

Case Report

Challenges in management of Eclampsia in high altitude and remote place of Nepal: a case report

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Introduction

Jumla, a remote district of Nepal is situated at the altitude of 2400 – 3050 meters. 1 Incidence of gestational hypertension and eclampsia is high in the high altitude. 2 Incidence of Eclampsia in our Institute is high around 2% (14 cases in 700 deliveries in 2073 BS year). Management of such challenging cases in the remote resource limit setup of Nepal is much more challenging.

Case report

Mrs Lama, 23 years, G3P2 at Term pregnancy, housewife, from lower Dolpa presented in emergency department with complain of amenorrhea for 9 months, headache for 1 month, abnormal body movement and loss of consciousness for more than 48 hours.

Patient was apparently well 9 months back presented with complain of Cessation of menstruation for 9 months, pregnancy was confirmed by urine pregnancy test in local medical shop 7 months back. She started having headache since one month moderate to severe in intensity, localized in frontal region which was on and off sometimes even disturbing the sleep. Headache was not associated with fever and vomiting. There were no relieving and aggravating factors. No medical advice was sought.

History relieved that suddenly develop jerky movements of the whole body followed by loss of consciousness for more than 48 hours, intermittent episodes without gaining consciousness, associated with frothing from mouth and up-rolling of eyes. She was taken to local Health post; IV line was opened and was referred to our center. Patient was carried on Stretcher for 48 hours and in between patient was taken to Dhama (Faith healer). According to the relatives they stayed there for 3 hours as he claimed

that the problem was due to ghosts and shins. Since patient did not improved after pray and chanting they decided to take her to our hospital. Past medical and surgical history was insignificant, since there were no history of seizure in the in previous pregnancies and overall in the past.

On Examination, patient's general condition was ill looking. The patient was unconscious with audible respiratory sounds. There were no jerky moments of the body on presentation. Vitals: Pulse was 128 beats/minutes, low volume, regular; BP was 150/90 mm of hg on left arm, 160/90 mm of hg on right arm, temperature was 96°F, respiratory Rate was 22 breath/minute with SpO₂ was 82 % at room air and 94% with Oxygen 6 lit/min via facemask. Bilateral pitting edema in lower limb, Jaundice, Anemia, Lymphadenopathy & cyanosis were absent. First and second heart sound were audible with no murmur and added sound. Bilateral equal air entry, coarse crepitation in the bilateral hemi thorax with conducted sounds & resonant on percussion were present. Gravid uterus at 34 week size, cephalic presentation of fetus with FHS- 146/minute were noted.. OS closed, uneffaced, no Show., GCS-7/15- E1V2M4, Pupil Bilateral 3 mm dilated sluggish reacting to light, moving all four limbs on painful stimulus

Clinical Diagnosis was made as G3P2 at term pregnancy with Eclampsia and aspiration pneumonitis. Plan of immediate termination of pregnancy by cesarean section was made. Only Blood grouping could be done. Other investigations were unavailable due to fire in the hospital building 2 days back. Blood group of the patient was AB +ve. Bedside BT and CT showed normal profile. Preoperative preparation was done with 18 G IV cannula in both upper limbs.

Intravenous fluid Inj. Ringer Lactate 1lit fast over 10 minutes was given. $MgSO_4$ loading dose total 14 gm was given. Blood was arranged and informed written high risk consent was obtained. Plan of anesthesia was made for General Anesthesia with Endotracheal intubation with rapid sequence induction (RSI).

Patient was taken to OT and was attached with monitor that included pulse oxymetry probe, NIBP and ECG leads. Immediate preoperatively pulse was 118/minute, regular, good volume, BP- was 170/100 mm of hg. Preoxygenation was done with 100% oxygen and tight seal mask for 3 minutes. Induction was done with RSI using Sodium thiopentone 200mg and Succinylcholine 100mg. Laryngoscopy and intubation with 7.0 mmid endotracheal cuff tube was done and inflated with air. Maintenance of anesthesia was done with Oxygen and halothane (max 0.5%). For analgesia, Inj Ketamine 30 mg was given initially and topped with 10 mg and 10mg in between. Total surgical time was 30 minutes and total blood loss was 250 ml. Outcome was Single, Live, Female, weighing 2200gram (IUGR), with APGAR 6/10,7/10,8/10 at 1minute, 5 minutes and 10 minutes. After delivery of baby, Inj Oxytocin 3units IV bolus and 3units in drip fast and 5units in 500ml of NS routine drip and tab Mesoprostol 800 mcg PR were given. Five units of Oxytocin was continued in alternate drip postoperatively.

Intraoperative Event was Drop in BP. Mean arterial pressure (MAP) below 60 mm of hg after induction and intubation was managed with Inj. Ketamine 30mg, stopping halothane and fluid bolus with 500ml NS. MAP was maintained more than 70 mm of hg and later systolic BP reached upto 140 – 160 mm of hg. At the end of surgery halothane was stopped. Spontaneous respiration was gained after 15 minutes of stopping Halothane. After two hours of completion of surgery patient was able to localize the pain and was extubated. Due to unavailability of ICU, the patient was shifted to ward. Maintenance IV fluid with Oxytocin in alternate drip and analgesics Inj tramadol + Paracetamol were given. Anti-hypertensive: Tab Nifedipine 10 mg PNG SOS if SBP \geq 160mm of hg or DBP \geq 110mm of hg. Tab Amlodipine 5mg PNG BD was given. Patient gradually improved; GCS was 12/ 15 in second post-operative day and 15/ 15 in third post-operative day but developed Rt. Hemiparesis. Patient was advised to go to higher center for CT head

and further management but refused. So was managed locally with oral antihypertensive. Patient improved with gradual increase in power of both limbs and discharged from hospital on 12th Post-operative day. After two days patient attended follow up in OPD with all gain of motor power in both the limbs with happy face and went home after 1 and half month walking 2 days.

Discussion

Gestational hypertension and Eclampsia are common in high altitude and complication like HELLP syndrome and intracranial bleed are serious³ that needs prompt and Intensive care management. Facilities for proper investigations, early recognition and proper primary care with critical care facility are important. To manage such obstetric cases from remote mountain region provision of Air ambulance is recommended. Proper Obstetrics management and anesthesia care can only save the patient's life. Cultural believes on faith healers delays the patient to reach hospital and increase morbidity and mortality. Incidence of Eclampsia is high in high altitude as in our institute where the incidence is around 2 % and is more in winter season. The complication of Eclampsia like HELLP syndrome and intracranial bleed were found to be less in our institute. Maternal mortality is zero in our institute due to eclampsia.

Conclusion

Maternal mortality due to Eclampsia can be prevented if managed timely and adequately. Prompt management of hypertensive disorder in pregnancy is important to decrease the incidence of eclampsia. Early identification and management of the cases decreases the maternal mortality even with basics maternity and anesthesia care.

References

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