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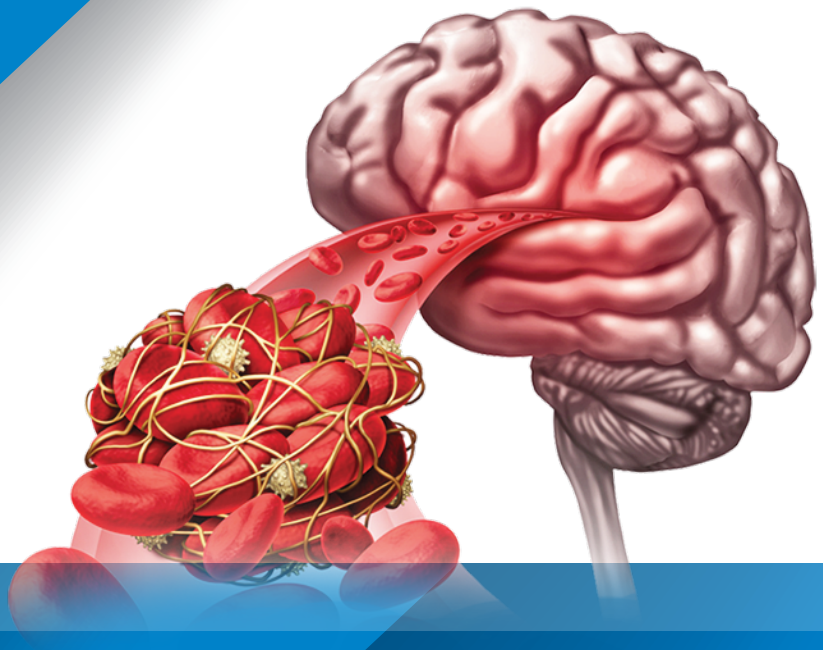

Stroke is the 2nd leading cause of mortality &

3rd leading cause of disability[1]

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The ORION Medical Journal

19th Years of glorious venture

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Editor's Choice

The Orion Medical Journal is celebrating nineteen years of trust and service to the medical community of Bangladesh. The Orion accomplishes the choice of thousand readers nationally and in the international arena. This medical journal is exclusively emphasizing the local research work and endorsing national diseases with native treatment protocol. In this issue we published one Editorial Article, Four Original Articles with adequate references. Latest and breakthrough news of modern Medical Science are also assimilate.

Editorial article (P-02) of this issue "Stem Cell Therapy for Decompensated Liver Cirrhosis"

The first original article (P-05) "Anemia in pregnancy and oral iron therapy ".

Second original article (P-10) "Partograph - Essential Tool for Effective Management of Labour".

Third original article (P-22) "Title: Study on near miss cases of Eclampsia".

Four original article (P-38) " Sonological Evaluation of Causes of First Trimester Bleeding".

Strength growth come only through continuous effort & struggle. Also thanks all of readers, contributors & reviewers for their continued support.

Thankfulness creates gratitude which generates contentment that causes peace.

May the Almighty bless you with good health, give you long and happy life and may your all dreams come true.

DR. SINTHIA ALAM
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Stem Cell Therapy for Decompensated Liver Cirrhosis

The ORION Medical Journal 2018 March;20-1(43): p2-3

Introduction

Decompensated cirrhosis of liver represents intractable liver disease with almost little opportunity to reverse and high mortality. Liver transplantation is the only effective treatment currently available for decompensated cirrhosis. However its application is limited due to shortage of donor and high cost. Hemodynamic instability, need for high dose inotropes, raised intracranial pressure, reduction in cerebral perfusion pressure, severe, bacterial and/or fungal infections etc. make patients often unsuitable to undergo lievr transplantation. Besides, liver transplantation is not available in Bangladesh.

Another modality for management of decompensated cirrhosis is liver support device (MARS) to serve as a 'bridge' to transplant. But studies have shown that MARS do not reduce mortality significantly compared to standard medical treatment (Khuroo et. al. 2004).

In order to overcome these problems, alternative approaches need to be explored. In particular, the great potential of stem cells to differentiate into multiple cell lineages raises the exciting hypothesis that these cells can be used in tissue repair and tissue-specific cell regeneration, when tissue-resident stem cells are not sufficient for the regeneration of a failing organ. During liver regeneration, bone marrow-derived hematopoietic stem cells (HSC) may mobilize to the liver and, together with hepatocytes and intra-hepatic stem cells, contribute to the proliferation of liver cells. It has been shown earlier that, granulocyte colony stimulating factor (G-CSF) can be used to mobilize stem cells to the periphery in patients with advanced liver disease. Therefore, stem cell therapy following G-CSF may be beneficial for liver regeneration in patients with decompensated cirrhosis of liver (Gara et. al 2006; Duan et. al 2013; Saha et. al 2017).

Besides recently a pilot study has been completed m BSMMU, where safety of autologus stem cell therapy in patients with decompesnated cirrhotics has been established (Mahtab et. al 2017).

Discussion

Safety and efficacy of G-CSF in 32 patients with Acute on chronic liver failure (ACLF) patients has been established at the Department of Hepatology, Bangabandhu Sheikh Mujib Medical University (BSMMU) recently (Saha et. al 2017). Simultaneous use of G-CSF and antiviral drugs in hepatitis B virus (HBV) ACLF significantly improved survival over antiviral drugs alone. Incidence of hepatorenal syndrome and hyponatremia were reduced due to use of G-CSF. Child Pough (CTP) and Model for End Stage Liver Disease (MELD) scores improved in patients treated with G-CSF. It was concluded that G-CSF therapy improved survival and clinical recovery in HBV-ACLF. G-CSF therapy also prevented renal failure and hyponatremia. The study strongly recommends use of G-CSF therapy in addition to standard medical therapy in such patients (Saha et. al 2017).

Earlier another study in BSMMU, established safety of G-CSF in decompensated cirrhotics. Patients were followed up at the end of treatment and at 12 weeks of treatment. Treatment was well tolerated, and no significant adverse event was recorded in any patient. Fifteen out of 17 (88%) patients were alive at last follow-up. Although serum bilirubin, albumin, and prothrombin time improved in some patients, statistically significant improvement of CTP score could not be documented (Mahtab et. al 2017).

From India, Garg et al (2012) stated that G-CSF mobilizes CD34+ cells and improved survival of patients with ACLF. The study shows, G-CSF therapy lead to significant increase in total leukocyte count across the total duration of therapy. The

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researchers observed G-CSF therapy also lead to significant increase in the CD34 cell population in the liver tissue after 4 weeks of G-CSF administration. This proved the role of recruitment of bone marrow-derived cells after G-CSF stimulation in patients with decompensated cirrhosis. An important observation of the study was that the G-CSF therapy tended to prevent the development of multi-organ failure. This can be explained by prevention of sepsis in these patients with the drug. Neutrophil dysfunction has been shown to cause sepsis and facilitate development of hepatorenal syndrome and hepatic encephalopathy is patients with decompensated cirrhosis. G-CSF therapy further showed an improvement of CTP and MELD scores and significantly improved survival in patients with ACLF.

Duan et al (2013) also stated that G-CSF therapy improves survival in patients with HBV associated ACLF. The study showed that G-CSF therapy increased peripheral neutrophil count and CD 34+ cell count in patients with HBV-ACLF. Patient treated with G-CSF not only demonstrated a significantly better 90 days survival rate, CTP and MELD scores, but also less likely to develop Hepato-renal syndrome and sepsis compared to controls. This could be explained by increased numbers of neutrophils in the patient.

Earlier Sell et al (2001) showed in a study that in liver regeneration process bone marrow derived stem cell may represent a third proliferative compartment besides hepatocytes and intrahepatic stem cells. Fogt et al (2002) performed a study, which suggest that such cell might contribute to the regeneration after different kinds of liver injuries. Gianni et al (1989) stated that a potential approach to improve bone marrow derived stem cell engraftment to the damaged liver could be their mobilization by using cytokine (G-CSF) administration. Gara et al (2006) stated that mobilization of bone marrow-derived stem cells induced by G-CSF is observed in patients with severe cirrhosis. Spahr et al (2008) showed that G-CSF mobilizes CD34 cells, increases hepatocyte growth and induce hepatic progenitor cells to proliferate within 7 days of administration in patients with alcoholic steatohepatitis. Mohamadnejad et al (2007) reported no side-effects in four patients with decompensated liver cirrhosis during follow-up after bone marrow derived mesenchymal stem cell administration through peripheral vein. MELD scores improved in two patients. Furthermore, the quality of life of all four patients improved by the end of follow-up.

Conclusion

Stem cell therapy is hers new hope for management of decompensation of liver, specially in settings like ours where liver transplantation is unavailable. Pilot study at BSMMU is already showing promising results.

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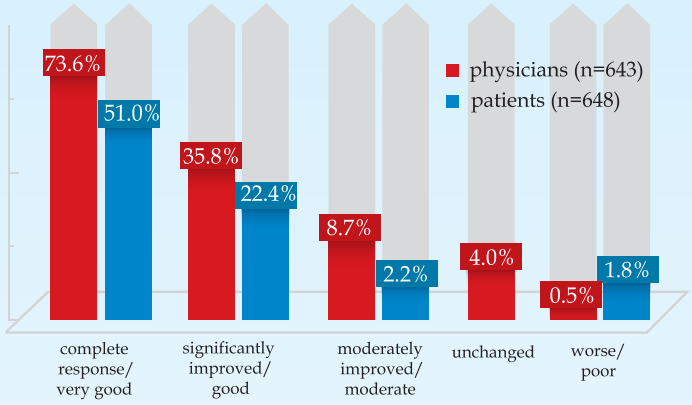

Fig: Effectiveness of Rupatadine

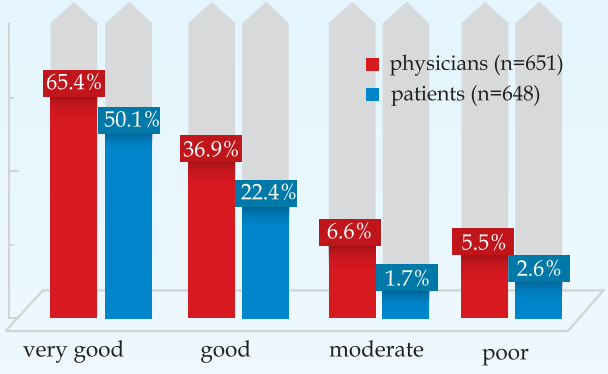

Fig: Tolerability of Rupatadine

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Original Article

Anemia in pregnancy and oral iron therapy

Mst. Shumsun Nahar [1], Sumia Ahmed Tazri [2], Monira Ahmed [3]

The ORION Medical Journal 2018 March;20-1(43): p5-8

Objective

To see the prevalence of anemia in pregnancy and effect of oral iron therapy.

Place and period of study

6 months study which was conducted at the department of Gynaecology and Obstetrics in Jahurul Islam Medical College Hospital.

Materials and method

Prospective study was conducted using purposive sampling method. 200 pregnant women of 13 to 28 weeks of pregnancy with iron deficiency anemia (Hb less than 10mg /dl) were enrolled for the study. Every woman was given Tab. ferrous sulfate (1 tab three times daily). Patients were evaluated 3 months after oral iron therapy.

Result

Prevalence of anemia was 47% and oral iron therapy was an effective method of treatment.

Conclusion

While the overall prevalence of anemia in pregnancy is still very high, oral iron therapy can be a very convenient approach to treat the condition. It may reduce the blood transfusion rates in pregnant women who have severe anemia near term. Government should strengthen nationwide programme to raise public awareness about it.

Key words

Anemia, Iron deficiency, Pregnancy

Introduction

Anemia is one of the most prevalent nutritional deficiency problems affecting pregnant women.(1) World health organization (WHO) estimated that 52% of pregnant women in developing countries are anemic.(2) Approximately 80% of all anemia cases in pregnancy results from iron deficiency. The predominant etiological factors are suboptimal iron content of the diet, insufficient iron store in the majority of women during their reproductive year. The reason is that women require about twice as much iron as the amount when they are not pregnant. During pregnancy blood volume increases about fifty percent which can result in an iron deficiency.(1) The high incidence of iron deficiency underscores the need for supplementation in pregnancy. Iron supplementation is especially important because the demand for iron by the mother and the fetuses increases during pregnancy. The extra demand cannot be met without iron supplementation. A pregnant woman needs about 2 to 4.8 mg of iron per day. (4) Iron supplementation is the most common strategy currently used to address iron deficiency in developing countries. Iron supplementation can be targeted to high risk groups & can be cost effective.(5) Internationally, oral iron supplementation is the most common way of treatment, and dose depends on severity of condition. Oral iron preparations given prophylactically consist of one of the iron salts, either alone or in combination with folic acid. Common iron preparation includes ferrous sulphate, and ferrous gluconate. (6) The choice of treatment of iron deficiency anemia is oral iron replacement because it is the safest and least expensive. (7)

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Materials and method

A prospective study stretching from January 2012 to June 2012 was conducted using purposive sampling method. 200 pregnant women of 13 to 28 weeks of pregnancy with iron deficiency anemia (Hb less than 10mg /dl)

were enrolled for the study. Verbal consent was taken from the respondents before data collection. They were clearly informed about the objectives of the study. They were also assured that data will remain confidential and it will be used for only academic and medical purpose. Every woman was given Tab. ferrous sulfate (1 tab three times daily). After compilation obtained data were checked, verified, coded and analyzed using computer based programme (SPSS for windows version 7). Pregnancy with haemolytic disorder, sickle cell disorder, thalassemia, chronic renal disease, others medical & surgical disorder or twin pregnancy were excluded from the study. Patients were evaluated 3 months after oral iron therapy.

Related definitions

Anaemia

Anaemia is present when hemoglobin level in the blood is below the Lower extreme of the normal range for the age & sex of the individual. The lower limit of normality is reduced during pregnancy. (8)

Iron deficiency anemia

Iron deficiency is used to designate a condition in which total body iron content has been depleted, no matter what the cause. (9) In adult women, iron requirement is approximately 1.36 mg/day. It will be stable or decreased slightly during the 1st trimester of pregnancy owing to the cessations of menses. During the first half of pregnancy iron requirements may not increase significantly, and iron from food (10-15 mg/dl) is insufficient to lower the basal loss of 1mg/d. However during the 2nd half of pregnancy iron requirement increases due to expansion of red blood cell mass and rapid growth of fetus. Increased number of red blood cells & greater haemoglobin mass require about 500 mg of iron. The iron need for fetus average 300 mg. Thus total amount of iron necessary over the course of a normal pregnancy approximately 800 mg; this cannot be supplied in the diet; and iron supplementation must be given. Data published by food and nutrition board of national academy of sciences showed that woman's iron requirements increases by approximately 3.5 mg/dl in pregnancy. (10) During 2nd & 3rd trimester, the requirements are about 5.6 mg/day (range 3.5-8.8mg/day), or about 4.2 mg/day more than that in the non-pregnant women. (11) These requirements covers normal basal losses from the gastro intestinal tract, skin, urinary tract, the additional demands of placenta, cord & the growing foetus as well as the increase of the maternal red blood cell mass. So approximately 1000 mg of iron is needed for the entire pregnancy. The amount of dietary iron is probably enough to compensate for the daily and the menstrual losses of a normal female, But it is not adequate for the formation of large iron stores during pregnancy. (12)

The iron requirements of a normal pregnancy have been quantified by the council of foods & nutrition as follows:

- To compensate for external iron losses 170 mg.
- To allow expansion maternal red cell mass 450 mg
- Fetal iron 270 mg
- Iron in placenta and cord 90 mg

The gastrointestinal absorption of iron increases during the last two trimesters of pregnancy for about 1.0-3.0 mg/day. Even if this increased absorption is taken into consideration, the iron contents of regular diet cannot provide more than one to two thirds of normal requirements of pregnancy. A pregnant woman must have at least 500 mg of stored iron at the beginning of the pregnancy in order to fulfill the requirements of gestational need without iron supplementation. Even if this amount of stored iron is present it will be completely exhausted at the end of gestation. (13)

Results

42% of the patients were of 23-28 years of age followed by 18-22 years of age group (40%) thereafter 29-34 years group (17%). Majority (91%) were house wife and only 9% were working lady. 6% patients were illiterate, 3% were sign only literate. 51.5% patients passed primary level, 36.5% passed secondary level and 3% passed secondary level

Table I: Distribution of cases by parity (n=200)

Parity	Number	Percentage (%)
Nullipara	79	39.5
Multiparous	103	51.5
Grand multiparous	18	9.0
Total	200	100.0

Table II: Distribution of cases by duration of pregnancy (n=200)

Duration of pregnancy	Number	Percentage (%)
13-17 weeks	24	12.0
18-22 weeks	55	27.5
23-28 weeks	121	60.5
Total	200	100.0

Table III: Hemoglobin level of study population (n=200)

Haemoglobin	Mean± SD	P value
Pre-iron therapy	9.52±0.43	0.001
Post iron therapy	10.88±0.43	
Increment by iron therapy	1.35±0.43	

Discussion

Most women begin their pregnancy with partially or completely depleted iron reserves. Thus, the severity of the anaemia is inversely related to the amount of iron reserves. (14) Among 200 pregnant anaemic respondents, 9%, 51.5%, 36.5% & 3% cases belonged to illiterate, primary, secondary & higher secondary educational groups respectively. It was observed that highest number of respondent in this study was in secondary educational group (51.5%). As the government has fixed a bar of minimum age for marriage, has taken a number of initiatives to encourage female education, number of early marriage and getting pregnant is gradually lowering down. Still the percentage of early marriage is still high. Common scenario showed by Rizwan et al. who observed 82.88% of the uneducated women were anemic while 45% of the educated patients were anemic. (14) Anemia was more prevalent in middle and lower middle class families. Knowledge about healthy and nutritious food habit was the cause. During pregnancy plasma volume expands, which is maximum around 32 weeks resulting in haemoglobin dilution reflecting bigger percentage of anemic patients around third trimester. (15) In practice, physicians are often faced with poor compliance, digestive side effects those can lead to worsening of anemia. In these cases parenteral forms of iron administration is indicated, as well as those in which the oral treatment is ineffective. (16) The same applies to patients with inflammatory bowel diseases, many of whom are iron deficient and show digestive intolerance to ferrous salts. (17)

Conclusion

Oral iron therapy is safe, convenient and effective in treatment of iron deficiency anemia.

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Partograph - Essential Tool for Effective Management of Labour

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The ORION Medical Journal 2018 March;20-1(43): p10-20

Abstract

Objectives

To assess the importance of partographic control of labour in preventing prolonged labour and its consequences, thereby decreasing maternal morbidity and mortality, and improvement of neonatal outcome.

Materials and Methods

This cross sectional study was conducted on 116 term primi and multipara women admitted in the Labour Ward of Rangpur Medical College Hospital during the period from July 2007 to June 2008. Data were collected by using a questionnaire along with partograph sheet.

Results

It was found that 66.8% patients were delivered within 7 hours and all patients were delivered within 10 hours from active phase of labour. Thus, prolonged labour and its consequences, such as obstructed labour and ruptured uterus, can be avoided by using partograph. There was no obstructed labour and no maternal or perinatal mortality because of close intranatal care by partograph. In case of any deviation from normal, intervention was done immediately. Intervention required in 31.4% of primigravida and 13.8% of multigravida in the form of forceps, ventouse or LUCS. Seventy-eight percent of these patients had spontaneous vaginal delivery, 4.3% required assisted delivery (Ventouse) and17.2% needed Caesarean section. Caesarean section was done in 17.2 % cases because of fetal distress (35.0%) and prolonged labour (65.0%) due to malrotation and cephalopelvic disproportion. Patients with non-engaged head in labour required more intervention than who had engaged head. With the use of partograph, unnecessary interventions were reduced. In 100% of the patients, crossing the action line of partograph required interference, but 93.10% within alert line of partograph delivered vaginally. When IDR (Initial dilatation rate of cervix) was 1 cm/hr or more, 83.72% women delivered spontaneously. When IDR was ≤ 0.4 cm/hr, 100% of patients required some kind of interference. Thus, the maintenance of partograph in labour enables the obstetrician to recognize very early dysfunctional labour and act accordingly.

Conclusion

The maintenance of a partogram in labour enables the obstetrician to recognize very early dysfunctional labour. With the help of a partogram, time of delivery can be estimated and if the progress is slow, an appropriate interference at the right time can be instituted before the labour becomes dangerously protracted.

Key Words

Partograph, LUCS (Lower Uterine Caesarean Section), ARM (Artificial Rupture of Membrane).

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Introduction

Approximately half a million women lose their lives because of complications of pregnancy every year and huge numbers are left with painful injuries as a result of obstructed or prolonged labour. About 99 percent of these occur in the developing

countries. The risk of pregnancy for women in the developing countries can be as high as fifty to hundred times that to women in Western Europe and North America1.

In Bangladesh, 174 mothers died per 100,000 live births from complications of pregnancy, childbirth and after delivery, 7% of these deaths occur due to prolonged and obstructed labour2. Not only mortality, the maternal morbidity which results from pregnancy complications is also a great problem in this country. It is estimated that for each death of a mother, there are 15 mothers who escaped near-death by chance, resulting in 375,000 physically and socially handicapped women annually in Bangladesh3.

One newborn dies every 3.4 minutes and for every 14 perinatal deaths in Bangladesh, there is one maternal death4. Early neonatal death occupy one-third of under-five death worldwide. Three million neonatal deaths occur during the first weeks of life and are largely a consequence of inadequate or inappropriate care during pregnancies and deliveries5.

Many millions of babies are so badly damaged due to birth injuries that they are unable to achieve their full potentiality as human beings. Survey shows that around 30% of newborn babies (3.6 million) in the developing countries suffer from moderate to severe birth asphyxia. Of these, about 800,000 die and an equal number suffers from brain damage leading to cerebral palsy, seizures and learning disorders6.

Among the cause of maternal mortality and morbidity, prolonged labour and obstructed labour accounts for 7% of direct maternal deaths in the developing countries7. Obstructed labour also frequently causes genital prolapsed, genital fistula, vaginal stenosis and secondary infertility in surviving women6.

When active labour lasts for more than 12 hours, it is known as prolonged labour. Obstructed labour is a condition, where in spite of good uterine contraction; the progressive descent of the presenting part is arrested due to mechanical insuperable obstruction8.

Among all the deliveries, 15% become complicated and needs special care. Early detection of abnormality and abnormal progress of labour and time intervention and prevention of prolonged labour would significantly reduce the risk of obstructed labour and other complications associated with obstructed labour, such as sepsis, postpartum hemorrhage, ruptured uterus, genital fistula etc.

The major constraint to the prevention of prolonged and obstructed labour is the accurate and timely recognition of cephalopelvic disproportion (CPD), either before or during labour, as CPD is the most common intervention in the course of labour6.

In modern obstetric practice, it is essential to take every step to ensure that the infant is born alive and healthy and also to ensure safety of pregnancy, labour and puerperium.

Partograph is the graphic recording of progress of labour and salient features of mother and fetus thus become a necessary part in the management of the patient in labour. It has been used since 1970 to detect labour that is not progressing normally, to indicate when augmentation of labour is appropriate and to recognize CPD long before labour becomes obstructed9.

One of the concerns of World Health Organization (WHO) is that Caesarean section may be used unnecessarily in many health facilities. Rate of caesarean delivery have been going up around the world, increasing health risks to women but showing little evidence of better rates of fetal survival. According to WHO, the partograph has potential, not only to reduce fetal and maternal morbidity and mortality, but also to reduce the rising trends of caesarean delivery9. This simple, inexpensive and revolutionary graphic labour records can be used everywhere in primary, secondary and tertiary health centers for every women who is in active labour. Its assists in early decision on transfer, augmentation and termination of labour, thus prevents prolonged labour, reduce operative intervention and improve neonatal outcome. In the developing countries like ours, this simple partographic control of labour, if used by everyone conducting labour, can make enormous change in maternal and perinatal mortality and morbidity.

The present study was designed to evaluate the impact of WHO modified partograph in labour management. The study was also designed to determine the prevalence of prolonged and obstructed labour, and to find out the causes of prolonged labour.

Methods and Materials

This hospital based cross-sectional study was conducted in the Labour Ward, Department of Obstetrics and Gynecology, Rangpur Medical College Hospital, Rangpur over a period of 1 year, from July 2007 to June 2008. All the patients who were

predicted to deliver were included in this study and among them 116 patients were included by probability sampling. A predesigned questionnaire was developed based on the specific objectives of the study, which included relevant history taking, general and obstetrical examination, continuous monitoring of labour using a WHO modified partograph, mode of delivery and condition of the newborn.

After fulfilling the criteria relevant history taking and clinical examination were carried out. Labour was diagnosed on the basis of regular, recurrent painful uterine contraction, cervical dilatation, show and ruptured of the membrane or formation of fore water bag.

A partograph was started on all women when cervical dilatation was 4 cm i.e. active phase of first stage of labour. A detailed vaginal examination was done on admission and repeated at an interval of 4 hours or more frequently in the later part of active phase of the first stage of labour. Moudling of the fetal head was also assessed. Fetal monitoring was done by auscultating fetal heart sound by stethoscope and seeing color of the liquor if membrane was ruptured. Before each vaginal examination, the level of the fetal head was assessed in 'Rule of Fifths' by abdominal palpation and was recorded with a '0' on the appropriate line of the chart. The frequency and strength of uterine contractions were studied half hourly in the active phase and the numbers and the strength of contractions in 10 minutes were recorded. Maternal pulse rate was recorded every half hour, blood pressure and temperature once every 4 hours or more frequently if indicated. Volume of urine passed was noted and estimation of sugar, protein and acetone in urine were done in selected cases.

Analgesics, intravenous fluid, strength and rate of Oxytocin drip, all that were used, also recorded in the partograph.

When the progress of labour was not satisfactory or contractions were not good enough as reflected by the partograph, acceleration of labour by Oxytocin was done.

The labour was managed according to the standard practice. The length of labour was carefully noted with mode of delivery and the condition of baby determined by Apgar score. A 5-minute Apgar score <6 was regarded as abnormal.

Inclusion criteria

Parturient of any age group, both primi and multigravida, gestational age of at least 37 weeks, cephalic presentation, singleton pregnancy.

Exclusion criteria

Multiple pregnancies, Antepartum hemorrhage, breech and other malpresentations, H/O previous two LUCS, H/O of LUCS due to recurrent indication, H/O successful VVF repair, eclampsia, premature labour (< 37 weeks).

Data collection and Analysis

Data for individual study subjects were recorded on a predesigned data collection sheet. Collected data were compiled and appropriate statistical analyses, such as Z-test, Chi-square test and unpaired Student's 't' test were done using computer based software, Statistical Package for Social Science (SPSS). P value <0.05 was taken as minimum level of significance.

Results

In all, 116 partograph that had been used to monitor labour during the study period were reviewed. The mean age group was 21-30 years which formed 75.8% of the patients.

Table 1: Age distribution of the patients (n=116)

Age in years	Primiparous n=51		Multiparous n=65		X^2	P value
	No.	%	No.	%		
16- 20	15	29.5	3	4.6	14.682	0.002
21-25	21	41.5	34	52.3		
26-30	13	25.4	20	30.8		
>30	2	3.9	8	12.3		
Mean±SD	25.05±3.99		27.16±3.21			

Table shows that majority of primi and multi patients were in age group 21-25 years 41.1% & 52.3% respectively.

Table 2: Gestational age of the patients (n=116)

Gestational age	Primiparous		Multiparous		X^2	P value
	No.	%	No.	%		
37-38	11	21.6	20	30.8	2.145	0.342
39-40	32	62.7	32	49.2		
41-42	8	15.7	13	20.0		
Mean±SD	39.52±1.37		39.20±1.47			

Table shows that the patients were 37-42 weeks pregnant with preponderance of 38-40 week in both primi and multiparous group. The difference was statistically not significant (P>0.05).

Table 3: Distribution of patients according to cervical dilatation on admission

Cervical dilatation	Primiparous		Multiparous		X^2	P value
	No.	%	No.	%		
<4	29	56.9	35	53.8	0.451	0.930
4-5	12	23.5	16	24.6		
>5-6	6	11.8	10	15.4		
>6	4	7.8	4	6.2		
Mean±SD	3.78±1.53		3.93±1.46			

Table shows that majority of primi (56.9%) and multiparous (53.8%) patients were admitted at an early stage of cervical dilatation (<4 cm). The difference was statistically not significant (P>0.05).

Table 4: Distribution of patients in relation to engagement of fetal head on admission

Engagement	Primiparous		Multiparous		X^2	P value
	No.	%	No.	%		
Engaged	31	60.8	21	32.3	9.370	0.002
Not engaged	20	39.2	44	67.7		
Total	51	100.0	65	100.0		

Table shows that maximum (60.8%) primiparous women had fetal head engaged on admission but only 32.3% multi had engaged fetal head at the time of admission. The difference was statistically significant (P<0.05).

Table 5: Mode of onset of labour in relation to parity

Onset of labour	Primiparous		Multiparous		X^2	P value
	No.	%	No.	%		
Spontaneous	44	86.3	60	92.3	1.122	0.290
Induced	7	13.7	5	7.7		
Total	51	100.0	65	100.0		

Table shows that maximum primi and multi patients had spontaneous onset of labour 86.3% and 92.3% respectively. The difference was statistically not significant (P>0.05).

Table 6: Distribution of patients in relation to augmentation of labour

Augmentation	Primiparous		Multiparous		X^2	P value
	No.	%	No.	%		
No	21	41.2	36	55.4	2.308	0.129
Yes	30	58.8	29	44.6		
Total	51	100.0	65	100.0		

Table shows that 58.8% and 44.6% primi and multi women, respectively needed augmentation. The difference was statistically not significant (P>0.05).

Table 7: Distribution of patients in relation to method of augmentation

Method of augmentation	Primiparous (n=30)			Multiparous (n=29)		X^2	P value
	No.	%		No.	%		
ARM	14	46.6		14	48.3	1.791	0.408
Oxytocin	8	26.7		4	13.8		
ARM+Oxytocin	8	26.7		11	37.9		
Total	30		100.0	29	100.0		

Table shows that most of the cases, augmentation was done by ARM (46.6% and 48.3% primi and multiparous women respectively), ARM + Oxytocin was used in 26.7% primi and 37.9% multiparous patients. The difference was statistically not significant (P>0.05).

Table 8: Distribution of cases in relation to alert and action line

Progression of labour	Primiparous (n=51)		Multiparous (n=65)		X^2	P value
	No.	%	No.	%		
Within alert line	29	56.9	43	66.1	1.831	0.400
Outside alert line	18	35.3	20	30.8		
Outside action line	4	7.8	2	3.1		
Total	51	100.0	65	100.0		

Table shows that majority of both primi and multi cases fell within alert line (56.9% and 66.1% respectively). Some cases fell outside alert line and only few cases were outside action line 7.8% and 3.1% primi and multi respectively. The difference was statistically not significant (P>0.05).

Table 9: Duration of active phase in relation to parity

Active phase (Hours)	Primiparous (n=38)		Multiparous (n=46)		X^2	P value
	No.	%	No.	%		
1-4	15	39.5	31	67.4	7.778	0.020
4-7	19	50.0	10	21.7		
7-10	4	10.5	5	10.9		
Mean±SD	4.68±2.27		4.08±2.22			

Table shows that active phase of labour in majority primiparous women lasted longer than 4 hours (50.0%) but most of multiparous women (67.4%) completed their active phase within 4 hours. The difference was statistically significant (P<0.05).

Table 10: Duration of second stage of labour in relation to parity

Second stage of labour (minutes)	Primiparous (n=38)		Multiparous (n=46)		X^2	P value
	No.	%	No.	%		
≤30	22	57.9	37	80.4	7.549	0.023
30-60	12	31.4	9	19.6		
>60	4	10.7	0	0.0		
Mean±SD	35.21±15.90		23.80±7.54			

Table shows that duration of second stage of labour did not vary with parity and in both groups; majority cases completed their second stage within 30 minutes (57.9% and 80.4% primi and multi cases respectively). The difference was statistically significant (P<0.05).

Table 11: Total duration of labour (from active phase to end of third stage) in relation to parity

Total duration (hours)	Primiparous		Multiparous		X^2	P value
	No.	%	No.	%		
≤3	3	7.9	8	17.4	1.872	0.392
3-7	26	68.4	30	65.2		
8-11	9	23.7	8	17.4		
Mean±SD	7.94±2.85		7.63±3.62			

Table shows that 68.4% primi and 65.2% multiparous women completed their delivery within 7 hours. The difference was statistically not significant (P>0.05).

Table 12: Mode of delivery in relation to parity

Mode of delivery	Primiparous		Multiparous		X^2	P value
	No.	%	No.	%		
Spontaneous	35	68.6	56	86.2	5.842	0.045
LUCS	12	23.5	8	12.3		
Ventouse	4	7.4	1	1.5		
Total	51	100.0	65	100.0		

Table shows that 68.4% primi and 65.2% multiparous women completed their delivery within 7 hours. The difference was statistically not significant (P>0.05).

Table 13: Outcome of labour in relation to engagement of fetal head on admission

Engagement	Normal vaginal delivery		Assisted vaginal delivery		LUCS		X^2	P value
	No.	%	No.	%	No.	%		
Engaged (n=52)	42	80.8	4	7.7	6	11.5	4.344	0.114
Not engaged (n=64)	49	76.6	1	1.5	14	21.9		

Table shows that women with engaged head had more vaginal delivery (80.8%), on the other hand more caesarean section occurred in non-engaged head (21.9%). The difference was statistically not significant (P>0.05).

Table 14: Outcome of delivery in relation to augmentation of labour

Augmentation	Normal vaginal delivery		Assisted vaginal delivery		LUCS		X^2	P value
	No.	%	No.	%	No.	%		
Yes	39	42.9	4	80.0	16	80.0		
No	52	57.1	1	20.0	4	20.0	10.826	0.004

Table shows that cases those did not require any acceleration had more vaginal delivery (57.1%) and 80% cases of augmentation needed LUCS. The difference was statistically significant (P<0.05).

Table 15: Outcome of labour in Oxytocin stimulated cases (n=31)

Mode of delivery	Frequency	Percentage
Normal vaginal delivery	19	61.3
Assisted vaginal delivery	4	12.9
LUCS	8	25.8

Table shows that in Oxytocin stimulated cases vaginal delivery occurred in 61.3% cases and 38.7% cases needed intervention including LUCS in 25.8%.

Table 16: Mode of delivery in relation to alert and action line

Progress of labour	Normal vaginal delivery		Assisted vaginal delivery		LUCS	
	No.	%	No.	%	No.	%
Within alert line	67	93.1	5	6.9	0	0.0
Outside alert line	24	63.2	0	0.0	14	36.8
Outside action line	0	0.0	0	0.0	6	100.0

Table shows that 93.1% cases falling within alert line had vaginal delivery and none had LUCS. Cases falling outside alert line had lower rate of vaginal delivery (63.2%) and LUCS rate went up (36.8%). Among the cases falling outside action line none had vaginal delivery and all 6 cases needed LUCS.

Table 17: Mode of delivery with their indications (n=116)

Mode of delivery	Number	Percentage
Normal vaginal delivery	91	78.4
Assisted vaginal delivery	5	4.3
Forcep	0	0.0
Ventouse	5	100.0
Cut short second stage of labour with maternal and fetal distress	3	60.0
Prolonged second stage	2	40.0
LUCS	20	17.2
Prolonged labour	13	65.0
Due to malrotation	7	53.8
Due to CPD	6	46.2

Table 18: Neonatal response after delivery (n=116)

Neonatal response	Number	Percentage
Spontaneous	97	83.6
Cried after resuscitation	16	13.8
Needed admission to neonatology	3	2.6

Table shows that babies cried spontaneously in 83.6% cases, 13.8% needed resuscitation and 2.6% newborns needed admission to neonatology.

Discussion

This cross-sectional study was conducted among 116 patients who attended the labour ward of Rangpur Medical College Hospital. The study was aimed to find out the prevalence of prolonged labour. The study also evaluated the maternal and fetal outcome in labour monitored by partograph.

Multigravida constitute majority of patients (56.0%) in the study population. This study was different from the study of Nargis who observed that 57.5% of her study population was primigravida10.

Most of the primi and multi patients belonged to age group 21-25 years 41.1% and 52.3% respectively. This finding was more or less consistent with the finding of Rahman, who found 18-23 years as the most common age group11. According to Bangladesh Demographic and Health Survey (BDHS), median age of first pregnancy is 18 years in Bangladesh12. The lower age group in primiparous women can be explained by sociodemographic character of the patients. Here, most of the patients came from low socioeconomic status with poor educational background.

Majority of the primi and multi patients (62.7% & 49.2%) respectively attended the hospital at their 38-40 weeks of gestation. Same observation was shown by Rahman in her study11.

In this study, majority of primi (56.9%) and multiparous (53.8%) patients were admitted at an early stage of cervical dilatation (<4 cm). The mean (±SD) cervical dilatation of primi and multigravida patients in admission in the present study were 3.78±1.53 and 3.93±1.46 cm, respectively. In a study by Studd admission dilatation were 3.3 and 3.8 cm, respectively13.

In the present study, 60.8% primi and 32.3 % multi has fetal head engaged at an early stage of labour. This finding is consistent with the findings of Nargis, who showed that 63.8% and 35% of primi and multigravida, respectively, had fetal head engaged at an early stage of labour10.

It has been shown in this study that engaged head had more vaginal delivery (80.8%) than non-engaged head (76.6%). On the other hand, non-engaged head had more Caesarean delivery (21.9%) than engaged head (11.5%). This finding comply with that of Rahman's study who also showed that engaged head had more spontaneous delivery11.

In the present study, it has been shown that maximum primi and multi patients had spontaneous onset of labour. Induction needed in 13.7% primi and 7.7% multigravida patients only. Augmentation was done in 58.8% primi patients and less number (44.6%) of multi patients needed augmentation.

Augmentation was mostly done by ARM (46.6% primi and 48.3% multi patients). Oxytocin was used in 26.7% primi and 13.8% multi patients (average 20.25%). In Dujardin's series Oxytocin was used in 22 % cases and in Rahman's study 24% patients needed oxytocin11,14. Both these studies are consistent with the present study.

Here, in this study, majority of cases falling within alert line (56.9% primi and 66.1% multi patients), some of the cases falling outside the alert line 35.3% and 30.8% primi and multi, respectively, and only few cases (7.8% and 3.1% respectively) fall outside action line. In Rahman's series 34% and 7% cases fall outside alert and action line, respectively11. In Dujardin's series 29.8% cases crossed the alert line14.

The active phase of labour in the present series varied from 1 to 9 hours in both primi and multigravida, and the mean (±SD) duration are 4.68±2.27 and 4.08±2.22 hours, respectively. In Friedman's series, the mean active in primi was 3.4 hours15. In Baby's series, the mean duration of active phase was 4.8 hours in primi and 4.48 hours in multi16.

The duration of second stage of labour in the present study was 35.21±15.90 minutes in primi and 23.80±7.54 minutes in multi. In Friedman's series, duration of second stage in primi was 45 minutes15. In Studd's series the duration was 46 and 22 minutes in primi and multi, respectively13. In Baby's series, the duration of second stage of labour was 47.17 minutes in primi and 26.27 minutes in multi16. The variation in duration of second stage may be due to incorrect methods of diagnosis of onset of second stage of labour.

In this study, 68.4% primi and 65.2% multi completed their delivery within 7 hours. However, 23.7% primi and 17.4% multi fell within the range of 7-11 hours. In this study 7.9% primi and 17.4% multi had labour lasted for less than 3 hours, which differs from that of Rahman's study11. She showed that no primi could end their delivery within 3 hours. This is probably due to that she included only those cases which were 3-4 cm dilated on admission, but in this study higher cervical dilatation were also included.

In the present study, 78.4% patients had spontaneous vaginal delivery; rest had difficult labour in the form of ventouse and LUCS. Nasrin in her study showed that 70% patients delivered spontaneously and 30% needed intervention, which comply with the present study. The incidence of LUCS was 17.2% in this series, which is less than that of Zakia (37.5%) and Saleha (28.2%)17,18.

In case of primi, 68.68% had spontaneous vaginal delivery and 23.5% had LUCS. On the other hand, in multigravida vaginal delivery and LSCS rate were 86.2% and 12.3%, respectively. In Rahman's study, LSCS rate were 16.9% and 12.2% for primi and multi patients, respectively11. Nargis in her study showed that 15.06% primi and 12.9% multi patients had Caesarean section10. The LSCS rate in primi (23.5%) in the present study is also higher than Baby's study (18%) and Nasrin's study (18%), but lower than the study done by Fauzia19, where primi patients topped the list of LSCS (37%) and Siddique et al.20 (30.67%). According to Holland and Brews21, the 25 years have witnessed an upsurge in the incidence of LSCS. The increased incidence has been the result of (a) increased avoidance of forceps deliveries, (b) avoiding vaginal deliveries in breech presentation and (c) detecting deteriorating fetal environment in utero by monitoring techniques and a rising trend of resorting to LSCS for delivery of such compromised babies.

In the present study, it showed that spontaneous vaginal deliveries were more (58.6%) in those who did not require any augmentation. On the other hand, 80% cases of LSCS needed augmentation. This is consistent with the study by Rahman11, who showed in her study that 90% cases of LSCS needed augmentation.

In Oxytocin stimulated cases, labour progressed to end with spontaneous vaginal delivery in 61.3% cases and 38.7% protracted cases needed intervention including LSCS in 25.8% cases. In Gibb's study22, spontaneous vaginal delivery occurred in 86.7% stimulated cases. In Rahman's series11, intervention needed in 21.05% cases, and which is more or less consistent with the study.

The present study showed that no LSCS occurred when the cases fell within alert line, and in 93.1% cases vaginal deliveries occurred. Vaginal delivery rate decreased and LSCS rate increased when the cases crossed the alert line (63.2% and 36.8%, respectively). Outside the action line, there was no vaginal delivery and all were delivered by caesarean section. In Philpott's series, only 10% cases crossing alert line and 21% crossing action line required interference23. Protima found 88% of cases

outside the action line needed intervention24. Rahman in her study showed that 23.3% cases outside alert line and 100% cases outside action line needed LSCS11. These differences in observation may be due to inadequate maternal and fetal monitoring system crossing alert/action line which was considered endpoint of intervention.

In this study, 83.6% babies cried spontaneously, 13.8% cried after resuscitation and only 2.6% needed admission to neonatal care unit. There was no stillbirth. In a study by Nargis, 71.65 % cried spontaneously, 21% cried after resuscitation and 7.09% needed admission to SCABU and in a series by Rahman those were 76%, 10% and 14%, respectively10,11.

Incidence of operative delivery in the present study was 21.5%. Among them, 17.4% required Caesarean section and 4.3% needed instrumental delivery (ventouse). LSCS was done due to fetal distress in 35% cases. Thirteen patients (65%) underwent Caesarean section due to prolonged labour. Labour was prolonged due to malrotation in 53.4% cases and in 46.2% cases it was due to CPD.

Conclusion

Lack of supervision of labour resulting in prolonged and obstructed labour and its consequences; such as ruptured uterus, hemorrhage, sepsis, increased operative interference, and increased maternal and perinatal mortality and morbidity. Proper supervision of labour can prevent all these complications of labour and thereby reduce the maternal and perinatal mortality and morbidity. Partogram is a graphic representation of labour, and its salient features have an immense value in the management of labour. This simple graphic record of labour can be maintained by anyone from the primary health centre up to tertiary hospital.

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Study suggests that long term use of Furosemide in heart failure patients causes thiamine deficiency and thereby worsening the heart failure symptoms.[1]

Ref.: The American Journal of Medicine (2016) 129, 753.e7-753.e11

Frulac®

Furosemide BP 20 mg & 40 mg
Spironolactone BP 50 mg

Maintains higher level of thiamine than Furosemide alone

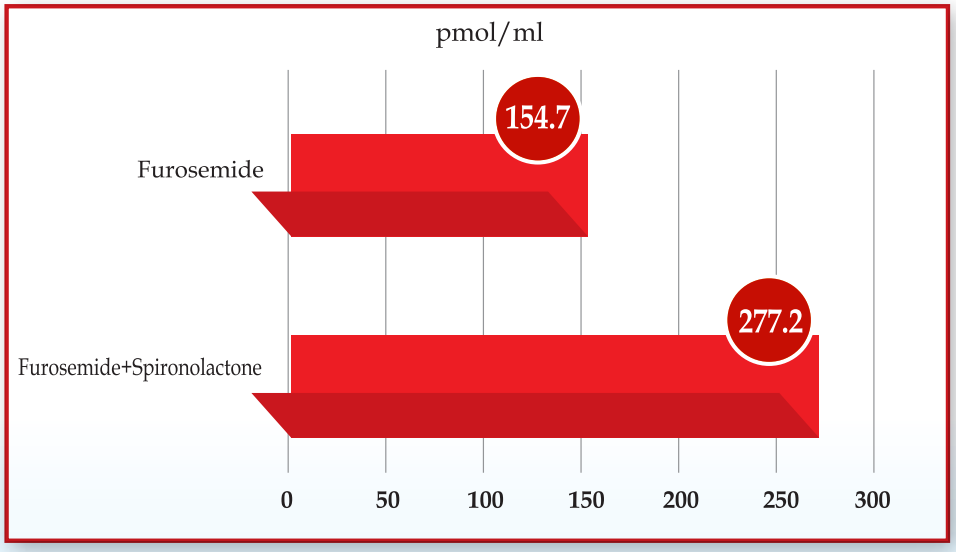

Fig.: Level of Vitamin B1 during Furosemide therapy & Furosemide+Spironolactone therapy

No. of Patients: 22
Dose: Furosemide 80 mg/day
Furosemide+Spironolactone (80 mg+25 mg)/day

Title: Study on near miss cases of Eclampsia

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The ORION Medical Journal 2018 March;20-1(43): p22-36

Abstract

Background

Eclampsia continues to the leading cause of death and may develop severe morbidities. Heightened surveillance and consistent care may limit the severe morbidities with early detection. If timely and adequate care can be provided, a number of such patients can be saved. DMCH is a tertiary level hospital where there is a separate eclampsia unit. A number of doctors, nurses and other hospital stuffs are working round the clock taking special care to the patients. So, eclampsia unit of DMCH has been selected for the study.

Objectives

To determine the total number of near miss cases in eclampsia during the study period of one year. To determine the causes of severe morbidities in eclampsia. To describe the socio-demographic features.

Study design

Cross sectional study.

Materials

380 patients of eclampsia with complications were selected for the study.

Methods

Patients were randomly selected for the study.

Results

Among the 380 near miss patients, HELLP syndrome was 78 (20.52%), HELLP Syndrome + ARF were 30 (7.89%), HELLP Syndrome + DIC were 16 (4.21%), HELLP Syndrome + ARF + DIC were 06 (1.57%), HELLP Syndrome + PRES were 02 (0.5%), HELLP Syndrome + ICH were 02 (0.5%), Acute Renal Failure (ARF) was 62 (16.31%), ARF + Electrolyte Imbalance were 16 (4.21%), ARF + DIC were 06 (1.57%), ARF + Cerebral oedema were 04 (1.05%), ARF+ pulmonary oedema were 02 (0.5%), Electrolyte Imbalance was 62 (16.31%), DIC was 20 (5.26%), Pulmonary oedema was 06 (1.57%), Acute LVF was 20 (5.26%), Cerebrovascular accident (CVA) was 14 (3.68%), Amniotic fluid embolism was 06 (1.57%), Septicaemia was 08 (2.10%), Cerebral oedema was 20 (5.26%). Mean (± SD) age was being 25.40 ± 6.03 years, mean(± SD) parity was being 1.9 ± 1.43. Mean (± SD) Gestational age was 26.09 ± 6.99 weeks and diastolic blood pressure at the time of admission was 104.37 ± 11.07mmHg. Most of the patients belongs to age group 20-30 years (82.63%), 310 patients (81.58%) of them were uneducated and 330 patients (86.84%) were belongs to rural area. Most of the near miss cases were primi gravida (52.63%), had singleton pregnancy, 284 cases (77.36%) and twin pregnancy were present in 6 cases (1.5%). Many of the patients did not received antenatal care, 80 cases (21.05%). Antepartum eclampsia was common, 300 cases(78.94%) and postpartum cases were 80

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(21.05%). Most of the patients, 170 cases had diastolic blood pressure >110mmHg (44.73%), 152 patients had proteinuria +++ (40%) and 248 patients were unconscious (65.26%). Mean (± SD) 3.2 ± 1.38 convulsions, ranged between 2 – 5 convulsions are well controlled by inj. MgSO4 and in 5.26% cases convulsion occurs after administration of inj. MgSO4. Vaginal delivery occurred in 254 cases (66.84%) and caesarean section was performed in 46 cases (12.10%) among the 300 antenatal cases. Live births were 176 (46.31%), fresh still borns were 100 (26.31%) and macerated still born were in 24 (6.31%) among the fetal outcome.

Conclusions

Eclampsia is associated with an increased maternal morbidities. By providing adequate care and life supporting facilities a greater no patient of eclampsia can be saved.

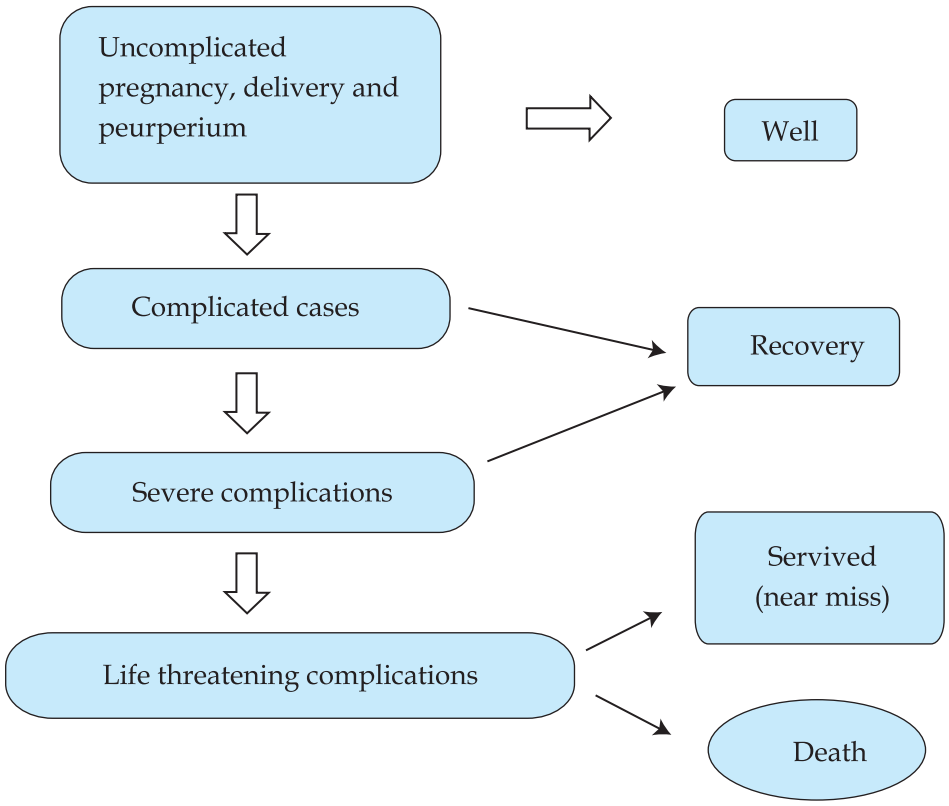
Key words

Near Miss Case, Eclampsia, Cerebrovascular accident (CVA), Acute left ventricular failure, Pulmonary oedema, Acute renal failure, DIC, Hepatic failure, Septicaemia, Amniotic fluid embolism.

Introduction

For many years, evaluation of maternal health care services aimed at improving the quality of obstetric care has traditionally relied on inquiries into maternal deaths. More recently review of cases at the very sever end of the maternal morbidity spectrum, described as "near miss" (those who nearly die) has been found to be a useful complements to investigation of maternal mortality [1]. Near miss cases are also called severe acute maternal morbidity cases.Near miss cases are defined as acute obstetric complications that immediately threatened a woman's survival but do not result in her death either by chance or because of hospital care she receives during pregnancy, labour and within 6wks after termination of pregnancy or delivery [2] which a near miss case is a woman with at least one near miss event.

Pregnancy continuum between extreme of good health and death:



Eclampsia is a life threatening obstetric emergency which is characterized by hypertension, proteinuria with convulsion (not caused by neurological disease) and eclampsia is a leading cause of severe maternal morbidity (near miss) and mortality also. Maternal complications of eclampsia may develop severe morbidities like CNS damage from recurrent seizures or intracranial bleeding, renal insufficiency, pulmonary oedema, HELLP syndrome, Disseminated Intravascular Coagulation (DIC), Cerebrovascular Accident (CVA) and others without intervention would have resulted in deaths. Heightened surveillance and consistent care may limit the severe morbidity of eclampsia with early detection.

Methods

This cross sectional descriptive type of study was conducted on 380 complicated nearly missed eclampsia patients of Dhaka Medical College Hospital during the study period of one year (January to December, 2011). Total 380 cases among the 1381 patients were considered as near miss and they fulfill the inclusion criteria. Rest of the patients were admitted as uncomplicated eclampsia cases which belonged to exclusion criteria group. A protocol was prepared and questionary was fulfilled by the doctor from the hospital record.

Ethical consideration

Institutional permission and ethical clearance from Dhaka Medical College & Hospital was obtained before conducting the study and to collect data.All patient were coded by a serial no. to maintain the privacy of the patient.Attendants were explained the condition of the patient in details with the treatment option and the possible outcome of the complications with or without intervention. Informed written consent were obtained prior to the surgery.This study was not interfered with patient management or deal with moral or social issue.

Data analysis

After collecting data editing was done manually and analyzed with the help of computer software program such as SPSS (Statistical Package for Social Science) version 16.0. Mean and standard deviation were calculated for continuous data and percentage for categorical data. Total 380 patients were obtained by using the formula: $n = z2Xpq/d2$. Here, n = desired sample size, z = standard normal deviation, usually set as 1.96 (95% confedence level),p = portion of the target population estimated to have a particular categorization. Here, $p = 0.5$, $q = 1 - p = 1 - 0.5 = 0.5$, d = degree of accuracy, we take 5% as $d = 0.05$

Results

Among the 380 near miss patients, HELLP syndrome was 78 (20.52%), HELLP Syndrome + ARF were 30 (7.89%), HELLP Syndrome + DIC were 16 (4.21%), HELLP Syndrome + ARF + DIC were 06 (1.57%), HELLP Syndrome + PRES were 02 (0.5%), HELLP Syndrome + ICH were 02 (0.5%), Acute Renal Failure (ARF) was 62 (16.31%), ARF + Electrolyte Imbalance were 16 (4.21%), ARF + DIC were 06 (1.57%), ARF + Cerebral oedema were 04 (1.05%), ARF+ pulmonary oedema were 02 (0.5%), Electrolyte Imbalance was 62 (16.31%), DIC was 20 (5.26%), Pulmonary oedema was 06 (1.57%), Acute LVF was 20 (5.26%), Cerebrovascular accident (CVA) was 14 (3.68%), Amniotic fluid embolism was 06 (1.57%), Septicaemia was 08 (2.10%), Cerebral oedema was 20 (5.26%). Mean (± SD) age was being 25.40 ± 6.03 years, mean(± SD) parity was being 1.9 ± 1.43. Mean (± SD) Gestational age was 26.09 ± 6.99 weeks and diastolic blood pressure at the time of admission was 104.37 ± 11.07mmHg. Most of the patients belongs to age group 20-30 years (82.63%), 310 patients (81.58%) of them were uneducated and 330 patients (86.84%) were belongs to rural area. Most of the near miss cases were primi gravida (52.63%), had singleton pregnancy, 284 cases (77.36%) and twin pregnancy were present in 6 cases (1.5%). Many of the patients did not received antenatal care, 80 cases (21.05%). Antepartum eclampsia was common, 300 cases(78.94%) and postpartum cases were 80 (21.05%). Most of the patients, 170 cases had diastolic blood pressure >110mmHg (44.73%), 152 patients had proteinuria +++ (40%) and 248 patients were unconscious (65.26%). Mean (± SD) 3.2 ± 1.38 convulsions, ranged between 2 – 5 convulsions are well controlled by inj. MgSO4 and in 5.26% cases convulsion occurs after administration of inj. MgSO4. Vaginal delivery occurred in 254 cases (66.84%) and caesarean section was performed in 46 cases (12.10%) among the 300 antenatal cases. Live births were 176 (46.31%), fresh still borns were 100 (26.31%) and macerated still born were in 24 (6.31%) among the fetal outcome.

Table2.3.1 Frequency of Near Miss cases among Eclampsia patients (n = 380)

Total Eclamptic patient	Total Near Miss cases	Percentage
1381	380	27.52

n : no of Near Miss cases

Table 2.3.2 Near Miss cases encountered in eclamptic patients (n = 380)

Near Miss cases	No of patients	Percentage
HELLP syndrome	78	20.52
HELLP Syndrome+ARF	30	7.89
HELLP Syndrome+DIC	16	4.21
HELLP Syndrome+ARF+DIC	06	1.57
HELLP Syndrome+PRES †	02	0.5
HELLP Syndrome+ICH ‡	02	0.5
ARF+Electrolyte Imbalance	78	86.65
ARF+DIC	06	1.57
ARF+Cerebral oedema	04	1.05
ARF+ pulmonary oedema	02	0.5
Electrolyte Imbalance	62	16.31
DIC	20	5.26
Pulmonary oedema	06	1.57
Acute LVF	20	5.26
Cerebrovascular accident (CVA)	14	3.68
Amniotic fluid embolism	06	1.57
Septicaemia	08	2.10
Cerebral oedema	20	5.26

n : no of Near Miss cases
† PRES: Posterior reversible encephalopathy syndrome
‡ ICH: Intracranial hemorrhage

Table 2.3.3 Basic parameters of Near Miss eclamptic patients (n = 380)

Parameters	Range	Mean ± SD
Age (years)	18-42	25.40 ± 6.03
Parity	1-11	1.9 ± 1.43
Gestational age (weeks)	21-40	26.09 ± 6.99
Diastolic blood pressure (mmHg)	90-140	104.37 ± 11.07

n : no of Near Miss cases

Table 2.3.4 Sociodemographic variable (n = 380)

Parameters	No of patients	Percentage
Age group(years)		
<20	16	4.2
20-30	314	82.63
>30	50	13.16
Education		
Illiterate	100	26.31
Primary	230	60.52
Secondary	50	13.15
Economic status		
Lower class	330	86.84
Middle class	50	13.15
Home		
Rural	300	78.94
Arban	80	21.05

n : no of Near Miss cases

Table 2.3.5 Obstetric characterestics (n = 380)

Parameters	No of patients	Percentage
Parity		
0	200	52.63
1-3	132	34.73
≥4	48	12.63
Pregnancy status		
Single	284	77.36
Twin	06	1.5
ANC		
Regular	50	13.15
Irregular	230	60.52
None	80	21.05
Record not available	20	5.26
Gestational age		
Antepartum	300	78.94
<34weeks	156	41.05
34-37weeks	86	22.63
38-40weeks	58	15.26
Postpartum	80	21.05

n : no of Near Miss cases

Table 2.3.6 Status of eclampsia (n = 380)

Parameters	No of patients	Percentage
Type of eclampsia		
Antepartum	300	78.94
Postpartum	80	21.05
Diastolic blood pressure (mmHg)		
90-100	70	18.42
101-110	140	36.84
>110	170	44.73
Urinary albumin		
+	36	9.47
++	106	27.89
+++	152	40
++++	86	22.63
Consciousness		
Unconscious	248	65.26
Semiconscious	112	29.47
Conscious	20	5.26
Convulsion following inj. MgSO4	20	5.26

n : no Near miss cases

Table 2.3.7 Control of convulsions (n = 380)

Parameters	Range	Mean ± SD
No of convulsion before admission	2 – 5	3.2 ± 1.38

n : no of Near Miss cases

Table 2.3.8 Obstetric outcome (n = 380)

Parameters	No of patients	Percentage
Mode of delivery		
Vaginal delivery	254	66.84
LSCS	46	12.10
Fetal outcome		
Live birth	176	46.31
Fresh still born	100	26.31
Macerated still born	24	6.31

n : no of Near Miss cases

Table 2.3.9 Diagnosis of HELLP Syndrome (n=134)

Parameters	Range	Mean ± SD
S. Bilirubin	2 - 13.94	4.73 ± 2.44
Total Platelet Count	20,000 - 90,000	56716.42 ± 16705.14
Liver Enzyme (SGPT)	244 - 1540	555.25 ± 218.61

n : no of HELLP Syndrome patient

Table 2.3.10 Management of HELLP Syndrome near miss patients (n=134)

Parameters	No of patients	Percentage
MgSO4	134	100
Methyldopa	134	100
Diazepam	134	100
Ca channel blocker	67	50
Ca channel blocker+ß blocker	30	22.39
Hydralazine(inj.)	24	17.91
Losartan potassium	10	7.5
Atenolol+ Ca channel blocker	3	2.24
Inf. Neutridex	14	10.45
Inj. Albumin	16	11.94
Inj. B 50 forte	22	16.42
Inj. Vit-C	22	16.42

n : no of HELLP Syndrome patient

Table 2.3.11 Transfusions in HELLP Syndrome near miss cases (n = 134)

Parameters	No of patients	Percentage
FFP	90	67.16
Whole blood transfusion	24	17.91
PRP	20	16.42

n : no of HELLP Syndrome patient

Table 2.3.12 Diagnosis of ARF (n= 90)

Parameters	Range	Mean ± SD
S. Creatinine	1.6 - 5.9	2.7 ± 0.99
S. Uric acid	4.9 – 12.43	7.4 ± 1.98

n : no of HELLP Syndrome patient

Table 2.3.13 Management of ARF near miss patients (n=90)

Parameters	No of patients	Percentage
Loop diuretics (Inj. Frusemide)	90	100
Fluid restriction	32	35.55
FFP	46	51.11
Whole blood transfusion	44	48.88

n : no of ARF patient

Table 2.3.14 Diagnosis of DIC (n= 20)

Parameters	Range	Mean ± SD
FDP	6 - 20	9.4 ± 4.5

n : no of DIC patient

Table 2.3.15 Management of DIC near miss patients by transfusions (n=20)

Parameters	Range	Mean ± SD
FFP	2 - 8	4.2 ± 1.5
Whole blood transfusion	1 – 3	1.9 ± 0.7

n : no of DIC patient

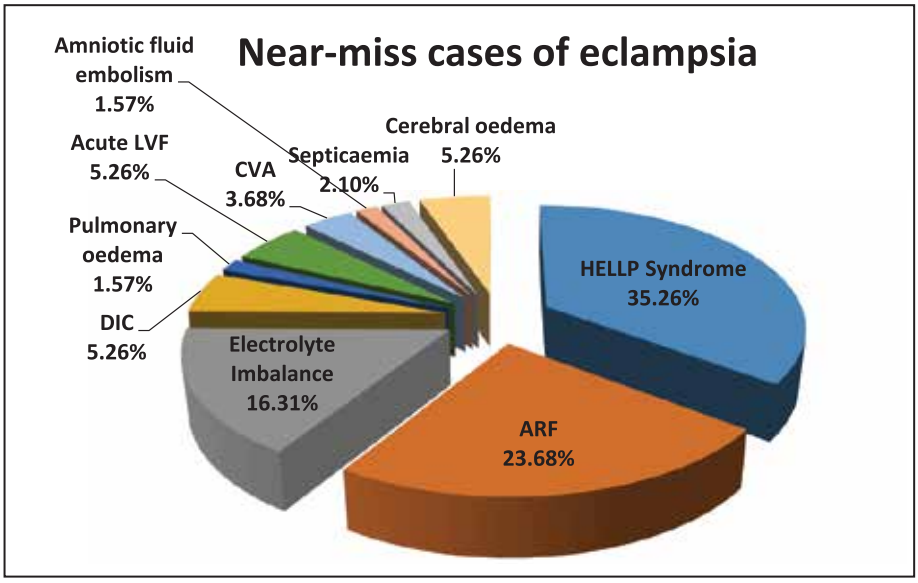
Table 2.3.16 Management of DIC near miss patients (n=20)

Parameters	No of patients	Percentage
FFP	20	100
Whole blood transfusion	20	100
Inj. Caproic Acid	20	100
Inj. Vit-K	20	100

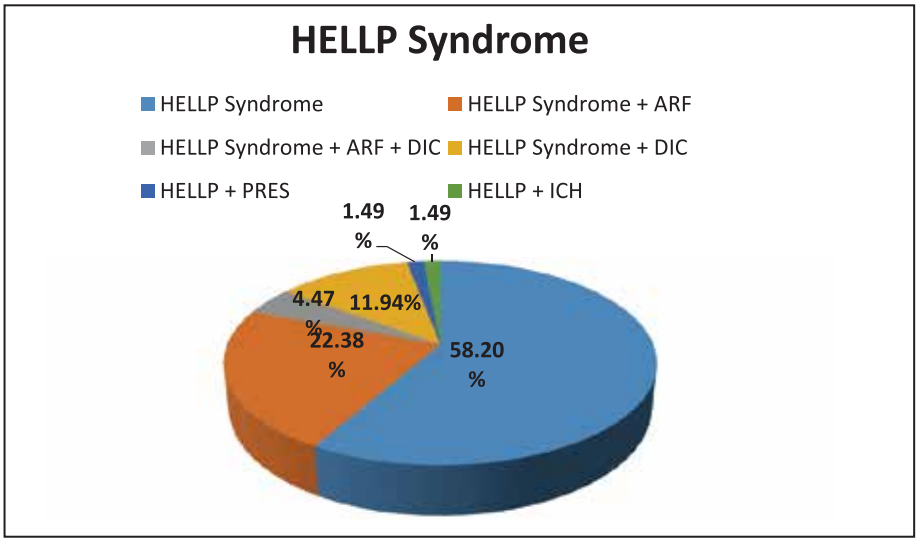
n : no of DIC patient

Table 2.3.17 ICU treatment (n = 380)		
ICU treatment	**No of patients**	**Percentage**
ICU needed	134	35.26
Provided	10	2.63
Could not be provided	50	13.15
Not needed	246	64.74
n : no of Near Miss Cases		

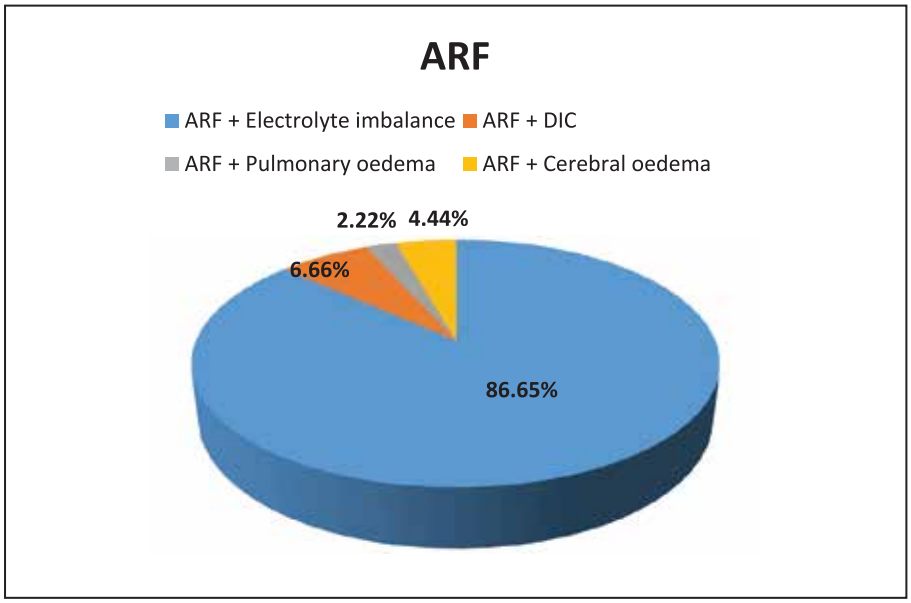
Pie chart-I: Near miss cases encountered in eclampsia



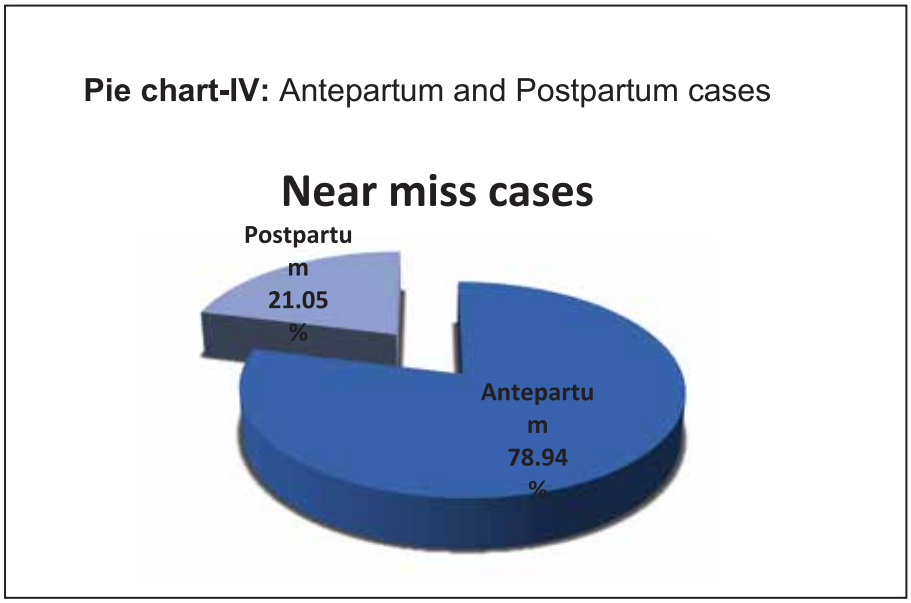
Pie chart-II: HELLP Syndrome



Pie chart-III: ARF



Pie chart-IV: Antepartum and Postpartum cases



Discussion

This prospective study is conducted on patients admitted in Eclampsia Unit of Dhaka Medical College Hospital (DMCH) during July 2011 to June 2012. Only Near Miss cases were included for the study. Dhaka Medical College Hospital is a tertiary level hospital,having a separate eclampsia unit, with some improved facilities. Doctors, nurses and other stuff are present round-the-clock to manage the patients. There is facilities for emergency caesarean section, good interdepartmental communication to manage the complications that arises from the disease and the intensive care unit (ICU) facilities.

During the study period (July2011-June2012), total no of obstetric patients were 14640;out of these there is 1381are eclampsia patients, giving an incidence of 9.4% and total80 patients died of eclampsia, giving an incidence of 5.7%

The study conducted by Begaum (1985-1986) at DMCH found that the incidence of total near miss obstetric patient to be 6.96 percent [3]. The other studies of this country shows that the incidence varied between 7 to 8.5 percent of all obstetric patients [4-6].

Though the incidence of eclampsia has decreased considerably over the years in the developed countries (1 in 330 deliveries), the incidence is still quite high in Bangladesh [7,8].

Serious forms of maternal morbidity occur in about 1% of women in the United States compared to 3.01 to 9.05% in some developing settings. Worldwide, the leading causes of near-miss morbidity are hemorrhage and pregnancy-related hypertension or eclampsia/pre-eclampsia. These complications can have lasting effects, and their sequelae may result in maternal illness, injury and disability. Based on severity, three phenotypes of obstetric near-misses have been provided : Class I (near-miss with healthy infant); Class II (near-miss with feto-infant morbidity); Class III (near-miss with fetal/infant death) [9]

Near-miss studies have mainly been facility-based and conducted in European or African tertiary hospitals. Essentially, three different approaches have been used for case identification. They have focused either on clinical criteria for common diagnostic categories, management-based criteria related to specific interventions or on organ system dysfunction.[10-12]

Previous studies have reported near-miss figures ranging from 4 to 10/1000 deliveries in high-income countries to 40 to 80/1000 deliveries in resource-poor settings.[13] So far, near-miss research has been rare in Latin America, with the exception of a recent study at a Brazilian tertiary level hospital that showed a near-miss frequency of total obstetrics cases are 15 to 42/1000 deliveries.[14]

The total severe morbidity ratio (SMR) was 50/1000 live births (range 26 to 88/1000) and the mortality index was 3.6% (range 2.0 to 4.5%)in a study of , 8136 hospital deliveries in Bolivia. Near miss cases of severe hypertensive disorders (46%). SMR 23/ 1000 for severe hypertensive disorders; low-mortality indices 0.5% (maternal mortality and near-missmorbidity in metropolitan La Paz, Bolivia).

Frequency of Near Miss cases among Eclamsia patients shows during thestudy period, there were total 1381 patients admitted in Eclampsia Unit of Dhaka Medical College Hospital, out of which 380 patient were Near Miss cases, yielding the incidence as 27.52%. A total of 63 women were included for analysis in a tertiary care hospital in Delhi and the incidence of near miss cases of eclampsia was 35% in october 2008 [15] 36 women were identified as near-miss obstetrical cases among the 1562 women and the near miss cases of hypertensive disorder of the pregnancy was the cause in 10 (27.77%) in Kathmandu during 2010 [16].

Near Miss cases encountered in eclampsia ward during the study period. Among the 380 near miss patients, HELLP syndrome was 78 (20.52%), HELLP Syndrome + ARF were 30 (7.89%), HELLP Syndrome + DIC were 16 (4.21%), HELLP Syndrome + ARF + DIC were 06 (1.57%), HELLP Syndrome + PRES were 02 (0.5%), HELLP Syndrome + ICH were 02 (0.5%), Acute Renal Failure (ARF) was 62 (16.31%), ARF + Electrolyte Imbalance were 16 (4.21%), ARF + DIC were 06 (1.57%), ARF + Cerebral oedema were 04 (1.05%), ARF+ pulmonary oedema were 02 (0.5%), Electrolyte Imbalance was 62 (16.31%), DIC was 20 (5.26%), Pulmonary oedema was 06 (1.57%), Acute LVF was 20 (5.26%), Cerebrovascular accident (CVA) was 14 (3.68%), Amniotic fluid embolism was 06 (1.57%), Septicaemia was 08 (2.10%), Cerebral oedema was 20 (5.26%).

There is a study conducted by Staykov D, Schwab S. suggest that the clinical syndrome of eclampsia is associated with an anatomical substrate that is recognizable by neuroimaging as PRES. Among the 13 cases of eclampsia7 patients developes PRES and among them follow up emaging of 2 patients show resolution and 1 patient develops residual abnonmalities [17].in my study I have found 2 cases of PRES and both patients were completely recovered.

There were total 1381 patients were admitted in eclampsia unit of DMCH during the study period, out of which 380 patients were severely morbid or near miss (according to criteria mentioned in the methodology), yielding as incidence of 27.52%. Near miss or severe obstetric morbidities is now a concept in maternal care and is now increasingly used to measure the standard of obstetric care [18]. No definite data regarding the frequency of near miss eclamptic patients in DMCH is available at this moment.But in different studies, complications of eclampsia have been mentioned.Yasmin [19] has shown that 20% of eclampsia patients had life threatening complications.

The basic parameters of Near Miss eclamptic patients shows age of the patient varies ranged between 18-42 years, with mean (± SD) being 25.40 ± 6.03 years, parity ranged between 1-11, which mean(± SD) being 1.9 ± 1.43. Mean (± SD) Gestational age was 26.09 ± 6.99 weeks and diastolic blood pressure at the time of admission was 104.37 ± 11.07mmHg, range being 90-140mmHg.

Sociodemographic variable of near miss cases shows among the 380 patients belongs to age group 20-30 years (82.63%), 310 patients (81.58%) of them are uneducated and 330 patients (86.84%) are belongs to rural area. Obstetric characterestics of the near miss cases shows most of them were primi gravida (52.63%), had singleton pregnancy, 284 cases (77.36%) and twin pregnancy were present in 6 cases (1.5%). Many of the patients did not received antenatal care, 80 cases (21.05%). Antepartum eclampsia was common, 300 cases(78.94%) and postpartum cases were 80 (21.05%).

Status of eclampsia in near miss cases shows antepartum eclampsia was common, 300 cases (78.94%) and postpartum cases were 80 (21.05%). Most of the patients, 170 cases had diastolic blood pressure >110mmHg (44.73%) at the time of admission, 152 patients had proteinuria +++ (40%) and 248 patients were unconscious(65.26%).

Mean (± SD) 3.2 ± 1.38 convulsions, ranged between 2 – 5 convulsions are well controlled by inj. MgSO4 and mean (± SD) 3.2 ± 1.38 convulsions, ranged between 1 – 2 convulsions occurred after administration of loading dose of inj. MgSO4.

Obstetric outcome of near miss cases of eclampsia shows delivery was accomplished by vaginal route in 254 cases (66.84%) and caesarean section was performed in 46 cases (12.10%) among the 300 antenatal cases. Live births were 176 (46.31%), fresh still borns were 100 (26.31%) and macerated still born were in 24 (6.31%) among the fetal outcome.

Among the HELLP Syndrome patients (134 cases) serum bilirubin level ranged between 2 - 13.94 mg/dl, with mean (± SD) 4.73 ± 2.44 mg/dl, total platelet count ranged between 20,000 – 90,000/cu mm, with mean (± SD) 56716.42 ± 16705.14/cu mm of blood and liver enzyme (SGPT) ranged between 244 – 1540, with mean (± SD) 555.25 ± 218.61.100% HELLP Syndrome patients were treated by administration of Inj. MgSO4, Tab. Methyldopa and Inj. Diazepam. Ca channel blocker, Ca channel blocker+ß blocker, Hydralazine(inj.), Losartan potassium and Atenolol + Ca channel blocker were given as antihypertensive in 50%, 22.39%, 17.91%, 7.5%, 2.24% patients respectively. Inf. Neutridex, Inj. Albutin, Inj. B 5o Forte and Inj. Vit c were given in 10.45%, 11.94%, 16.42% and 16.42% patients respectively.

Most of the patients of HELLP Syndrome (134 cases), about 67.16% (90) cases were transfused fresh frozen plasma. Whole blood was transfused in 17.91% (24) cases and PRP was given in 16.42% (20) cases.

Among the near miss cases of ARF (90 cases), serum creatinine level ranged between 1.6 – 5.9 mg/dl, with mean (± SD) 2.7 ± 0.99 mg/dl, serum uric acid level ranged between 4.9 – 12.43 mg/dl, with mean (± SD) 7.4 ± 1.98 mg/dl. Loop diuretics (Inj. Frusemide) was used in 100% patient, fluid restriction was given in 32 cases (35.55%), fresh frozen plasma (FFP) was transfused to 46 cases (51.11%) and whole blood was transfused in 44 cases (48.88%).

Among the near miss cases of DIC (20 cases), FDP level ranged between 6 – 20 U, with mean (± SD) 9.4 ± 4.5U. DIC near miss cases were managed by transfusion of FFP and whole human blood. The range of FFP transfusion ranged between 2 - 8 units, with mean (± SD) 4.2 ± 1.5 units and whole human blood transfusion ranged between 1 – 3 units, with mean (± SD) 1.9 ± 0.7 units.All near miss cases of DIC are treated by transfusion of FFP and whole human blood along with inj. Caproic acid and inj. Vit-k.

There is a study conducted by Kuklina E, Ayala C, Callaghan W. on Hypertensive Disorders and Severe Obstetric Morbidity in the United States, where they found among the eclampsia and preeclampsia patients hospitalizations were associated with 38% of hospitalizations with acute renal failure and 19% or more of hospitalizations with ventilation, disseminated intravascular coagulation syndrome, pulmonary edema, puerperal cerebrovascular disorders, and respiratory distress syndrome. Overall, hospitalizations with hypertensive disorders were associated with 57% of hospitalizations with acute renal failure, 27% of hospitalizations with disseminated intravascular coagulation syndrome, and 30% or more of hospitalizations with ventilation, pulmonary edema, puerperal cerebrovascular disorders, and respiratory distress syndrome [20]. In my study

, I found 23.68% cases with ARF, 5.26% cases with DIC, 1.57% cases with pulmonary oedema, 5.26% cases with Acute LVF, 3.68% cases with CVA, 1.57% cases with Amniotic fluid embolism, 2.10% cases with septicaemia and 5.26% cases with cerebral oedema.

Pie chart-I shows among the 380 near miss cases HELLP Syndrome was found in35.26% (134), ARF in 23.68% (90), Electrolyte Imbalance in16.31% (62), DIC in 5.26% (20), Pulmonary oedema in 1.57% (06), Acute LVF in 5.26% (20), CVA in 3.68% (14), Amniotic fluid embolism in 1.57%(06), Septicaemia in 2.10% (08)and Cerebral oedema was found in 5.26% (20) cases.

Pie chart-II shows among the total 134 cases of HELLP syndrome patient, uncomplicated HELLP Syndrome is 58.20% (78 cases), HELLP Syndrome + ARF is 22.38% (30 cases),HELLP Syndrome + ARF + DIC is 4.47% (06 cases), HELLP Syndrome + DIC is 11.94% (16 cases), HELLP Syndrome + PRES is 1.49% (02 cases) and HELLP Syndrome + ICH is 1.49% (02 cases).

Pie chart-III shows among the total 90 cases of ARF, only ARF is 68.88% (62 cases),ARF + DIC is 6.66% (06 cases), ARF + Electrolyte imbalance is 17.77% (16 cases), ARF + Pulmonary oedema is 2.22% (02 cases) and ARF + Cerebral oedema is 4.44%(04 cases).

Pie chart-IV shows the antepartum and postpartum cases. Among the near miss cases of eclampsia, antepartum cases are 78.94% (300 cases) and Postpartum cases are 21.05% (80 cases).

ICU treatment was required for 134 (35.26%) cases, among them ICU could be provided for 10 (2.63%) cases and in 124 (32.63%) cases ICU could not be provided. 246 (64.74%) cases didn't required ICU facilities.

Dhaka medical College Hospital is a large tertiary level hospital but there is only 20 beds in ICU for the all departments, which is inadequate to deal with a large no of critically ill obstetric patients. So a separate obstetric ICU is now a demand of time.

Obstetric near-misses should be considered as potentially chronic illnesses that warrant follow-up care because the theoretical cycle of near-miss can only be interrupted by the resolution of residual issues or the mother's death. Some may consider near-miss events to be obstetric successes because ultimately the mother's life was spared, but the consequences of these complications can be overwhelming and enduring.

Conclusion

In Bangladesh, eclampsia still continues to be an important cause of maternal morbidity and mortality. This study is conducted in DMCH reflectinf a fact that the near miss cases due to eclampsia is high. During the study period there was only 80 maternal deaths due to eclampsia giving an incidence of 5.7% and the incidence of eclampsia patients among the total admitted obstetric cases is 9.4%. During the study period, there were total 1381 patients admitted in Eclampsia Unit of Dhaka Medical College Hospital, out of 380 patient were Near Miss cases, yielding the incidence as 27.52%. Among the near miss cases HELLP Syndrome, ARF, DIC, electrolyte imbalance, CVA, pulmonary oedema, cerebral oedema and amniotic fluid embolism were found most severe types of complications.

Eclampsia itself is a grave disease, so when an eclamptic patient develops complications, these are life threatening. The death and severe morbiditied due to eclampsia could be prevented by the experience of the physicians, using of standardized protocol for management, vigorous antihypertensive therapy timely and properly, referral and availability of appropriate intensive care facilities.Details analysis of near miss cases of eclampsia shows that most of the patients belonged to age group18-42 years, lower class people of rural area, were primi gravida,with singleton pregnancy, having primary education, had antepartum eclampsia, had diastolic blood pressure >110mmHg and presented late. Most of the patients were under irregular ante natal check up and delivered by vaginlal route. Live birth rates of fetal outcome is satisfactory. Many of the patients demand the facility of the ICU treatment but only 2.63% cases were treated at ICU.Dhaka medical College Hospital is a large tertiary level hospital but there is only 20 beds in ICU for the all departments, which is inadequate to deal with a large no ofcritically ill obstetric patients. So a separate obstetric ICU is now a demand of time.

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ROVEX

rosuvastatin 5 & 10 mg Tablet

THE 3G STATIN

Highly effective & safe in achieving target of all types of lipid

A study has conducted to evaluate efficacy & safety of Rosuvastatin in achieving target LDL-C, HDL-C, TG & TC levels in T2DM patient with newly diagnosed Dyslipidaemia. Rosuvastatin was found to achieve the target goal of LDL-C, HDL-C, TG & TC levels on Diabetic patients with favorable safety profile.

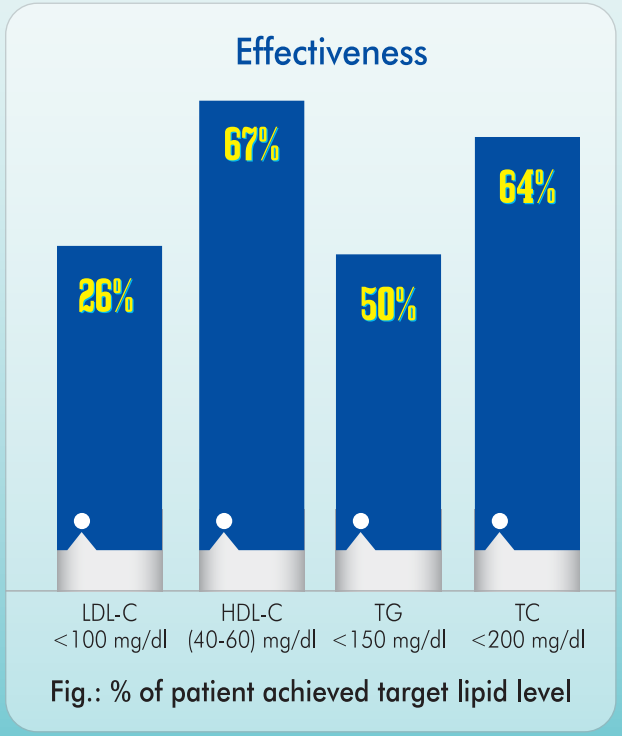

Fig.: % of patient achieved target lipid level

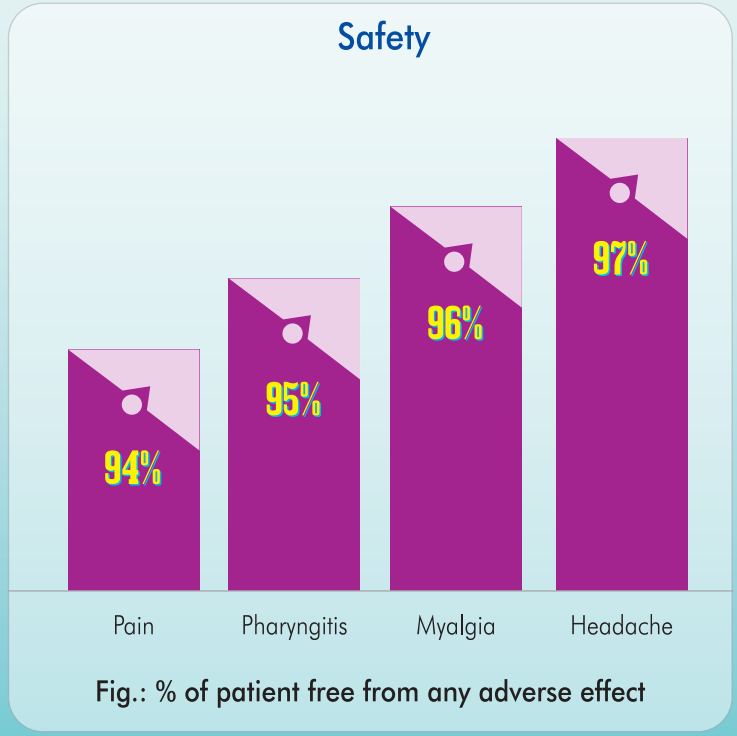

Fig.: % of patient free from any adverse effect

ROVEX The confident choice of statin for Dyslipidaemic patient

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Sonological Evaluation of Causes of First Trimester Bleeding

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Summary

Per vaginal bleeding in the first trimester is a common obstetrical situation ranging from an insignificant episode to life threatening emergency. The major causes are abortion, ectopic and molar pregnancies. Ultrasonography is playing an increasing role in diagnosis. This study was taken up to evaluate its utility in correlation to clinical findings.

In this prospective study all obstetric cases (with a history of per vaginal bleeding in the first trimester of pregnancy between April, 2015 to November, 2015 (of 8 months) were included. A complete general physical examination including pelvic examination was done to arrive at a clinical diagnosis. Patients were then subjected to ultrasound examination. Clinical diagnosis and ultrasound diagnosis were correlated.

Precisely indentifying the causes of vaginal bleeding occurring in the first trimester by clinical and trans-abdominal sonography, it needs to evaluate the outcome after instituting appropriate obstetric management. 42 of all obstetric cases (200) had the first trimester bleeding (incidence being 21%). The commonest causes were abortion (85.68%), molar (9.52%) & ectopic (4.80%) pregnancies. The bleeding cases were common in the younger age group 21 to 25yrs, more in the multigravida within 5 to 8(47%) weeks of gestational age. The commonest cause of bleeding was threatened abortion (28.57%).

Early institution of treatment after proper diagnosis has decreased morbidity, at times mortality of women.

Ultrasound had not only clinched the diagnosis but also helped in timely management of first trimester vaginal bleeding.

Ultrasound is a simple, non-invasive diagnostic modality available in the current day practice to diagnose and to manage first trimester vaginal bleeding.

Introduction

Sonographic evaluation of first trimester per vaginal bleeding in pregnancy is a combined task amongst the cases to be scanned and the knowledge of the sonographer relating its anatomic, pathophysiological changes, the technological advancement of the machine and the ultimately the composite of its subtle findings of any abnormalities1,2.

Bleeding in the first trimester is defined as bleeding that occurs at or within 12 weeks of pregnancy. Although the precise

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aetiology of per vaginal bleeding within first trimester remains to be determined, sonography is proven to be a major tool for diagnosis of this important condition,(Sanders 1985)3,4.

There are many reasons and indications of sonography in cases of first trimester bleeding in pregnancy. To detect location of pregnancy whether intrauterine or extra-uterine, detection of gestational sac, number of pregnancy, embryo, yolk sac amnion, chorion, foetal poles, cardiac pulsation, CRL and its normalcy or any abnormality or severity of disorder related to all these above mentioned indicators5,6.

Obstetrical disorders that may cause vaginal bleeding in the early pregnancy include abortion, ectopic pregnancy, and trophoblastic neoplastic conditions such as hydatidiform mole and invasive mole (Sanders 1985)4. Prior to the advent of sonography, most of the patients in first trimester vaginal bleeding were diagnosed by clinical examination2. But now a days, fortunately with the gradual advancement of technology since 1958 (Dr. Ian Donald incorporated Ultrasonography into OBS-GYN), sonography can now be used to find the exact causes of bleeding so that appropriate therapeutic measures can be undertaken at the earliest possible time7,8.

This study was conducted by prenatal ultrasonography to investigate the clinical significance of bleeding in the first trimester. The purpose of this study is to confirm, to compile and to correlate the the complaints, clinical sign-symptoms of the patients with the sonographic findings and as such to provide suggestive informations to the clinicians for the needful management of the bleeding in first trimester cases.

Since there are several causes of vaginal bleeding in first trimester of pregnancy, sonography is very much needed to establish the causes of bleeding and the severity of the disorder9,10,6. Antenatal ultrasound can facilitate early diagnosis, appropriate decision making and suitable management of the causes of first trimester bleeding11,12.

It is notable that ultrasound is the first and foremost simple noninvasive diagnostic tool and the safest method of choice for the detection of causes of first trimester bleeding13,24.

Patients & Methods

It this prospective study, a total number of 200 women in their first trimester of pregnancy were studied, out of which 42 women presented with vaginal bleeding. The patients were between 15 to 36 years of age. All of these patients were referred by OBS-GYN department of different hospitals and Private Clinics.

Study period of eight months duration from April. 2015 to November, 2015.

Place 1. The Bangladesh Institute of Ultrasound in Medicine Research,
2. Central Police Hospital, Rajarbag, Dhaka.
3. Al-Raji Consultation center, Concord Center Point, Farm Gate, Dhaka,

Study population:

Inclusion Criteria-

1 Age group: 16 - 36 years.

2. Women with history of amenorrhea upto three months of pregnancy.

3. History of amenorrhea and per vaginal bleeding within three months of pregnancy.

4. Both Primigravida and multigravida.

5. Patient with positive pregnancy test.

Exclusion Criteria-

1. Maternal age more than 36 years.
2. Amenorrhoea other than pregnancy.
3. Bleeding in 2nd and 3rd trimesters.
4. Multiple gestations.

5. Congenital anomalies.
6. Medical termination of pregnancy.

Description of the Instrument:

The Sonographic examination were performed with real-time ultrasound system

1) ALOKA SSD- 1100 FLEXUX
2)SAMSUNG MEDISON, SONOACE –X6, KOREA.
3.SIEMENS X- CLASS. ACUSON X 300, made in KOREA
Real-time imaging system .....
Probes employed were 3.5MHz curvilinear transducer.
Though transvaginal transducer can provide the better information in the first trimester vaginal bleeding, but it was not used owing to refusal from all patients.

This study group consisted with the history of amenorrhoea, per vaginal bleeding and a positive pregnancy test; all patients underwent through sonographic examination of the lower abdomen including uterus and adnexa, the Mean Sac Diameter (MSD), presence of yolk sac and its character, the embryo, the Crown Rump Length(CRL), fetal cardiac activity by using standard methodology. All measurements were obtained in millimeter (mm).

Sample Selection

All patients were scanned on random basis from 5th to 12th weeks of amenorrhoea.
All study subjects were local inhabitants; belonging to Dhaka city and its adjacent areas.
Data collection:
1.VARIABLES-
Independent Variable: Age, sex, menstrual History,
Obstetrical History.
Dependent Variable: Ultrasonography, Blood grouping;
HIV, Blood Sugar, VDRL, HBsAg, Urine for routine et
microscopic examination & Pregnancy Test.

2. Data collection Instruments-
Structured questionnaire (Examinatiion Protocal)
The questionnaire has section on 1. History, 2. Clinical
examination and 3. Ultrasound finding.

3. Data Collection Procedures-
The interview were taken by the student (Myself) herself
All parameters were determined by ultrasound measurement
taken by the principal researcher.

Parameter record of the Images:

For hard copy documentation, an image reading unit was used that printed the images on special papers.
Patients' preparation and Examination Procedures-
1 Patients' Preparation-

For the evaluation of first trimester vaginal bleeding cases, patients need optimally full urinary bladder. So, for patients with empty bladder three to six glasses of drinking water were given and advised to wait until the bladder becomes optimally full.

2. Examination procedures-

Position of the patient– Supine.

Scanning Technique: Patient's lower abdomen were exposed from the umblicus to the Symhysis Pubis. Then ultrasound gel were applied onto the exposed area. Scanning was started with longitudinal scans in the middle between the umbilicus and pubic symphysis. Then repeated more laterally, first on the left side and then on to the right. Next scanning was done transversely.

3. GAIN SETTING: Gain setting was adjusted to gain the best possible images.

Figure-1: The plane for measurements of gestational sac.

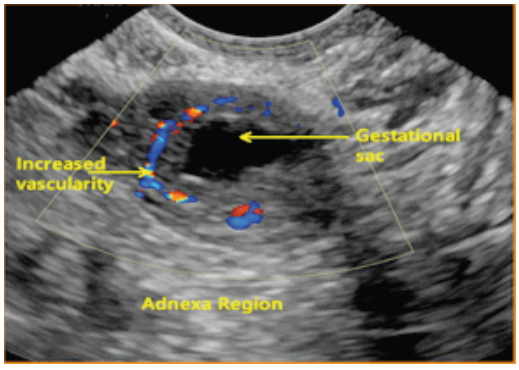


Figure-2: The plane for measurements of gestational sac.

Figure-3: Plane for measurement of Crown Rump length (CRL).

4. DATING MEASURMENTS-

Using longitudinal scan, the maximum dimension of the sac in the long axis (length) and at 90 degree to its antero-posterior(AP) dimension. A transverse scan was then made at right angle to the longitudinal scan plane and the greatest width of the sac was measured.

The mean dimension of the sac is the sum of these three measurements divided by 3. (Palmer 1995)

Mean gestational sac dimension= length+ AP+ Width 3

The current measurement (Sedien) demonstrated the following features:

* the shape of the sac should be oblong or oval(not a circular sac)
* Double echogenic ring is present.
* The inner ring is of uniform echcogenecity and encircle the entire sac
* The outer ring is incomplete and it is the lining of the uterus.
* Between the two rings is an echogenic residual uterine cavity.
* The thickness of the margin should be >or =2 mm.

Yolk sac: it is usually seen as round cystic structure about 4 to 5 mm diameter adjacent to the fetus. Criteria : A yolk sac diameter greater than 5.6 mm between 5 and 10 weeks is always associated with an abnormal outcome.

CROWN-RUMP LENGTH (CRL): The dating meaurment had been done using crown –rump length (CRL). PROCEDURE: Using scans in different direction , the longest length of the embryo was found and the measurement made from the head (Cephalic pole) to the outer edge of the rump. The fetal limb and the yolk sac were excluded in this measurement.

CARDIAC ACTIVITY OF THE EMBRYO: Using trans-abdominal ultrasonography, it is abnormal to visualize the embryo without demonstrating cardiac activity. The risk of spontaneous abortion of a live embryo by trans-abdominal scan between 7 and 12 weeks of menstrual age is 2% to 2.3%. If the fetus is alive, the heart will be recognized lying in the mid-mbryo usually seeming to lie anterior to the rest of the thorax.

Results:

The value of ultrasonogram in the diagnosis of total 200 cases of pregnancy in their first trimester were assessed. Among them total 42 (21%) women were found with bleeding in their first trimester. The remaining 158 (79%) of women were without any bleeding Which is shown in the graphical form (graph-1). Among these cases threatened abortion were most common cause of bleeding. It was 12cases and constituted 28.57% of the causes of early pregnancy bleeding.

Distribution of total patients with vaginal bleeding are presented in tabulated form in the tables 1, 2, 3 according to age in years, duration of pregnancy in weeks, and causes of bleeding respectively.

The results are represented in graphical forms as followings:

Graph no 1. Represents the percentage of vaginal bleeding during first trimester (42 out of 200) 21%.

Graph no 2. Represents the duration of pregnancy which shows that most of the bleeding cases are found between 5 to 8 weeks of pregnancy, which is 47.40% of the total study population.

Graph no 3. Bleeding cases in age group shows that maximum bleeding occurred within 21 to 25 years of maternal age (47.27%).

Graph no 4. Represents the relative population of the patients with the causes of per vaginal bleeding in third trimester where threatened abortion (28.57%),

incomplete abortion (19.07%), complete abortion (16.6%), missed abortion (11.92%), blighted ovum (9.52%). Other than abortion, the causes are molar pregnancy (9.52%) and ectopic pregnancy (4.76%).

The total number of threatened abortions were 12, which constituted 28.57%. Total number of Incomplete cases were 8, which constituted 19.04% of early pregnancy bleeding, they were treated surgically by dilatation and curettage, and subsequent rest and advice.

Complete abortion cases were 7 which constituted 16.60% and they needed no surgical intervention. Only rest, medication and observation was given to them.

Missed abortion cases were 5 which came to 11.90% and they needed hospitalization, surgical intervention and some cases needed blood transfusion as a life saving measure.

In this study 4 cases were of blighted ovum, that constituted 9.52% of the vaginal bleeding in the first trimester of pregnancy.

Total number of molar pregnancy were 4 which constitutes 9.52% of early pregnancy bleeding. These were managed by surgical intervention and followed up by histopathological examination and subsequent hormone study of Beta HCG and regular follow up.

Number of ectopic pregnancy were 2 which contributed to 4.76% of causes of early pregnancy bleeding. Ectopic pregnancy is a gynecological as well as obstetrical emergency condition which needed immediate hospitalization and surgical intervention without any delay. One of these cases were treated laparoscopically and other one was managed by laparotomy.

Among all the tools to diagnose a case and to get a result by history, clinical examination, and laboratory examinations. Ultrasonogram of the pelvic organs contributed a lot to come to an almost near to a correct diagnosis and to a satisfactory result.

Tables, Graphs & Case Reports:

Ultrasonography was done for a total 800 patients in 8 months of period, Out of them 200 cases were in first trimester of pregnancy. Out of these 200 cases, 42 women (21%) Presented with vaginal bleeding.

Bleeding in first trimester of pregnancy is common in the age group of 20 yrs to 30 yrs of age, less common before 21 years and after the age of 30 years and not found beyond 36 years of age: (Table -1).

Table No-1: Distribution of the Study Group according to age :

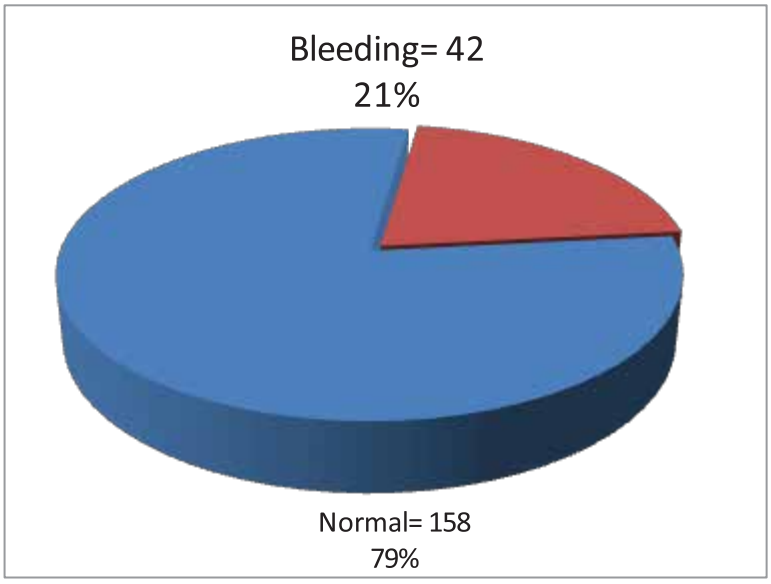
Age of the Patient	Number of the patients	Percentages
16 to 20 Years	8	19.50%
21 to 25 Years	20	47.40%
26 to 30 Years	10	23.50%
31 to 35 Years	4	9.6%
36 and above	0	0
Total	42	100%

Table No-2: Distribution of the Study Group according to the duration of Pregnancy:

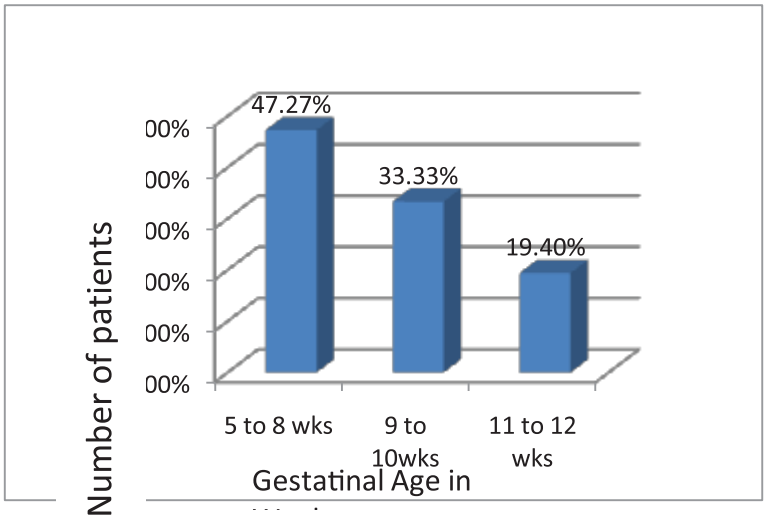
Gestational age in weeks	Number of the patients	Percentages
5 to 8 weeks	20	47%
9 to 10 weeks	14	33.33%
11 to 12 weeks	8	19.04%
Total	42	100%

Table No-3: Distribution of the Study Group according to the Causes of bleeding :

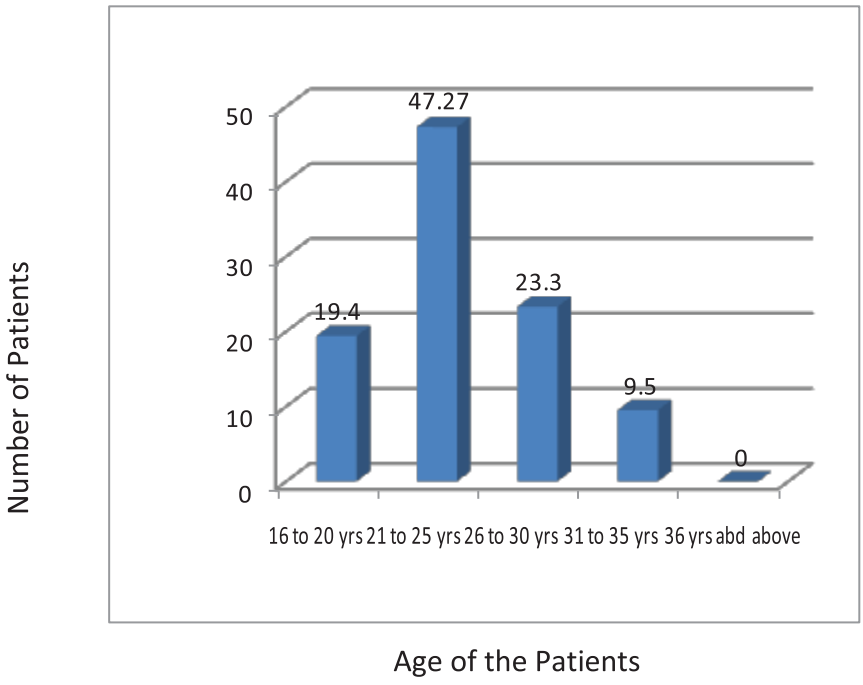
Causes of bleeding	Number of the patients	Percentages
Threatened abortion	12	28.57%
Incomplete abortion	8	19.07%
Complete abortion	7	16.6%
Missed abortion (fetal demise)	5	11.92%
Blighted Ovum	4	9.52%
Molar pregnancy	4	9.52%
Ectopic Pregnancy	2	4.80%
Total	42	100%



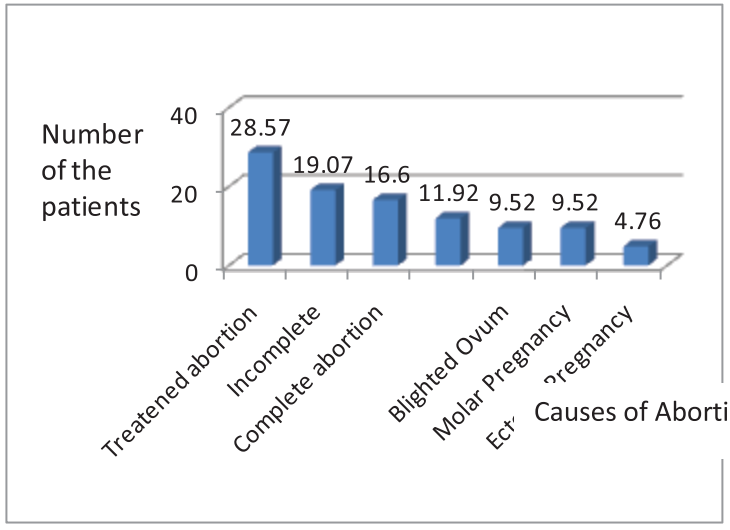
Graph No-1: Percentage of study Population in first trimester Vaginal Bleeding.



Graph No-2: Graphical presentation of study group according to duration of pregnancy.



Graph No-3: Graphical presentation of the study according to age group of the pregnancy cases.



Graph-4: Graphical presentation of the study to age group according to the causes of bleeding in first trimester of Pregnancy.

Case study -1

History : 32yrs multigravida, presented with history of 2 and half months of amenorrhea with per vaginal bleeding for 5 days.

Ultrasonographic Findings : Uterus is gravid containing a single gestational sac. The mean sac diameter is 4.96cm with regular margin of gestational sac but there is no embryo within the sac.

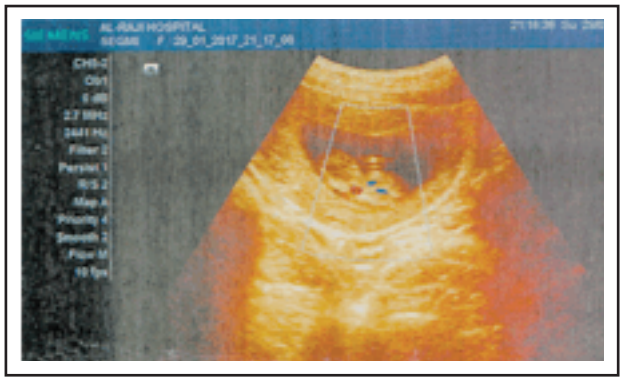
Comments : A case of Blighted Ovum

Case study -2

History : A 21 yrs muligravida presented with history of amenorrhoea for 2 months came with excessive vaginal bleeding with passage of blood clots for 4 days.

Ultrasound findings : Uterus is enlarged in size, anteverted in position, Some echogenic structure is seen within the cervical canal cavity measuring about 2.8 x 1.7cm

Comment : Findings suggests of retained Product of conception (Incomplete abortion).



Case study -3

History : A 24 Years multigravida came with history of 3 months amenorrhea with per vaginal bleeding 3 days.

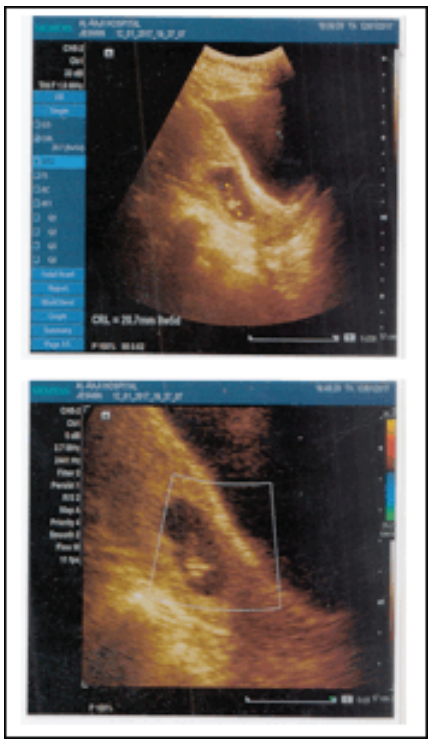
Ultrasound findings : Uterus is gravid, containing a single fetus with cardiac activity and movement CRL measures 44.4mm

Case study -4

History : A 18 Years primigravida with history of amenorrhea for 12 weeks with excessive vomiting and spotted and occasional per vaginal bleeding for 8 days.

Ultrasound findings : Uterus is gravid containing 12wks of a single live pregnancy with posterior placenta Previa.

Comment : Suggestive of a case of Threatened Abortion. Advised Follow Up US Scan.

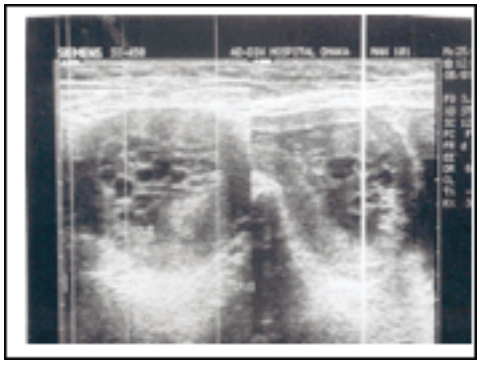


Case study -5

History : A 32 years lady, 2nd gravida came with history of amenorrhea for 8 weeks with positive pregnancy test with the complaints of bleeding per vagina for 4 days.

Ultrasound findings : Uterus is gravid, containing a single gestational sac with an embryo but no cardiac activity.

Comment : A case of Fetal Demise (Missed Abortion).

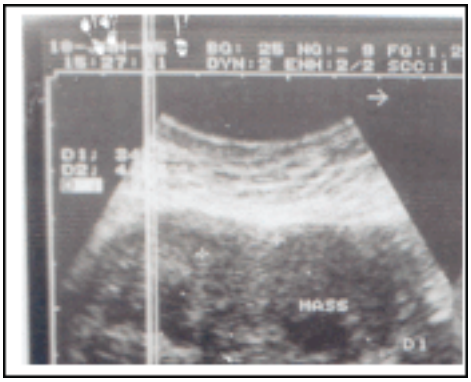


Case study -6

History : A 18 primigravida with history of 9weeks pregnancy with excessive vomiting and nausea with irregular per vaginal bleeding for 10days.

Ultrasound findings : Uterus is bulky, There are anembryonic soft tissue cystic structures of variable siges in the gravid uterus. No foetal parts could be visualised.

Comments : Findings suggestive of Hydatidiform Mole.



Case study -7

History : A 30yrs lady, 2nd gravida came with history of amenorrhoea for 8 weeks with pain in lower abdomen, more on to the right side with per vaginal bleeding for 2 days with positive pregnancy test.

Ultrasound findings : Uterus is gravid, there are 2 masses are present , one near the anterior wall measuring 34 mm and 44mm respectively. there is a gestational sacin the right adnxae with an embryo with cardiac activity.

Comment : A case of unruptured Ectopic Pregnancy with 2 myoma inside the uterus

Discussion

Diagnostic ultrasound is a safe, valuable and noninvasive tool used in the field of obstetrics for more than last 35 years. It is a very important technique for examining the pregnant women and can be used when clinically indicated in any time during pregnancy, (Palmer 1995)1,2,15,16.

Human reproduction is a relatively inefficient process. Some 25% of all women will have one or more miscarriages (Warburton and Frasre 1964) and in this study it was shown 21%. There is a complex relationship between maternal age over 35 years and nearly menarche (Arias Fernando, 1993)4,7,17,18.

In this study most of the bleeding cases were between 21 to 25 years of age, and in the context of our country (South East Asian), it differs with the study of western countries15,19.

Among 42 vaginal bleeding cases, 30 cases were multigravida (71.42%) and 12 cases were primigravida (28.57%) which indicates that abortion is related to gravidity. In this study about 47.27% abortion occurred within 5th to 8th weeks of gestation. In this study the most common cause of bleeding in first trimester is threatened abortion. It was 12 cases out of 42 women with per vaginal bleeding (28.75%). Rest of the cases were of incomplete abortion (8 cases correspond to 19.04%), complete abortion (7 cases correspond to 16.60%), fetal demise/missed abortion (5 cases correspond to 11.92%), blighted ovum (4 cases correspond to 9.52%), molar pregnancy (4 cases correspond to 9.52%), ectopic pregnancy (2 cases correspond to 4.80%).

Ultrasonography was done for total 800 patients in eight months period.

Out of them 200 cases were found in their first trimester. Of this 200 cases 42 (21%) (as shown in the graph-1) women presented with vaginal bleeding.

About 47.27% bleeding occurred between 5th & 8th week of gestation (as shown in the graph-2.

Bleeding in first trimester of pregnancy is common in the age group of 21 to 30 years, less common before 20 years of age and after 30 years of age, and above 36 years of age it is not common (as shown in the graph-3.

The most common cause of bleeding in the first trimester in this study was found as threatened abortion 28.75% (as shown in the graph-4.

The above findings of discussion shows that by means of ultrasonogram, we can detect and identify the causes of bleeding in the first trimester.

Bleeding in early pregnancy occurs in 12-24% of recognised pregnancies; the true rate is probably higher as many may occur before a woman has realized that she is pregnant20,21,22. In the UK there were 0.05-0.22 reported deaths due to miscarriage

per 100,000 maternities in the period 1985-2008 (Jurkovic D, Overton C, Bender-Atik R;)23,24,25.
In UK, It's thought that around one in 10 women experiences some bleeding when she is in early part of pregnancy and for the vast majority, it signifies nothing serious. Less common than miscarriage, ectopic pregnancies occur in approximately 1 out of 100 pregnant women and bleeding can be a sign (Article - Bleeding During Pregnancy: Usually No Cause For Concern, The Huffington Post, 14/08/2014); huffingtonpost.co.uk/2014/08/14/bleeding-during-pregnancy-usually-no-cause-for-concern_n_7366606.html26,27.

Limitations

Though this is a prospective study, the duration of this study period is only 8 months. And the Place of study and study population of this dissertation are confined within the Dhaka city. So this study is not a large scaled multi-centered study. All cases were examined by trans-abdominal sonography because of patients refusal to give consent by trans-vaginally.

Conclusion

In this study various types of abortions constituted the commonest causes of vaginal bleeding. Confirmation of abnormal & nonviable pregnancies by ultrasound facilitated early institution of appropriate treatment thereby lessening the physical and psychological morbidity for the patients. Complications like infection & future infertility could be avoided by suitable early effective treatment. The study therefore agrees with the assumption given and satisfies the hypothesis.
Recommendations
This study should be conducted within multi-centered and large scaled population group including both rural and urban areas.
The recent availability trans-vaginal sinology (TVS) has greatly improved the evaluation of both normal and abnormal early intrauterine and extra uterine pregnancies. So to get more information for early pregnancies, both trans-abdominal and trans-vaginal approach should be recommended side by side.

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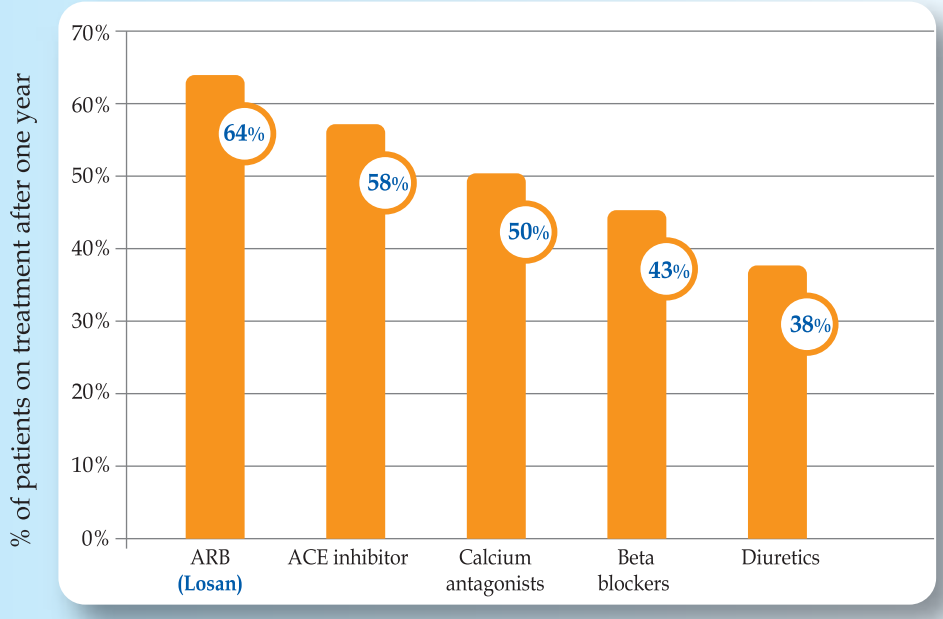

ARB: Angiotensin II Receptor Blocker
ACE: Angiotensin - Converting - Enzyme

Fig.: Percent of patients continuing initial therapy

Maintaining adequate vitamin D may help prevent onset of inflammatory diseases

The ORION Medical Journal 2018 March;20-1(43): p53-57

Maintaining sufficient vitamin D levels may help to prevent the onset of inflammatory diseases like rheumatoid arthritis, research led by the University of Birmingham has discovered.

The research also found that while Vitamin D can be effective at preventing the onset of inflammation, it is less effective once inflammatory disease is established because diseases such as rheumatoid arthritis leads to vitamin D insensitivity.

Another key finding of the research was that the impact of vitamin D on inflammatory disease cannot be predicted using cells from healthy individuals or even from the blood of patients with inflammation as cells from the disease tissue are very different.

The researchers concluded that if vitamin D is to be used in patients with rheumatoid arthritis, clinicians may need to prescribe much higher doses than currently employed or provide a treatment that also corrects the vitamin D insensitivity of immune cells within the joint.

In addition to its well-established actions on the skeleton, vitamin D is a potent modulator of the immune system. In particular, vitamin D can suppress inflammation in autoimmune diseases such as rheumatoid arthritis. Patients with rheumatoid arthritis are frequently vitamin D deficient and may receive vitamin D supplementation.

The study, published in the Journal of Autoimmunity, involved using paired peripheral blood and synovial fluid from the inflamed joint of patients with rheumatoid arthritis.

Professor Martin Hewison, of the University of Birmingham's Institute of Metabolism and Systems Research, said: "Our current understanding of vitamin D and rheumatoid arthritis is based on studies of patient blood which may not truly represent the situation at the site of inflammation - the joints.

"We therefore investigated responses to the active form of vitamin D in immune cells from the inflamed joints of patients with rheumatoid arthritis.

"Compared to blood from the same patients, the inflamed joint immune cells were much less sensitive to active vitamin D.

"This appears to be because immune cells from the joints of rheumatoid arthritis patients are more committed to inflammation, and therefore less likely to change, even though they have all the machinery to respond to vitamin D."

Dr Louisa Jeffery, also of the University of Birmingham, said: "Our research indicates that maintaining sufficient vitamin D may help to prevent the onset of inflammatory diseases like rheumatoid arthritis.

"However, for patients who already have rheumatoid arthritis, simply providing vitamin D might not be enough. Instead much higher doses of vitamin D may be needed, or possibly a new treatment that bypasses or corrects the vitamin D insensitivity of immune cells within the joint."

Senior author Professor Karim Raza, also of the University of Birmingham, said: "Our findings were unexpected as we initially thought that cells from the inflamed rheumatoid joint would respond just as well to vitamin D as cells from the blood. The fact that they don't has important implications for how we think about using vitamin D to treat inflammation.

"Unlike previous studies we isolated different immune cell types from the actual site of disease to determine whether specific subsets of immune cells (specific T cell groups) have equal sensitivity to vitamin D."

This is the first research of its kind to characterize the effects of vitamin D in both peripheral blood and inflamed joints of patients with inflammatory disease.

The study, carried out in collaboration with Professor David Sansom at University College London, is part of an ongoing research project which first began in 2011.

The university now hopes to embark on new research to determine why rheumatoid arthritis leads to vitamin D insensitivity, how we can overcome this and whether this effect is seen in other inflammatory diseases.

https://www.news-medical.net/news/20171121/Maintaining-adequate-vitamin-D-may-help-prevent-onset-of-inflammatory-diseases.aspx

Could Folic Acid Fight a Cause of Autism?

FRIDAY, Sept. 8, 2017 (HealthDay News) -- By taking folic acid around the time of conception, mothers-to-be may reduce their child's risk of pesticide-related autism, a new study suggests.

"We found that if the mom was taking folic acid during the window around conception, the risk associated with pesticides seemed to be attenuated," said study first author Rebecca Schmidt.

"Mothers should try to avoid pesticides. But if they live near agriculture, where pesticides can blow in, this might be a way to counter those effects," said Schmidt. She is an assistant professor of public health sciences at the University of California, Davis.

It's estimated that one in 68 U.S. children has an autism spectrum disorder, which can range from mild to severe. There is no single cause, but research suggests a combination of genetic and environmental influences plays a role, according to the U.S. National Institutes of Health.

The new study included about 300 children aged 2 to 5 with autism and 220 without the developmental disorder. Children whose mothers took 800 or more micrograms of folic acid (the amount in most prenatal vitamins) had a much lower risk of developing autism, even when their mothers were exposed to household or agricultural pesticides, the researchers said.

Autism risk was higher among children whose mothers were repeatedly exposed to pesticides or whose mothers had low folic acid intake and exposure to agricultural pesticides between three months preconception and three months afterward, the findings showed.

Those two factors combined were associated with higher risk of autism than either low folic acid intake or pesticide exposure alone, Schmidt said in a university news release.

"The mothers who had the highest risk were the ones who were exposed to pesticides regularly," she added.

Folic acid is the synthetic form of vitamin B9, found in supplements and fortified foods. While taking it reduced the associated risk of pesticide-related autism in children, it did not entirely eliminate it, the report noted.

"It would be better for women to avoid chronic pesticide exposure if they can while pregnant," Schmidt said.

Folic acid plays a critical role in DNA repair and synthesis, and in determining which genes are turned on or off, said Schmidt. "These are all really important during periods of rapid growth when there are lots of cells dividing, as in a developing fetus. Adding folic acid might be helping out in a number of these genomic functions," she added.

The study doesn't show a causal link, and there are limitations. For one, participants relied on their memory to report folic acid intake and household pesticide exposure.

The study was published Sept. 8 in the journal Environmental Health Perspectives.

-- Robert Preidt

http://www.medicinenet.com/script/main/art.asp?articlekey=206695

High cholesterol diagnosis tied to lower breast cancer risk

Researchers have linked a diagnosis of high cholesterol to a lower risk of breast cance

After investigating 14 years of study data on over 1 million people, researchers found that women diagnosed with high cholesterol had a lower odds of developing breast cancer, compared with women without high cholesterol.

Speculating on the finding, they suggest that it shows that taking statins may protect against breast cancer and call for further research to confirm it.

The researchers, from Aston University in the United Kingdom, recently presented their findings at the European Society of Cardiology ESC Congress 2017 in Barcelona, Spain, and report in the European Heart Journal.

Breast cancer is cancer that begins when cells grow abnormally in breast tissue. Although men can also develop breast cancer, it is much more common in women.

Among women around the globe, breast cancer is the most common cancer and the fifth most common cause of cancer death. In 2012, nearly 1.7 million new cases - a quarter of all new cancer cases in women - were diagnosed worldwide.

All animal cells need cholesterol to function normally and it is an essential component of cell walls. Cholesterol is also important for making vitamin D, compounds that aid digestion, and hormones.

http://www.medicalnewstoday.com/articles/319199.php

What's your heart attack risk?

IMAGINE THE DAY when a blood test could predict whether you are likely to have a heart attack within five years, thus allowing you and your medical practitioner to do everything possible to prevent such an event.

Well, another simple blood test, developed by researchers at the National Heart and Lung Institute, Imperial College London, promises to do just that.

If clinical trials are successful, instead of using age, sex, cholesterol and blood pressure levels and medical history to evaluate your risk of heart problems, the new test looks at protective antibodies that already exist in your system. These immune system-produced antibodies, called IgG, seem to shield the body from a heart attack, even when cholesterol and blood pressure are high.

A five-year study found that patients with the lowest levels of IgG antibodies had the highest risk of heart attack, while those who had high levels of IgG were less likely to suffer from cardiovascular disease. The findings will enable doctors to be more efficient in identifying those who need to be more closely monitored. If the blood test reveals low levels of IgG, patients can be given preventative therapies before their condition escalates.

Ref. Reader's digest October, 2017

Non-invasive help for the partially blind

UNTIL NOW, vision loss due to glaucoma or optic nerve damage has generally been considered irreversible. But results from a German clinical trial published last year have demonstrated significant vision improvement in partially blind patients after ten days of non-invasive, transorbital alternating current stimulation (ACS). This is when alternating currents of electricity are applied to the area of the brain that processes vision.

"ACS treatment is a safe and effective means to partially restore vision after optic nerve damage," commented lead investigator Bernhard A. Sabel.

And more good news for those with low vision: a specialised miniature camera mounted onto their eyeglasses dramatically improves their ability to read.

The device recognises text and reads it to the user, who uses an earpiece, according to researchers with UC Davis Health System, California. The device can also be programmed to recognise faces and money and grocery items.

Ref. Reader's digest October, 2017

Breast-Feeding Linked to Lower Endometriosis Risk

FRIDAY, Sept. 8, 2017 (HealthDay News) -- Women who breast-fed at least one child appear to have a lower risk for developing endometriosis, new research suggests.

Endometriosis is a chronic and often painful condition that occurs when the lining of the uterus grows outside of the reproductive organ on the fallopian tubes, ovaries or another area.

"We found that women who breast-fed for a greater duration were less likely to be diagnosed with endometriosis," said study author Leslie Farland. She is a research scientist at Brigham and Women's Hospital in Boston.

"Given the chronic nature of endometriosis and that very few modifiable risk factors are currently known, breast-feeding may be an important modifiable behavior to reduce the risk of endometriosis among women after pregnancy," Farland said in a hospital news release.

The study involved thousands of women who participated in the Nurses' Health Study II. That study began in 1989, and the women were tracked for two decades. The researchers found that during this time, nearly 3,300 of the women were diagnosed with endometriosis after giving birth to their first child.

The research team then focused on breast-feeding behavior among the women. Specifically, the researchers considered how long the women nursed their infants, when they introduced solid food or formula, and how much time passed before their first postpartum period.

The women's risk for endometriosis fell by 8 percent for every three additional months they breast-fed after each pregnancy, the findings showed. Their risk dropped 14 percent for every extra three months of exclusive breast-feeding after each pregnancy.

The researchers also looked at a woman's lifetime risk. Women who exclusively breast-feed for a cumulative 18 months or more during their reproductive years (which may include multiple pregnancies) have a nearly 30 percent lower risk for endometriosis, the study found.

The temporary pause in periods while women are breast-feeding shortly after birth may partially explain their lower risk for endometriosis, the study authors suggested. The hormonal changes associated with breast-feeding could also play a role.

http://www.webmd.com/parenting/baby/news/20170908/breast-feeding-linked-to-lower-endometriosis-risk#1

MSD News

Orion Pharma Limited arranged 'Orion Pharma Limited Strategic Conference 2018' on January 18, 2018 at BRAC CDM, Rajendrapur, Gazipur. The event was chaired by the Honorable Chairman of Orion Mr. Mohammad Obaidul Karim, the Director Mrs. Arzuda Karim and the Managing Director Mr. Salman Obaidul Karim. All the Regional Sales Managers, Territory Coordinators, Regional Coordinators, Area Managers and Deputy Sales Managers attended the auspicious program. The Honorable Chairman, Director and the Managing Director paid tribute to the employees who successfully achieved the regional targets. Their zestful speech made the event more resilient. The success stories of Barisal and Kushtia region were also narrated by the respective Area Managers. The main motto of this program was to create enthusiasm and inspiration among the field force for the upcoming challenges.

Medical Services Department of Orion Pharma Ltd. is successfully arranging significant number of Scientific Seminar, Round Table Meeting, Clinical Meeting and Rural Promotional Conference at different venues/Institutions in all over the Country.

Special Medical Programme

Orion Renal & General Hospital, Kalabagan, Dhaka

As a contributor in Health sector Orion renal & General Hospital organized an inauguration ceremony of Special Medical Programme conducted by foreign specialist from India at Orion Renal & General Hospital premises Lake circus Kalabagan , Dhaka on 15th Dec, 2017 at 11:00 AM. Presided by the Director of Orion Group Mrs. Arzuda Karim. At the presence of three Indian specialists Dr. Neerav Goyal (Gastroenterologist), Dr. Kailash N Singh (Nephrologist), Dr. Sudheer K Tyagi (Neuro & Spine Surgeon) along with some respected Doctors of Orion Renal & General Hospital Dhaka. There is huge number of patients from different remote corner of the country gathered in the Hospital premises. The program ended up with proving medical consultation and health checkup by highly experienced doctors of both neighboring countries. This auspicious program and event ended with heartfelt gratitude from patients to Orion Renal & General Hospital Management for this noble effort and wonderful discipline arrangement, at the same time they request to continue such an event in further.

Scientific Seminar (SS)

NICVD (National Institute of Cardiovascular Diseases & Hospital)

A Scientific Seminar has been arranged by NICVD at the Prince Chinese Restaurant, Link Road, Shymoli, Dhaka. The Seminar was presided over by the renowned Cardiologist Prof. Dr. Amol Kumar Chowdhury, NICVD. Asst. Register Dr. Fahdia Afroz was the Key Note speaker of the Seminar. The program was concluded with an attractive Buffet Lunch sponsored by OPL.

Conservative Department, Dhaka Dental College Hospital

Year Ending Seminar was arranged by the Conservative Department of DDCH, Dhaka. The program was arranged at conference room of DDCH. The program was observed by the senior surgeons & all participants. The was program was proudly sponsored by OPL.

Department of Gastroenterology, Khulna Medical College Hospital

Scientific Seminar was arranged by the Department of Gastroenterology, Khulna Medical College Hospital, Khulna. The Program was arranged at conference room of KMCH. The seminar was chaired by the Prof. Dr. Abdul Ahad, Head of the Department Prof. Dr. Abdul Ahad. All members of the department were present at the program. OPL was the proud partner of this Scientific Seminar.

Round Table Meeting (RTM)

Department of Pediatrics, Khulna Medical College Hospital

In last Thursday of every month A Round Table Meeting arrange by the Department of Pediatric of Khulna Medical College Hospital. Head of the Department of Pediatric Assistant Professor (Dr.) A.K.M Mamunur Rashid was the Chief Guest. All members of the department were present in the program. It was concluded with a luscious refreshments sponsored by OPL.

ENT & Head-Neck Cancer Hospital & Research Institute, Agargaon

A Round Table Meeting has been organized by ENT & Head-Neck Cancer Hospital & Research Institute in ENT Hospital Conference Hall. Deputy Director Dr. Junnun Istiaq Chowdhury was the Chief Guest of the program & Dr. Chandan Sarker, Senior Medical Officer was the Key Note Presenter. About 26 Doctors attended the session & The program sponsored by OPL.

Rural Promotional Conference (RPC)

Sufi Md. Dayemuddin Hospital, Sonargaon, Narayangonj

A Rural Promotional Conference was arranged by Sufi Md. Dayemuddin Hospital, Sonargaon at the Hospital Conference Room. Dr. Joshim Uddin was the Chief Guest & Dr. Sohel Rana was the Key Note Speaker of the program. About 60 Doctors was attended the session & sponsored by OPL.

Nayapur General Hospital, Sonargaon, Narayangonj

A RPC was arranged by Nayapur General Hospital, Sonargaon, Narayangonj at Hospital premises. Dr. Robi Bishwas was the Chief Guest of the program. Near about 40 Doctors was enjoyed the session. The program was proudly sponsored by OPL.

Bibir Bazar, Keranigonj

A RPC was arranged by Bibir Bazar, Keranigonj. Dr. Aminul Islam was the Organizer & Chief Guest of the Program. About 35 Doctors was attended the program. OPL was arrogantly sponsored the program.

http://journal-index.org/ISSN-validator/issn-validator.php

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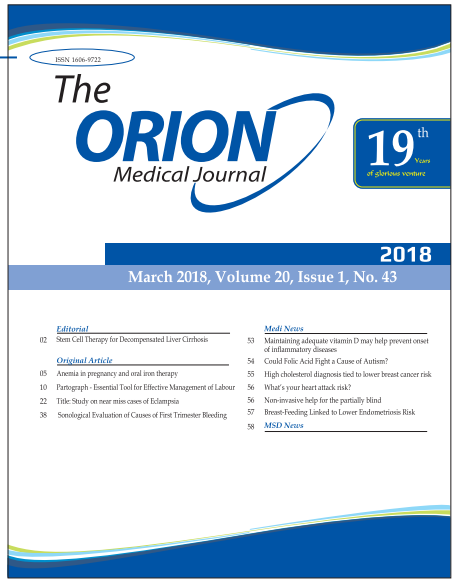

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