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Original article:

Study of perinatal outcome in abruptio placentae patients

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Abstract:

Introduction: There is no cause as such, that can be pinpointed as an etiological factor for abruption placentae, however there are several conditions which predispose to or are associated with premature separation of placenta

Methodology: The present study was conducted during a time period of two years. During this study 12,226 patients were delivered at P.R.H., which is the only tertiary health care centre in the district and gets emergency cases from nearby townships and villages within a radiuas of 100kms. Over same period, out of all delivered women, 136 patients were diagnosed and treated for Abruptio placentae.

Results :All complications seen in neonatal period were mainly due to prematurity. Neonatal sepsis and acute respiratory distress syndrome, birth asphyxia were commonest complications.

Conclusion: Perinatal morbidity and mortality still continues to be very high and extra efforts will b required to reduce it. Illiteracy, poverty and ignorance, pre existing anaemia, lack of communication facilities, lack of availability of blood transfusion contribute to adverse maternal and fetal outcome.

Introduction:

There is no cause as such, that can be pinpointed as an etiological factor for abruption placentae, however there are several conditions which predispose to or are associated with premature separation of placenta.[1]Maternal hypertension, maternal trauma, cocaine abuse, cigarette smoking, short umbilical cord, sudden decompression of uterus (example – premature rupture of membranes in polyhydramnios and delivery of first twin), retroplacental fibroma and advanced maternal age are known factors associated with abruption[2].

Maternal complications encountered are hypovolemic shock, coagulation failure, renal failure, uterine inertia, puerperal sepsis.High perinatal loss is related to problems like prematurity, associated fetal congenital malformations.According to Pritchrad et al[8], fetal mortality was proportionalto degree of placental separation.The availability of recent diagnostic modalities like trans-vaginal ultrasound may prove helpful, a timely diagnosis and effective intervention is required in these cases to improve maternal and perinatal outcome

Maternal mortality noted by various authors ranges between 0.57%(Purandare)[3] to 2.1% (Parikh)[4]. Fetal mortality ranges from 48%(Estaman)[2] to 73.5%(Purandare)[5].

Recently the availability of hematological facilities and increased use of caesarean section has resulted in better pregnancy outcomes in these cases.With the better availability of blood and blood products and coagulation factors, the management of shock and DIC has produced good results over last few decades.

Inspite of availability of Mother and Child Health Care services provided through the government health infrastructure in rural areas, we still find many cases of antepartum

haemorrhage coming late in moribund stage in tertiary care hospital with ultimate adverse maternal and perinatal outcome.

Methodology:

The present study was conducted during a time period of two years. During this study 12,226 patients were delivered at P.R.H., which is the only tertiary health care centre in the district and gets emergency cases from nearby townships and villages within a radiuas of 100kms. Over same period, out of all delivered women, 136 patients were diagnosed and treated for Abruptio placentae.

All women coming to hospital with pregnancy more than 28 weeks and having clinical features suggestive of abruptio placentae were included in the study.

All cases were admitted in critical care unit of maternal ward.

A detailed history of patients were noted down. All of them were examined and investigated with help of proforma.

Clinical classification (page et al)[11] of all patients was done depending upon clinical presentation.

Depending upon severity of the condition the patients were treated either conservatively or by an active line of management.

MANAGEMENT PROTOCOL FOR ABRUPTIO PLACENTAE:

Preliminaries:

1. Estimation of haemoglobin, blood group, haematocrit, coagulation profile was made.
2. Ringer's lactate solution drip was started with wide bore cannula, arrangements for blood transfusion were initiated and hypovolemia was corrected

Close monitoring of maternal and fetal condition were done.

1. Expectant Management:

In revealed type, if haemorrhage was slight, fetus was premature and patient was not in labour, expectant treatment was persuded to attain fetal maturity, provided symptoms ceased to exist.

If preterm labour threatened, use of tocolysis was avoided.

2.Active Management:

A) If the patient was already in labour:

Labour was augmented with following methods, depending on the state at which patient presented

1. Only artificial rupture of membranes.
2. Artificial rupture of membranes and oxytocin infusion.
3. Only oxytocin.
4. Artificial rupture of membranes and vaginal misoprostol tablets

B) If patient was not in labour:

Depending upon cervical conditions, induction of labour was done with

1. Cerviprime gel(Intracervical instillation)
2. Vaginal misoprostol.
3. Artificial rupture of membranes and oxytocin

VAGINAL DELIVERY:

Following induction/augmentation, labour was usually completed within 6 to 8 hrs.

Intravenous methergin and liberal oxytocics were given to minimize post partum blood loss.

Caesarean section was done only for following conditions

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1. Unfavourable cervix (poor Bishops cervical score) with good prospects of fetal survival where speedy delievery was not possible.
2. Failed induction for more than 7 to 10 hrs.with deteriorating maternal conditions.
3. Fetal distress in near term or term fetus
4. Associated obstetrics complications like previous LSCS, previous two LSCS, breech, transverse lie, eclampsia.

Results:

TABLE 1 :DISTRIBUTION OF CASES AS PER BLOOD TRANSFUSION

BLOOD COMPONENTS	NO. OF CASES	PERCENTAGE
PCV	122	89.70
WB	92	67.64
FFP	93	68.38
PLATELETS	86	63.23

122 patients 94% patients required blood transfusion, 90% were transfused with PCV. 68% were transfused with whole blood, and fresh frozen plasma.

TABLE 2 : DISTRIBUTION OF CASES AS PER ADMISSION TO DELIVERY INTERVAL

Causes	No. Of cases	Percentage
0-6 hrs.	84	61.76%
6 to 12 hrs.	40	29.41%
More than 12 hrs.	12	8.82

Most patients (62%) delivered within 0-6 hours of admission, 9% patients took more than 12 hours time to deliver from the time of admission. TABLE 16: DISTRIBUTION OF CASES AS PER NEONATAL OUTCOME

Outcome	No. Of cases	Percentage
Live births	80	57.98
Still births	58	42.02

(N=138, two twin deliveries)

42% of babies were still births and 58% were live births in present study.

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TABLE 3;DISTRIBUTION OF CASES AS PER NEONATAL MORBIDITY

Causes	No. of cases	Percentage
Sepsis	40	36.02
ARDS	18	13.23
Birth asphyxia	20	14.70
Intracranialhaemorrhage	10	7.3
Necrotizing enterocolitis	2	1.4

All complications seen in neonatal period were mainly due to prematurity.

Neonatal sepsis and acute respiratory distress syndrome, birth asphyxia were commonest complications.

Discussion

In our study majority of cases had abruption of grade II and above as per Page's[6] classification, much the same as compared to study my Menon.[7]Diagnosis of abruptio placentae was mainly done clinically on the basis of history and clinical examination. Ultrasonography was used basically to rule out placenta previa as suggested by Randall[8] (1996). There is only 20% accuracy for clinical diagnosis of abruptio placenta by ultrasonography. (Khanna[9]1992).

Immediately after resuscitative measures had been started, artificial rupture of membranes was done. Labour was induced or augmented depending upon the clinical condition of patient in an attempt to expedite delivery.

Labour was induced for those patients who were not in labour with ARM+ IV oxytocin drip or cerviprime gel or misoprostol vaginal tablets.With artificial rupture of membranes and intravenous oxytocin induction delivery interval was shortest. Vaginal Misoprostol tablets and cerviprime gel took little longer time.

Augmentation was mostly done with artificial rupture of membranes in 56 cases.Along with artificial rupture of membranes in 42 cases oxytocin drip was started where as in 14 cases Misoprostol was given.

11 cases only oxytocin was used.

Maternal morbidity remained same with all methods of augmentation.In this study 92% patients(i.e.124 cases) delivered within 12 hrs. of admission. And 8% patients(i.e.12 cases) took more than 12 hrs. of admission. Maternal morbidity and mortality was seen more with longer duration of admission.The past view advocating delivery less than 6 hours or so as to decrease maternal mortality and morbidity is changing. Recent experiences at university of Virginia and Parkland hospitals[2], Texas, indicate that the outcome depend in more upon the diligence with which adequate fluid replacement therapy especially blood is persued than the time of delivery.In present study 63%(86cases) patients underwent LSCS and only 37%(50cases) patients delivered vaginally.

Caesarean section was most frequent mode of deliver 63% at our hospital in abruptioncases . In 7

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patients it was done to save mother, this was probably again as most women came late with severe abruption. Also Caesarean delivery is better option as a mode of delivery as this mode of delivery reduced the perinatal death rate in case of live fetus.

LSCS was done when therewas either failure of induction,failure of progress even after augmentation, unfavourable cervix, presence of any associated obstetric problems or fetal distress.

14% of LSCS in present study were done for failure of induction , 33% were done for fetal distress, 40% of LSCS cases were previously scared uterus. Cesarean section in abruption placentae was studied by Palaniappan[85] in 1984 he reported that failure of induction was the commonest indication followed by fetal distress and threatened coagulation failure. He stated that majority of caesarean sections were performed in a desperate attempt to save the mother and hence higher incidence of caesarean sections.

But now a days number of primary elective LSCS has increased dramatically due to increase in no. of patients not willing for vaginal delivery. So 34 cases of patients who underwent LSCS were with previous LSCS or previous two LSCS .Following delivery the most common complication were Anaemia in 126 cases(93%), Post partum haemorrhage in 22 cases (16%), DIC in 7 cases(5%).There was high incidence of anaemia in this study, however as stated earlier clinical appearance of pallor is more suggestive of blood loss. For which total of 939 transfusions were done in present study out of which 122 cases received PCV (90%), 92 cases received whole blood(68%), 93 cases received FFP(68%) and 86 cases received platelets transfusion(63%) and19 cases (13.97%) did not receive transfusion.

Second most common complication 16% of cases had post partum haemorrhage in this study. 20 units Pitocin drip, prostaglandin and continuous uterine massage controlled the bleeding in 21 patients. Coagulation profile was monitored and blood transfusion was given accordingly. In 1 patient post partum haemorrhage was not controlled by medical method in whom internal illac artery ligation was done.

5% patients had coagulation failure .All patients were given fresh blood and FFP and they recovered after prompt treatment. Vaidya and Gopalkrishna[84] (1984) stated that in their study massive blood transfusion was required in 8% cases and total 52% were given transfusion. Palaniappan[10](1984) studied caesarean section in abruption and found that all patients with LSCS needed blood transfusion. Shrotri and Pawar[11] (2001) stated that 4 cases out of 5 patients with coagulation failure needed blood transfusion. In present study there is 0.73% maternal mortality, that is one case in 136 cases of abruptio placentae. Reduction in maternal mortality is mainly due to acceptance of universal policy of immediate termination of pregnancy, intensive care facilities, availability of adequate blood for transfusion, effective antibiotics and good anaesthetic agents by means of which complications like PPH, DIC renal failure, shock, sepsis could either be prevented or diagnosed and treated at an earlier stage.

In the present study there was high incidence of (42%) fresh still birth. Out of 58 still births , 38 (65%) were pretermand only remaining 20 (35%) were term. Fetal heart was absent in all cases on admission.Chitra Kumari[83] (2001) has reported abruption is one of the leading causes of intrauterine death with an incidence of 22.5%.bIn

present study 58% i.e. b0 babies were live birth, of which 29 % i.e. 23 cases were preterm and 71% i.e. 55 cases were term.

Conclusion:

Perinatal morbidity and mortality still continues to be very high and extra efforts will b required to reduce it. Illiteracy, poverty and ignorance, pre existing anaemia, lack of communication facilities, lack of availability of blood transfusion contribute to adverse maternal and fetal outcome.

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