

STUDY OF CASES OF CHORIOAMNIONITIS FOLLOWING PREMATURE RUPTURE OF MEMBRANCES.

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SUMMARY

Chorioamnionitis following premature rupture of membranes often leads to high incidence of maternal and neonatal morbidity and mortality. In the present study of 56 cases of chorioamnionitis, out of 400 cases of P.R.O.M. (incidence being 14%), maximum number of cases were found between 16 and 25 years of age, majority belonging to low socio-economic group. Forty percent of such cases (40%) were between 28-32 weeks of gestation higher incidence of chorioamnionitis. Caesarean section and forceps delivery were performed in 8.33% and 10% cases respectively with higher incidence of post partum infection compared to those delivered Vaginally. Neonatal infection was high (26.7%) with 10 neonatal loss. One maternal death occurred in this series.

Chorioamnionitis can occur in patients of premature rupture of membranes and can result in pre-term labour. The overall incidence of such infection as seen from previous studies ranged from 3 to 31% (Devi et al 1996). Varied complications were observed in cases of chorioamnionitis resulting in maternal and neonatal morbidity and mortality in such a way that the condition poses a great dilemma for the obstetrician. Control of such infection will help to provide safety to both mother and baby.

The present study is undertaken to evaluate the situation in our hospital.

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Accepted for Publication on March'97*

MATERIALS AND METHODS :

The present study was carried out

on 400 cases of P.R.O.M. without any other complications at Chittaranjan Seva Sadan during a period of 2 years from June 1994 to May 1996. Of these the cases of overt chorioamnionitis were isolated, diagnosis being based on (i) fever 100°F (39.8°C) or more along with ii) any two of the criteria like maternal tachycardia, fetal tachycardia, uterine tenderness, foul odour of the amniotic fluid.

RESULTS AND OBSERVATIONS :

Intra amniotic infection was diagnosed

by amniotic fluid culture. The commonest (a) aerobic micro-organisms isolated were E. Coli, Klebsiella species, streptococci B group (b) anaerobic micro-organisms being Bacteriodes fragilis, peptostreptococcus species etc. Thirty six cases (36 cases) belonged to low, 14 cases to middle and only 6 cases belonged to high socio-economic status.

Parity-wise distribution showed no differences as regards the incidence of chorioamnionitis in this series.

TABLE I
SHOWS AGE DISTRIBUTION

Age	No. of PROM	No. & % of Chorioamnionitis amongst PROM
Less than 20 yr.	48	8 (16.66%)
20 - 25 yr	248	40 (16.12%)
26 - 30 yr	80	6 (7.5%)
31 - 35 yr	34	2 (8.33%)

TABLE II
SHOWING DISTRIBUTION OF GESTATIONS

Wks of gestation	No. of PROM	No. & % of Chorioamnionitis amongst PROM
28 - 32	40	16 (40%)
33 - 37	168	21 (12.5%)
38 - term	192	19 (9.8%)

All the cases of chorioamnionitis were treated by different combinations of Ampicillin, Cloxacillin, gentamycin, metronidazole, Cephalosporin etc

TABLE III
SHOWS DURATION OF ONSET OF CHORIOAMNIONITIS
FOLLOWING PROM

Hours	No of PROM	No & % Chorioamnionitis amongst PROM
Upto 12 hrs.	106	3 (2.83%)
12-24 hrs.	102	8 (7.84%)
24-48 hrs.	104	20 (19.6%)
48-72 hrs.	56	12 (21.4%)
> 72 hrs upto 1 wk	24	8 (33%)
> 1 Wk	8	62.5%

TABLE IV
SHOWS MODE OF TERMINATION AND NO. OF POSTPARTUM
SEPSIS IN CASES OF CHORIOAMNIONITIS

Mode of termination	No. of PROM	No & % Chorioamnionitis amongst PROM	No and % of sepsis amongst chorioamnionitis
L.S.C.S.	96	8 (8.33%)	4 (50)
Forceps	40	4 (10%)	1 (25)
Normal delivery	264	41 (32.1%)	3 (13.8)

There were 8 cases of puerperal sepsis, 8 cases of puerperal pyrexia from U.T.I. and abdominal wound infection 15 cases of PPH following confinement of cases of chorioamnionitis in this series. One mother died following septicaemia after caesarean section.

TABLE V
SHOWS THE INCIDENCE OF NEONATAL ASPHYXIA AND
SEPSIS IN RELATION TO THE BIRTH WEIGHT OF BABIES
IN CASE OF CHORIOAMNIONITIS.

Birth weight	No of Cases of Chorioamnionitis	No. & % of asphyxia	No. & % of sepsis
Upto 2000 gm	20	10 (50%)	7 (35%)
2000 to 2499 gm	16	7 (43.7%)	4 (25%)
2500 to above	20	7 (35%)	4 (20%)

There were 15 cases of neonatal sepsis in the form of respiratory tract infection, umbilical sepsis, sepsis of skin, eyes etc. in cases of chorioamnionitis of mother in this series. Twenty four babies suffered from moderate to severe asphyxia. High incidence of asphyxia and sepsis were observed in preterm babies. Ten babies died in this series, 6 from asphyxia neonatorum, 2 from septicaemia and 2 from pneumonia.

DISCUSSION

The incidence of chorioamnionitis was found to be 14% (56 out of 400) in this study amongst 400 cases of PROM, which is greater than 4.2 to 10.5% incidence noted by (Scoper et al 1989). According to our study it was found that the maximum number of cases were between 16 and 25 years of age and hailed from a lower socio-economic status. Rao et al (1994) also reported similar findings. We found that 40% of the cases of chorioamnionitis occurred between 25 to 32 weeks of 38 weeks and term. This finding confirms with the study by Beydoun et al (1986). It was also noted that 62.5% of the cases of chorioamnionitis occurred when membranes rupture and delivery interval was greater than 1 week. Only 2.83% of the cases developed overt chorioamnionitis within 12 hours of

membranes rupture. Gunn et al (1970) observed similar findings, where 2.7% and 26.4% of the cases developed chorioamnionitis before 12 hours and after 24 hours respectively. So past and present study indicate that chorioamnionitis can be prevented to some extent by short membranes rupture and delivery interval.

Of the 56 cases of chorioamnionitis, 44 delivered normally, 10% by forceps and 8.3% had to be terminated by caesarean section in this study. However it was noted that operative delivery like caesarean section and forceps were associated with puerperal sepsis with 50%, 25% cases respectively. Devi & Rani (1996) also observed that risk of operative delivery is increased in the presence of such infection. Patients with chorioamnionitis had much better outcome with vaginal delivery as

because postpartum sepsis was noted in only 13.8% of cases. Gante and et al (1982) opined that postpartum infection remains high in patients with chorioamnionitis despite antibiotics. In our series also the incidence of puerperal pyrexia was 28.4% (8 cases of puerperal sepsis and 8 cases of other infection out of 56 cases). One case of caesarean section was associated with burst abdomen and died due to uncontrollable septicaemia. Neonatal infection in this series was 26.7% (15 out of 56) Devi & Rani (1996) observed high incidence of neonatal sepsis. The incidence of neonatal loss was 17.8% in this series, mostly observed in preterm babies. So maternal and neonatal outcome

is influenced both chorioamnionitis itself and its associated complications which can be controlled by i) proper diagnosis (ii) liberal use of antibiotics (iii) timely intervention and (iv) well equipped neonatal unit.

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