

# ADHERENT PLACENTA PRAEVIA

by

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Abnormal adherence of placenta to uterine wall results from lack of decidual response at the site of implantation. Danforth and Chapman (1949) showed that the endometrium of the lower uterine segment has the characteristics of only the basilar portion of the corporeal endometrium, which is least likely to supply proper vascularity and good decidua for nidation. Therefore, a placenta located in the lower uterine segment has got a greater tendency for accretion. Kistner *et al*, (1952) first presented their largest series of 9 cases of placenta praevia accreta. Since then a large number of case reports have appeared in the literature with or without histological confirmation of the diagnosis.

## Material and Methods

Nine cases of adherent placenta praevia were managed in Tirunelveli Medical College Hospital, Tirunelveli, over a period of 6½ years from January 1968 to

June 1974. These cases form the basis of this report. During the period of study, there were 12,032 viable deliveries; 296 cases of placenta praevia and 138 cases of adherent placenta. Of them 30 were delivered in our institution and others were admitted with retained placenta after delivery elsewhere.

## Results

The incidence of adherent placenta praevia is shown in Table I. The frequency of adherent placenta in placenta praevia is shown in Table II. The frequency of placenta praevia in adherent placenta is shown in Table III. The salient features of 9 cases of adherent placenta praevia are given in Table IV. The average age was 29 years and the mean parity was 2.3. There were 3 primigravidae (33.3%) and one grand-multipara. Previous history of manual removal of the placenta was elicited in 4 cases (44.4%). One patient had previous

TABLE I  
Incidence of Adherent Placenta Praevia

Year	Authors	Incidence (Per cent)	Incidence (Per million)
1961	Koren <i>et al</i>	0.0012	12
1963	Rubestone and Lash	0.0179	179
1963	Di Masi <i>et al</i>	0.0245	245
1976	Present study	0.0748	748

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lower segment caesarean section. In the remaining 4 cases, there was no etiological factor and in them, implantation of the placenta in the lower

TABLE II  
Incidence of Adherent Placenta in Placenta Praevia

Year	Authors	Overall incidence of adherent placenta	Incidence of adherent placenta in placenta praevia	Frequency
1963	Di Masi et al	0.0167	5.0%	+ 47 times
1968	Topete et al	0.0347	5.8%	+171 times
1976	Present series	0.2527	2.7%	+ 11 times

TABLE III  
Incidence of Placenta Praevia in Adherent Placenta

Year	Authors	Incidence (percent)
1937	Irving and Hertig	15.0
1954	Stone, et al	100.0
1957	Rotton and Friedman	18.0
1959	Miller	20.0
1963	Rubenstein and Lash	62.5
1968	Topete et al	60.8
1971	Present series	30.0

uterine segment per sé may be the cause for adherence. All patients were admitted with antepartum haemorrhage. Seven patients (77.8%) were managed conservatively (LSCS-3, classical caesarean section-2, vaginal delivery-2) by piecemeal removal of the placenta. Caesarean hysterectomy was done in two. Two mothers (22.2%) were lost. In one of them, the placenta had been removed piecemeal and in the other patient, initial attempts to separate the placenta during caesarean section resulted in massive haemorrhage. All patients had moderate to severe postpartum haemorrhagic shock and received 350 ml. to 1750 ml. of compatible blood transfusion. Heavy blood loss was noticed in those who were delivered by lower segment caesarean section. In one patient (case 7), adherent placenta praevia was associated with Couvelaire

uterus and coagulation failure. Seven babies (77.8%) were premature and 5 were lost (55.5%) as a result of prematurity and asphyxia.

#### Discussion

Basically, accretion of the placenta is a result of deficient or absent decidua and it is not related to increased invasiveness of the trophoblast. Since the endometrium of the lower uterine segment is lined only by basilar portion of the corporal endometrium, as demonstrated by Danforth and Chapman in 1949, implantation of the placenta in the lower uterine segment per sé predisposes to placenta accreta. Most obstetricians consider placenta accreta as a natural concomitant of placenta praevia.

Until June 1974, a total of only 26 cases of placenta accreta have been reported in the Journal of Obstetrics and Gynaecology of India. There is no reference to placenta praevia accreta in any of these case reports. The incidence of adherent placenta praevia in our series is 62 times greater than that of Koren, *et al*, (1961) and about 3 times higher than that of Di masi, *et al*, (1963). The etiologic significance of implantation of the placenta in the lower uterine segment is well documented by the reports of Di Masi, *et al*, (1963) and Topete *et al*, (1968) as shown in Tables II and III. Our figures also

TABLE IV  
Salient Features of Nine Cases Reported

Sl. No.	Case No.	Age yrs.	Para	Etiology	Type of Placenta Praevia	Type of Delivery	III stage Management	Quantity of Blood Given (ml)	Foetal outcome	Maternal Prognosis
1	15510/69	25	1	Previous MRP	Type II posterior	ARM—Pitocin assisted breech	Removed piecemeal	350	D.B. 1.3 Kg.	Survived
2	9631/74	21	0	Nil	-do-	ARM—Outlet Forceps	-do-	700	Alive 2.75 Kg.	Survived
3	14819/69	30	2	Previous MRP	Type IV	Classical C.S.	-do-	350	NND 2.0 Kg.	Survived
4	11365/71	35	9	-do-	-do-	-do-	-do-	1050	NND 1.75 Kg.	Died***
5	18588/69	30	2	Nil	Type II Anterior	L.S.C.S.	-do-	1750	Alive 1.5 Kg.	Survived
6	13833/73	10	0	Nil	Type IV	-do-	-do-	700	NND 2.25 Kg.	Survived
7	14463/72	36	0	Nil	Type IV**	-do-	-do-	700	D.B. 2.5 Kg.	Survived
8	16352/72	35	4	Previous L.S.C.S.	Type IV	Caesarean hysterectomy	Caesarean hysterectomy	350	Alive 2.5 Kg.	Survived
9	10664/74	31	3	Previous MRP	Type IV	Caesarean hysterectomy	Caesarean hysterectomy***	700	Alive 3.0 Kg.	Died*

\* Patient had delayed PPH on 2nd day postoperatively and died of exsanguination.

\*\* This case was associated with Couvelaire uterus and coagulation failure.

\*\*\* In this case initial attempts to remove the placenta provoked massive haemorrhage and patient died of exsanguination soon after operation.

favourably agree with these reports. Other important etiologic factors include previous manual removal, previous curettage and previous caesarean section.

Kistner, *et al*, (1952) stressed that the postpartum haemorrhage which so frequently occurs with placenta praevia should not always be ascribed to failure of contractility of the lower segment, but may be the result of accretic tendency of the abnormally situated placenta. Koren, *et al*, (1961) and Cherry, *et al*, (1961) demonstrated hypofibrinogenaemia and afibrinogenaemia in cases of placenta praevia accreta, and coagulation defects may therefore account for postpartum haemorrhage in some cases. In this report, one patient showed coagulation failure in association with Couvelair uterus. A careful review of the literature showed only one earlier report (Kalstone, 1969) in which Couvelaire uterus was associated with placenta praevia. In Kalstone's case, the fibrinogen level was normal and the Couvelaire uterus was the result of premature separation of the placenta implanted in the lower segment. But in our case, the placenta was adherent to the posterior wall of the lower segment and showed no evidence of separation.

The management of adherent placenta in general, and adherent placenta praevia in particular presents a dilemma. Israel, *et al*, (1955), Abitbol, *et al*, (1958), Di Masi, *et al*, (1963) and Rubenstone and Lash (1963) have emphasised that total, rather than subtotal, hysterectomy should be performed in cases of placenta praevia accreta to avoid catastrophic bleeding from the portion of the lower uterine segment which is left behind in subtotal hysterectomy. This view has been upheld in subsequent reports. Rubenstone and Lash stated that this seemingly more radical management of placenta praevia

accreta resulted in a much lower, maternal mortality rate and conversely, conservative management resulted in a higher maternal mortality rate.

An analysis of the cases reported in literature undoubtedly indicate that immediate total hysterectomy is the ideal treatment. Our observations also lend support to this view. Of the two maternal deaths, one was directly related to removal of placenta in bits and in the other patient, enough damage was caused by initial attempts to separate the placenta before hysterectomy was decided.

#### *Summary and Conclusions*

Nine cases of adherent placenta praevia have been presented. One case was associated with Couvelaire uterus and coagulation failure. Immediate total hysterectomy is considered as the ideal treatment for adherent placenta praevia.

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