

Original Article

## PATIENTS WITH POSTPARTUM COMPLICATIONS ADMITTED IN A MEDICAL WARD OF MAYO HOSPITAL, LAHORE.

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### ABSTRACT:

**Objective:** To evaluate the postpartum complications and their outcome in patients who were admitted between the periods of 1st July 1999 to 30th June 2000 in a medical ward following delivery.

**Design:** A prospective study of patients who were admitted in a medical ward with various postpartum complications following delivery at home or hospital.

**Setting:** Department of Medicine, Mayo Hospital/K.E. Medical College, Lahore, Pakistan.

**Subject:** Sixty-four patients who were admitted through emergency or referred/shifted from obstetrical wards attached to the hospital.

**Results:** Out of 64 patients, septicemia was detected in 26 (40.5%), renal failure in 8 (12%), Disseminated Intravascular Coagulation (DIC) in 6 (10%), jaundice in 6 (10%), eclampsia/fits in 8 (12%), tuberculosis in 4 (6%), tetanus in 3 (5%), postpartum cardiomyopathy in 2 (3%), stroke in 1 (1.5%). Fifty-two (81.24%) were discharged home, 6 (9.38%) died in the hospital and 6 (9.38%) left against medical advice (L.A.M.A.) in moribund condition.

**Conclusion:** Only serious postpartum complications present in medical wards. Physician, obstetrician and other specialties should act as one team to prevent maternal mortality and morbidity.

**KEY WORDS:** Postpartum complications, septicemia, renal failure, Disseminated Intravascular Coagulation (DIC), Jaundice. Spontaneous vaginal Delivery (SVD) Caesarian section (CS).

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### INTRODUCTION

In every healthy pregnant woman certain physiological changes take place. Extent of changes varies from system to system but no system remains unaffected<sup>1</sup>. The changes vary according to trimester of pregnancy and most of these revert back to normal in 6 weeks or sometimes longer in an uncomplicated delivery<sup>1</sup>. Complications may take place following delivery, some complications are minor, few are severe and if not tackled early and appropriately maternal mortality rises. Roughly 75% of maternal deaths are due to direct causes and 25% are due to indirect causes in developing countries whereas in the developed countries these respective figures are 60% and 40%<sup>2</sup>.

Accurate data of puerperal sepsis in Pakistan is not available. However, it is known that 40-45% in spontaneous vaginal delivery (SVD) and 50% in instrumental deliveries get infected when carried out by traditional birth attendants (TBAs), nurses, lady health visitors and by female general practitioners<sup>3</sup>.

To our knowledge, this report is the first one in Pakistan regarding postpartum complications in patient who are referred to physicians. This study is an attempt to know the type of complications and their outcome in such patients.

## PATIENTS AND METHODS

This was prospective study carried out admitted patients with postpartum complications between the periods of 1st, July 1999 - 30th June 2000. This ward is one of the four medical wards of Mayo Hospital from where patients are admitted through the OPD/emergency or referral from other sister wards. All those patients who were admitted with postpartum complication following delivery at home or hospital whether vaginally or through caesarian section (C/S). Parameters studied were age, duration of symptoms, parity, home/hospital delivery, complication following delivery and their ultimate outcome. The investigations included blood complete examination, urine complete examination, liver function tests, blood urea, serum creatinine, blood glucose and X-ray chest in all the patients. Special investigations like clotting profile, fibrinogen degradation products, blood and urine culture sensitivity and ultrasonography for retained products of conception were carried out on those patients who had septicemia and disseminated intravascular coagulation (DIC).

## RESULTS

Sixty-four patients with postpartum complications were admitted during the period of study. Many of the patients were referred from Lady Aitchison Hospital and Lady Willingdon Hospital which deal with obstetrical patients and attached with King Edward Medical

College / Mayo Hospital, Lahore, although 50 % amongst these patients were admitted in these wards were referred from Tehsil or District hospitals.

Table-I shows the demographic data of 64 patients. Their age ranged between 17- 46 years with the mean age of  $30.6 \pm 7.9$ . Duration of symptoms after delivery ranged between 1 - 10 days, mean duration being  $3.84 \pm 2.17$  days. The patients from obstetrical ward were referred within few hours. However some patients were referred after two days stay in the obstetrical ward.

Three (4.4 %) were primigravidae, 46 (72%) were multiparous and 15 (23.6%) were grand multipara. Thirty - four (53.12 %) were delivered home vaginally by traditional birth attendants (TBAs) and 30 (46.88%) were delivered in hospitals at various levels. Out of later 14 had SVD with medical instrumentation and 16 had trial of labor followed by C/section. Out of the admitted patients in our ward 52 (81.24%) were discharged home after extensive management, 6 (9.38%) left against medical advice as they were seriously ill, so relatives took them away in moribund state under care of

Table-I: Demographic Data  
n = 64

S. No.	Symptoms/ disease	No. of Patients	Percentage
1.	Age (Range 17-46 years)		Mean $30.6 \pm 7.9$
2.	Duration of symptoms (Range 1-10 days)		Mean $3.84 \pm 2.17$
3.	Parity		
	a) Primiparous	3	(4.4%)
	b) Multiparous (G 1-4)	46	(72%)
	c) Multiparous (G 5-8)	15	(23.6%)
4.	Home delivery	34	(53.12%)
5.	Hospital delivery	30	(46.88%)
	SVD	14	
	C/section	16	
6.	Discharged	52	(81.24%)
7.	Death	6	(9.38%)
8.	L.A.M.A.	6	(9.38%)

some other doctor or they thought that patients would not recover. 6/12 (9.38%) died in the ward. Diagnosis made during stay in the ward both clinically and on investigations are shown in table-II.

In most of the patients the clinical diagnosis of septicemia was very apparent as those patients had toxic look, dehydration, high-grade fever, purulent vaginal discharge, urinary tract infection, aspiration pneumonia or chest infection. All the patients were febrile. Hypostatic pneumonia due to prolonged flat position, forcible feeding and aspiration was present in all unconscious patients.

Table - II: Diagnosis during admission  
n = 64

S. No.	Symptoms/ disease	No. of Patients	Percentage
1.	Fever	64	(100%)
2.	Septicemia	26	(40.5%)
3.	Renal failure	8	(12%)
4.	Disseminated Intra-vascular coagulation (DIC)	6	(10%)
5.	Jaundice/hepatic failure	6	(10%)
6.	Fits/Eclampsia	8	(12%)
7.	Tuberculosis (TB)	4	(6%)
8.	Tetanus	3	(5.0%)
9.	Postpartum Cardio-myopathy	2	(3.0%)
10.	Stroke due to sub-acute bacterial endocarditis (SBE)	1	(1.5%)

## DISCUSSION

Postpartum complications, were noted in the patients, who were admitted through emergency and referred from obstetrical wards attached with the hospital with the stay from few hours to 2 days. Fifty percent of the patients who reported to us were critically ill when they came to obstetrical wards, and were referred there from home or other Tehsil or district hospitals. Septicemia was most common and noted in 40.5% patients, which if not handled appropriately and immediately can lead to death of the

patients. Sepsis syndrome is the clinical syndrome that results from the presence of microorganisms in the blood stream, this can lead to systemic infection and organ dysfunction, which may lead to hemodynamic instability and ultimately septicaemic shock. Prolonged obstructed labor, repeated vaginal examinations with septic measures, instrumental delivery or manual removal of placenta can lead to infections and has also been reported in another study carried out in obstetrical ward<sup>3</sup>. Septic shock which leads to mental confusion or tachypnoea by Gram positive organisms account for 40% and Gram negative for 60% of hospital acquired infection<sup>4</sup>. The most common Gram negative bacteria are Esch. Coli, Klebsiella and Pseudomonas. The most common gram positive are staph. aureus, staph. epidermidis and enterococci, however in female genital tract anaerobes are equally important<sup>4</sup>. Similarly retained placenta following delivery, severe tissue damage can lead to over stimulation of clotting and anticlotting mechanisms of body which may lead to generalized bleeding<sup>5</sup> which can also lead to acute renal failure<sup>6</sup>.

In the puerperium alkaline lochia reduces acidity of the vagina to such an extent that saprophytic organisms do not flourish, after third day puerperial saprophytes may be found in uterus, the contamination becoming more frequent and more marked as puerperium advances. Infection is conveyed from outside during labour or during early puerperium, TBA's should be familiarized with aseptic techniques and should know to refer high risk patients to hospitals<sup>7,8</sup>. Shock leads to profound tissue hypoperfusion and increases the mortality to 60%<sup>9</sup>. Septic shock can present with profound prolonged hypotension, fever or hypothermia, acidosis, tachypnea and confusion due to hypoxia, adult respiratory distress syndrome (ARDS), disseminated Intravascular coagulation and acute renal failure which can cause breathlessness, oliguria and anuria. In the present study 22% of patients presented with DIC and ARF, out of these 12% had eclampsia. Davidson et al. reported the seizures can occur postpartum the remainder being antepartum<sup>10</sup>

(38%) or intrapartum<sup>10</sup> (18%), pathophysiology is thought to involve cerebral vasospasm leading to ischaemia and cerebral edema<sup>11</sup>. The patients who presented with eclampsia, mortality was high in them because of associated complications, which was also in accordance with another study which showed that 65% patients had intracerebral hemorrhage, 15% pulmonary embolism, 10% DIC and 10% ARF on clinical grounds<sup>12</sup>.

In this study, 22 patients presented with DIC and acute renal failure which can be due to septicemia, embolism or thrombotic thrombocytopenic purpura or haemolytic uraemic syndrome. If infection is by clostridium perferinges it can cause more severe shock as reported by Krane<sup>13</sup> and Turney<sup>14</sup>. Katz et al<sup>15</sup> noted that 6% of the patients who had initial GFR lower than normal, developed end stage renal failure. Pregnant women show fall in GFR by 16%, which comes to normal level by 6-12 months after delivery in most cases<sup>15</sup>. In our patients it was not known that how many did have any sort of renal disease prior to pregnancy because a few may have suffered from glomerulonephritis. It has been reported in a series by Jungers<sup>16</sup> et al. that histological type of glomerulonephritis was predictive of end stage renal failure. Postpartum haemorrhage<sup>17,18,19</sup>, hypovolemia<sup>20</sup> and infection may contribute to it. Obstetrical renal failure is a known entity which is responsible for ARF which has virtually disappeared in West<sup>21</sup> but is still responsible for 15-30% of all cases in India, Indonesia, Thailand and Ghana<sup>22,23</sup> all these complications were associated with abruptio placenta, peripartum or postpartum hemorrhage and puerperal sepsis. Our study findings correlate well with other observations.

Jaundice may occur in pregnancy due to many causes like hepatitis, acute fulminant hepatitis, biliary stasis, drug induced, haemolytic disorders and sepsis. Sepsis and acute fulminant hepatitis was the cause of jaundice amongst 10%. This is at variant with another study<sup>24</sup>, perhaps it was the study on pregnant women and not in postpartum patients.

In our study, TB was noted in (6%) and SBE

were recorded in 1.5% which resulted in stroke. In the perception of the patients the fever was thought to be due to weakness during pregnancy. However when fever became worse following delivery only then the patient consulted the doctor.

Postpartum cardiomyopathy is a rare disorder in which a weakened heart is diagnosed within the last month of pregnancy<sup>25</sup> or within 5 months after delivery without other identifiable causes for dysfunction of the heart. In this study, 3% of the patients had postpartum cardiomyopathy. However another study from Lahore in older pregnant patient reported this complication to be 7.4%<sup>26</sup>.

Tetanus was observed in 5% of patients in the present series, despite the campaign by government for tetanus vaccination amongst pregnant females. This is not in line with other study which showed 13% tetanus as post-delivery and post-abortive complication which was carried out in tetanus ward<sup>27</sup>.

Mortality was high, 12 (18.76%) were very critically ill, 6 (9.38%) died in the ward whereas 6 (9.38%) left the ward which would have ultimately died. Deaths were more common in multiparous women and who had multiple problems following septicemia, which resulted in multi-organ failure. Similar observations have been made in other studies<sup>28,29</sup>.

## CONCLUSIONS

In developed countries maternal mortality rate is only 2.9/100,000 live births while in developing countries it is 300-600 deaths/100,000 live births<sup>6</sup>. Problems of our obstetric services include non-availability of services in far-flung areas, lack of proper facilities, equipment and adequate skilled personnel at Tehsil Headquarter and District Headquarter Hospitals. Proper utilization of the available staff which can manage complicated patients will go a long way in further reducing mortality. There should be coordination between obstetrician, physician and surgeons at all levels and they should work as one team for the ultimate care of the patient and the attitude

of getting rid off the patient after delivery, should be discouraged.

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