IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 1 Ver. XII January. (2018), PP 11-15
www.iosrjournals.org

Prevalence, Risk Factor and Treatment Options in Patients with Post-Partum Psychosis in Tertiary Centre: A Retrospective Study

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Abstract
Background*: Postpartum psychosis is a very serious medical emergency that affect a new mother. The episode of psychosis usually begins within 3 months of delivery. A woman with postpartum psychosis loses touch with reality and have hallucinations and delusions. Other symptoms may include insomnia, agitation, anger, and irrational guilt about somehow having done something wrong. Women who have postpartum psychosis need prompt treatment and almost always need medication. They are at increase risk for hurting themselves or someone else.*
Objectives: *To measure the prevalence, associated risk factors and treatment options in patients with post-partum psychosis in tertiary centre.*
Materials & Methods: *Study type- Retrospective type with study duration of 18 calendar months with effect from the 1st may 2016 to 31st Oct 2017 conducted in Dept. of Obstetrics and Gynaecology, RIMS, Imphal.*
Result: *out of total 13500 deliveries including both by vaginal route and caesarean section there were 19 cases of postpartum psychosis giving an incidence of 1.4 per 1000 deliveries. Most of the patients were unbooked, primiparae with low socioeconomic status, with mean age of 26 ± 6 years. There were 14 live births, 5 perinatal deaths. 12 newborn was male by sex while only 7 were female.*
Conclusion: *Post-partum psychosis is one of the rare and serious medical emergency which requires immediate attention. Early diagnosis of associated risk factors and extensive and timely intervention may alter the outcome and prevents future complications.*
Keywords: *Hallucination, primiparae, delusions, unbooked, perinatal deaths.*

Date of Submission: 08-01-2018 Date of acceptance: 25-01-2018

I. Introduction

Postpartum psychosis is the one of most severe but uncommon form of postnatal affective illness, with rates of 1-2 episodes per 1000 deliveries.[1] It is considered an emergency that necessitates an urgent evaluation, psychiatric referral, and possible hospitalization.[2] Postpartum psychosis is a rare psychiatric emergency in which symptoms of high mood and racing thoughts (mania), depression, severe confusion, loss of inhibition, paranoia, hallucinations and delusions set in, beginning suddenly in the first two weeks after childbirth. The symptoms vary and can change quickly. The most severe symptoms last from 2 to 12 weeks, and recovery takes 6 months to a year. It is psychiatric emergency related to care of women after they give birth. It is different from postpartum depression and from maternity blues.[4] The clinical onset is rapid, with symptoms presenting as early as the first 48 to 72 hours postpartum and the majority of episodes developing within the first 2 weeks after delivery. The presenting symptoms are typically depressed or elated mood, disorganized behaviour, mood lability, delusions, and hallucinations.[5] Differential diagnoses include bipolar disorder, unipolar major depression, obsessive compulsion symptoms, obsessive compulsion disorders, and schizophrenia Women with a history of bipolar disorder, schizophrenia, prior episode of postpartum psychosis, or a family history of postpartum psychosis are at high risk; about 25-50% of women in this group will have postpartum psychosis.[4] Around 37% of women with bipolar disorder have a severe postpartum episode. Women with a prior episode of postpartum psychosis have about a 30% risk of having another episode in the next pregnancy.[7] For a woman with no history of mental illness who has a close relative (a mother or sister) who had postpartum psychosis, the risk is about 3%.[4] The mutations in chromosome 16 and in specific genes involved in serotoninergic, hormonal, and inflammatory pathways have been identified, but none had been confirmed.[3] The Family history of affective psychosis, prenatal depression, and autoimmune thyroid dysfunction also increase the risk of postpartum

psychosis.[8] In most cases hospital admission is necessary. Antipsychotic drugs and mood stabilizing drugs such as lithium are typically administered but is not clear if mood stabilizers can be titrated to a high enough level quickly enough to be effective. Electroconvulsive therapy may be considered, especially if there is a high risk of suicide.[4]Family support plays an important role. Prognosis is good, especially when symptoms emerge less than one month after delivery.[9] They are at higher risk of developing further puerperal and non-puerperal episodes of bipolar affective disorder in future.[10]Aim of this study is to measure the prevalence, associated risk factors and treatment options in patients with post-partum psychosis in tertiary centre RIMS, Imphal, Manipur.

II. Materials And Methods

Study design : Retrospective descriptive study
Study duration : One and half year (1st may 2016 to 31st Oct 2017)
Study setting : The study has been conducted in the Department of Obstetrics & Gynaecology, RIMS, Imphal, Manipur

Study population: All the women who was admitted and delivered in Obstetrics & Gynaecological Department, RIMS, Imphal, during the study period. The disease was diagnosed using criteria for psychosis given by the International Classification of Diseases of the World Health Organization ICD-10. Detailed clinical history including parity, Obstetrical history, family history, past medical & surgical history, booking status, General examination, systemic examination, obstetrical examination, all the routine investigations detail including complete haemogram, urine routine examination, liver and kidney function test, serum thyroid profile, ABO grouping and Rh typing, blood sugar estimation, trans-abdominal sonography has been retrieved manually from the health records unit of our Hospital. Foetal outcomes as regards with liquor status, sex of the baby, APGAR score at 1 minute of birth, NICU admissions or neonatal death, has been taken into consideration.

III. Statistical Analysis

The data has been checked for consistency and completeness and observation of study has been entered in IBM SPSS 21.0 Version. The descriptive statistics like mean, median, standard deviation, percentage has been used.

IV Result

The study included 13500 patients who delivered by vaginal route and caesarean section at term pregnancy between 1st May 2016 to 31st Oct 2017 in Department of Obstetrics & Gynaecology, RIMS, Imphal, Manipur .Out of the 13500 patients, 19 patients had post-partum psychosis with incidence of about 1.4 per 1000 deliveries.

Table 1: Distribution of religion

Religion	Frequency (N)	Percentage (%)
Mettei	8	43.2
Muslim	7	35.6
Tribal	3	16.4
Others	1	4.8

Majority of the women in the study group were mettei/Hindus (43.2%). and Muslim (35.6) while tribal and other remaining constitute viz. 16.4% and 4.8%.

Table 2: Distribution of blood group

Blood group	Frequency (N)	Percentage (%)
O+	8	42.60
AB+	2	10.72
A+	5	26.51
B+	3	15.98
B-	0	0
O-	0	0
A-	1	3.9

- The most common blood group among the study population was O+ve which comprises 42.60% followed by A+ve which comprises 26.51% of the total study population. Only one patient was with –ve Rhesus factor.

Table 3: Age distribution of the study population.

Age in years	Numbers of cases	Percentage
≤24	12	62.45
25-34	2	12.66
>35	5	24.90

Total	19	100

Mean± SD = 29.5±5.80

The table is showing the distribution of age among the study population. The maximum number of pregnant women were in the age group of ≤24 years of age which forms around 62.45 % of study population, and minimum number of women were with age between 25-34 years.

Table 4: Booking/unbooking status of study populations**.**

Booking Status	Numbers	Percentage
Booked	5	26.31
Unbooked	14	73.69
Total	19	100

In the study, out of the total 19 cases, 14 (73.69%) were unbooked at RIMS Antenatal clinic (ANC) with less than three antenatal visits and attended as emergencies and 5 (26.31%) of cases were booked with regular ante-natal check-up and follow up.

Table 5: Gravidity of study population.

	Number of cases	Percentage
Primigravid	11	57..89
Multigravida	2	10.52
Grand multigravid	6	31.57
Total	19	100

Most of the cases were Primigravid multigravida which formed around 57.89% of the study population while minimum number of patients were from multigravida which formed 10.52% of total study population.

Table 6: Birth weight

Birth weight	**Frequency (N)**	**Percentage (%)**
Low birth weight	13	68.42
Normal Birth weight	6	31.58

This table shows the distribution of birth weight among the study population. 68.42% of the babies have low birth weight.

Table 7: Showing percentage of patients with family history of psychosis among study group**.**

Relation	**Number**	**Percentage**
Mother	2	10.52
Father	1	5.26
Both	2	10.52
None	14	73.70
Total	19	100

Among study group 73.70% of patients had no family history of diabetes mellitus while father of 1 and mother of 2 patients had psychosis, while 10.52% of patients had both parents suffering from diabetes mellitus.

Table 8: Showing Percentage Of Mechanism Of Delivery At Term In Study Group

Mechanism of delivery	**Number**	**Percentage**
Caesarean Section	1	5.26
Normal Vaginal Delivery	15	78.95
Ventouse Vaginal Delivery	2	10.52
Forceps Vaginal Delivery	1	5.26
Total	19	100

Most of the patients from study group of 78.95% delivered by vaginal means out of which 10.52% were assisted by Ventouse and only 5.26% were assisted by Obstetric forceps and 5.26% delivered by Caesarian section.

Table 9: Showing mode of management among study group**.**

Mode of management	**Number**	**Percentage**
Pharmacotherapy	18	94.73
ECT	1	5.27
Total	19	100

The table depicts that 94.73% of patients have been managed by pharmacotherapy while 5.27% of the patients from study group were managed by ECT.

IV. Discussion

1. The study included 13500 patients who delivered by vaginal route and caesarean section at term pregnancy between 1st May 2016 to 31st Oct 2017 in Department of Obstetrics & Gynaecology, RIMS, Imphal, Manipur. Out of the 13500 patients, 19 patients had post-partum psychosis with incidence of about 1.4 per 1000 deliveries. The disease was diagnosed using criteria for psychosis given by the International Classification of Diseases of the World Health Organization ICD-10. The incidence of 1.4 per 1000 deliveries is comparable to that found in study conducted by B. L. Harlow .[11]
2. Women with a history of bipolar disorder, postpartum psychosis, or both are at high risk for postpartum relapse.[12] During postpartum psychosis, there is a forced withdrawal from everyday life, accompanied by a tendency to suspend social adjustment, and during the period of hospitalization, social adjustment may collapse to the extent that it may not be possible to assess social adjustment at all.
3. According to *DSM-I* [13] psychotic disorders are defined as diseases characterized by personality disintegration, failure to test and evaluate correctly external reality, and inability to relate effectively to people or work. In affective reactions, the psychosis is characterized by severe mood disturbance, with the mood alterations of thought and behaviour in consonance with affect. In schizophrenic reactions, the psychosis is defined by fundamental disturbances in reality relationships and concept formation with associated affective, behavioural, and intellectual disturbances marked by a tendency to retreat from reality, regressive trends, bizarre behaviour, disturbances in the stream of thought, and delusions.
4. The psychotic behaviour is detected by the presence of one or more of the following psychopathological symptoms: hallucinations, formal thought disorder (disorganized or odd speech), delusions (including disturbances of ego integrity, such as thought insertion, thought withdrawal, or feelings of being controlled), disturbances of affect (flat/inappropriate), avolition/apathy, alogia, disorganized behaviour, catatonic motor behaviour, and depersonalization/derealization. [14]
5. The ages of the patients ranged between 20 and 35 years with a mean age of 29.5±5.80 years. This finding differs from that of a study in Sweden which found that older maternal age was associated with increased risk of first hospital admission from postpartum psychosis among first-time mothers.[15]
6. In present study the physical co-morbidities associated with postpartum psychosis were mostly anaemia , puerperal sepsis, and rarely pre-eclampsia. This was actually similar finding to the finding in Tanzania.[16]
7. Elston R et al [18] found no relationship between blood group and psychotic disorder but in our study we found that most common blood group among the study population was O+ve which comprises 42.60% followed by A+ve which comprises 26.51% of the total study population. Only one patient was with –ve Rhesus factor.
8. The birth weight among the present study population in 68.42% of the babies delivered to mother who later developed postpartum psychosis have low birth weight, similar finding has been observed by Rahman et al.[19]
9. In this study he mainstay of treatment was pharmacotherapy in almost all the cases however, only one patient had electroconvulsive therapy (ECT) for lack of adequate response to pharmacotherapy with the suicidal tendency. V. Bergink et al[17] advocate the use of ECT as first line treatment in selected cases.
10. Untreated postpartum depression can have adverse long term effects. For the mother, the episode can be the precursor of chronic or recurrent depression. For her children, a mother's ongoing depression can contribute to emotional, behavioural, cognitive and interpersonal problems in later life. The known risk factors and negative consequences of postpartum psychosis point to the importance of preventative and acute treatment measures. Well-designed prospective studies are needed to determine the efficacy of prevention and treatment interventions for women who experience postpartum psychosis.

V. Conclusion

The incidence of postpartum psychosis was 1.1 per 1000 deliveries in our centre. Primiparity appeared to be a risk factor and the illness occurred mainly in unbooked patients who also had unsupervised home deliveries. The most common mode of presentation was irrational talks. There is need for risk factor evaluation for puerperal psychosis during the antenatal period especially in primigravidae and more advocacies to encourage women to book for antenatal care in our environment.

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