

Understanding Importance of “Golden hour” in Obstetric Emergencies -Common Observations and Suggestions

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Obstetric emergencies occur suddenly and at times unexpectedly, posing risk of serious maternal morbidity or mortality. The common life-threatening obstetric emergencies include accidental haemorrhage, postpartum haemorrhage, eclampsia, ruptured ectopic pregnancy, retained placenta and inversion of uterus. These emergency conditions are responsible for large percentages of cases, who in turn develop serious maternal morbidity or mortality.

The outcome of these conditions depends primarily on certain factors. Place of delivery or occurrence of emergency. Time lapse between occurrence of the emergency and admission to tertiary care hospital, readiness of the referral hospital to manage emergencies, time spent in decision making, stabilizing or preparing patients for surgical interventions, availability of required quantity of blood and its components and availability of competent expert team at the health facility.

Time is considered as most crucial factor that determines the outcome, especially when the obstetric emergency take place outside the tertiary care hospital. Patient generally receives first aid treatment, when she is in lower-level facility when emergency arrives. When it happens at the domiciliary level, it becomes a very big challenge to save these women.

Haemorrhagic shock due to large amount of blood loss in ante-partum and post-partum haemorrhage, retained placenta and ruptured ectopic pregnancies is usually cause of death. In cases with acute inversion of uterus, there is an additional component of neurogenic shock.

At times, the health workers including the doctors and nurses do not appreciate the importance of these golden hours that results into delay in provision of requisite care. Some of the examples of delay that take place at tertiary care hospital are worth quoting here.

It is well known that accidental haemorrhage needs prompt decisions regarding termination of pregnancy, either by induction of labour or emergency caesarean. Artificial rupture of membranes and some additional uterotonic drug needs to be administered as soon as possible to reduce induction delivery interval. When this interval exceeds 8 hours, there are more chances of complications like renal failure, DIC, severe couvelaire uterus leading to atonic PPH. Some cases of severe uterine atony due to couvelaire uterus need emergency obstetric hysterectomy as a lifesaving procedure.

Post partum haemorrhage (PPH) occurs in 2-5 percent of cases. It could be due to uterine atony or soft tissue trauma to genital tract. It is observed that there is delay in recognition of PPH in all types of health facilities as there is

always underestimation of blood loss or there is no quantitative assessment of blood loss in every delivery and in home deliveries. There is delay in starting intravenous fluids and arranging for transfer to higher centres. Patient vital parameters deteriorate, as patient starts losing excessive blood. Zero-hour management in the form of starting intravenous fluids along with adequate dosage of oxytocics is not done even at lower-level facilities. Women who deliver at home and develop PPH have poor prognosis as they develop hypovolemic shock earlier. Time taken and the distance travelled to reach to higher centre decide the prognosis. It is observed that women who report to hospital after two hours of development of PPH have poor prognosis for the above-mentioned reason.

Ectopic pregnancies report quite often to tertiary care centres. Majority are ruptured tubal gestations and some are either corneal, rudimentary horn or ovarian ectopic pregnancies. These women present either in stable condition or with haemodynamic instability. Here again time interval between rupture of ectopic gestation and reporting to hospital is important. Due to advent and availability of ultrasonography, majority of cases are diagnosed by ultrasound and are thus referred to higher centres. Approximately 10-20 percent cases are unruptured at the time of reporting to tertiary care hospital. Most of the cases of ruptured ectopic gestation have classical clinical presentation, which does not need pelvic sonography. There is tendency among the on-call doctors at the referral hospital to repeat ultrasound for re confirmation of diagnosis of ruptured ectopic. Un-necessary time is lost in getting this investigation done, especially when the USG facility is not available at hand, and thus requires shifting of the moribund patient to ultrasound unit of the hospital.

Eclampsia and cases with HELLP syndrome are often reported to tertiary care hospital with varied clinical and biochemical profile. After initial management and stabilization, decision of termination of pregnancy must be taken without further delay to avoid other complications. Whether to do induction of labour or perform caesarean section depends on various factors like gestational age, fetal viability or chances of survival, blood pressure value, condition of cervix and whether patient is in labour or not. Some obstetrician favour vaginal route over caesarean section, when there are no contraindication for vaginal delivery. Some prefer caesarean section, thinking that the baby is already compromised due to placental insufficiency

and may not come up with the stress of labour. When patients of eminent eclampsia or eclampsia are kept for vaginal delivery, there is increased chance of repeat convulsion and placental separation which may further compromise fetal outcome. Interval between first convulsion and delivery must be kept short to reduce the risk to mother and baby.

Cases of placenta praevia can bleed heavily from placental bed on table during caesarean section. Important time may be lost in managing these cases by conservative means. Quick decision must be made on table about the best possible method to stop or control the haemorrhage. There is also a possibility of adherent placenta with placenta praevia, which further complicates the picture and create a real threat to patients life and challenge to obstetrician. It is very important to rule out adherent placenta before we perform caesarean section or must be very vigilant in observing the signs of invasion of placenta after opening the abdomen. Casual approach and missing important intra operative findings can lead to nightmare. It is recommended that adequately trained manpower, blood and components are arranged, written informed consent is taken after counselling the patient and the relative so that important time is not lost in taking additional supplementary consents, when decision of obstetric hysterectomy or internal iliac ligation are needed on table to save life of the woman.

Retained placenta is one of the third stage complications that endanger life of parturient. Partially separated placenta is more dangerous than non separated placenta. Similarly, partially adherent placenta is more dangerous than completely adherent placenta. If woman has delivered at home, the risk of haemorrhagic shock is many a fold more than institutional delivery. Every obstetrician must follow standard protocol of management of third stage of labour, which is universally accepted by the name AMTSL. The nurse midwife or the attending doctor at peripheral hospital can attempt removal of placenta by gentle traction using Brand Andrew technique. Preparations must be made to transfer the case to nearest possible hospital, where manual removal of placenta can be performed. Possibility of adherent placenta should always be kept, whenever one gets a situation of retained placenta. Intravenous compartment should be maintained by infusion of Ringers lactate solution. Available oxytocics should be administered in correct doses and through correct route. Quick and safe transfer of the case can reduce the morbidity and mortality due to PPH.

Acute inversion of uterus, although rare, can occur suddenly and unexpectedly. Obstetrician or the nurse midwife un-prepared to face and manage this an un anticipated situation often express panic reaction. Inversion of uterus, if occurs at home, often results into maternal mortality due to haemorrhagic and neurogenic shock. If it takes place in the hospital and if the nurse midwife is trained to identify this condition, manual reposition of uterus can be tried. If there is failure of reposition, patient must be shifted as early as possible to tertiary care hospital. Any delay in transfer may aggravate shock resulting in poor outcome. Gravitational drag on the inverted uterus can be reduced by keeping woman in lying down position and supporting the inverted fundus with the help of dressing and bandage like what is done for hydrocele. Intravenous fluids must be continued during transfer of the case. If placenta is not separated from the fundus, no attempt should be made to remove the placenta at lower-level facilities. Time is very crucial, when patient of inversion of uterus has atonic postpartum haemorrhage. Arranging quick transfer with prior communication with referral hospital giving them the details of the condition of patient and her blood group can prove beneficial.

Time becomes crucial factor for maternal and fetal wellbeing in few more conditions. These are prolonged labour, obstructed labour, scar dehiscence and prolong second stage of labour.

Prolong labour especially the second stage of labour is another condition which demands prompt decision making and appropriate action to avoid maternal and fetal complications. Partograph is the simple tool that helps us in monitoring the progress of labour. For various reasons and even after

emphasising its importance to labour room staff which include doctors and nurses, partograph is either not used or is filled incompletely or in retrospect. The staff understands the importance of the partographs, but it is not reflected through its proper use in labour room. Failure to monitor labour results into prolong labour, both first stage and second stage. This ultimately results into increased maternal morbidity. The uterine rupture or the scar rupture, fetal distress, birth asphyxia, fresh stillbirths and increased need for neonatal care unit admissions. There is need for emergency caesarean section with possibility of complications of extension of uterine incisions and injury to pelvic vessels leading to excessive haemorrhage. There is also an increased risk of post-partum haemorrhage following prolong labour, whether woman deliver by vaginal route or abdominal route.

Labour monitoring using continuous electronic monitors, have compromised the clinical examination for assessment of progress of labour of patient. The attending doctor or the nurse neither palpate the uterus for frequency, duration and intensity of uterine contractions, nor assess the descent of the presenting part, as abdomen is covered with two straps or belts of the transducers. Many a times labour is monitored by just observing the fetal heart rate shown on the display of the electronic monitor. This leads to missing of important per abdominal findings leading to complications. There are incidences of even rupture uterus not being recognized till the time of caesarean section. Uterine hypertonicity, which is often a side effect of unsupervised actions or over dose of various oxytocic drugs that are in use in modern obstetrics, mainly include two types of prostaglandins and oxytocin. Many of the babies with unexplained birth asphyxia or stillbirths are result of inadequate intra-partum supervision. Timely recognition of prolong labour at any stage and prompt remedial measures will reduce maternal and perinatal morbidity and mortality.

Assisted vaginal delivery using either ventouse or obstetric forceps is recommended when second stage of labour or the perineal stage is getting prolonged for some reason. Obstetrician should quickly decide the type of instrument that is ideal in the given situation. Repeated attempts of instrumental delivery and failed instrumental deliveries are associated with adverse perinatal outcome. It is essential that the Obstetrician should reassess the case and promptly take appropriate decision to avoid complications.

Umbilical cord prolapse is another obstetric emergency that create panic reaction in the labour room. It usually follows either artificial rupture or spontaneous rupture of membranes, when presenting part is not engaged or when there is abnormal lie. Prompt identification and avoidance of cord compression by manual pushing up of the presenting part or by postural means, while making preparations for emergency caesarean section, can prevent intrauterine fetal hypoxia or fetal death. Time interval between occurrence of cord prolapsed and delivery of baby determines the chances of fetal survival.

Similar to cord prolapse, difficulty in delivery of after coming head of the breech and baby with shoulder dystocia are two more situations, wherein time becomes crucial factor. Early recognition and prompt action for delivery of the baby by appropriate method and route is necessary to avoid perinatal morbidity and mortality. Obstetrician is required to possess sufficient skills in managing these obstetric emergencies.

In conclusion, it is suggested that everyone who is practising Obstetrics and dealing with obstetric emergencies must understand the importance of golden hour in obstetric emergencies. Intelligent anticipation and prompt recognition of the problem, avoidance of delay in instituting first-aid or definitive treatment, calling for help from colleagues or who so ever is available, timely referral to higher centres after stabilization, using effective techniques of communication, keeping facility readiness in every respect to provide emergency care, practising emergency drills and use of simulations, can help in improving the outcome and reducing maternal and perinatal morbidity and mortality in obstetric emergencies.



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