estimates of maternal mortality: a new approach by WHO and UNICEF WHO/FRH/MSM/96.11/UNICEF/PLN/96.1/DISTR.: General; April 1996.
13. Reddy VV, Carey JC. Effects of umbilical vein oxytocin on puerperal blood loss and length of 3rd stage of labour. Am J Obstet Gynaecol 1989; 160: 206-8.
14. Ekerhovd E, Bullarbo M. Sublingual nitroglycerin seems to be affective in the management of retained placenta. Acta Obstet Gynecol Scand 2008; 87: 222-5.
15. Tuladhar H, Dali SM, Pradhanang V. Complications of home delivery: a retrospective analysis. J Nepal Med Assoc 2005; 44: 87-91.
16. Lopes A, King PA, Duthie SJ, To WK, Ma HK. The impact of multiple induced abortions on the outcome of subsequent pregnancy. Aust N Z J Obstet Gynaecol 1991; 31: 41-3.
17. Herman A, Weinraub Z, Bukovsky I, Arieli S, Zabow P, Caspi E, et al. Dynamic ultrasonographic imaging of the third stage of labor: new perspectives into third-stage mechanisms. Am J Obstet Gynecol 1993; 168: 1496-9.