J Obstet Gynecol India Vol. 57, No. 2 : March/April 2007 Pg 167-168

CASE REPORT

The Journal of Obstetrics and Gynecology of India

Traumatic spinal cord injury during pregnancy – Report of two cases

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Key words : trauma, spinal cord, pregnancy

Introduction

Pregnancy complicated by spinal cord injury poses a challenge to the obstetric team in developing countries because of limited medical facilities. We present two cases of spinal cord injuries during pregnancy, one resulting from automobile accident and the other from a fall from a height. The problems encountered in the management are highlighted.

Case report 1

A 27 year old farmer gravida 4 para 3 presented at 26 weeks gestation with a history of fall from a 10 meter height. She was unable to move any part of her body after the incident but there was no loss of consciousness. She was brought to the hospital 24 hours after the accident. Examination revealed a conscious pregnant woman with minor laceration on the right upper limb. She was afebrile, not pale and anicteric. Her pulse rate was 86/minute and blood pressure 130/80 mmHg. The chest was clinically clear. The abdomen was uniformly enlarged and nontender. The fundal height was compatible with 26 weeks gestation and fetal heart was heard. Sensation was present up to T4 level. There was normal power in the upper limbs but none in the lower limbs. Ultrasound confirmed normal intrauterine pregnancy of 26 weeks. X-ray of the cervical spine showed anterior wedge compression fracture of C6 with fracture of its spinous process, and anterior subluxation of C7 upon T1. Skull traction was applied and passive movements of the lower limbs commenced. Urethral catheter was passed and manual evacuation of impacted feces done. She was started on prophylactic antibiotics and the genital region was kept clean and dry. Regular turning of the patient and breathing exercises were encouraged as well. Despite these measures she developed urinary tract infection, pneumonia, bedsores and anemia, which necessitated use of third generation cephalosporins and blood transfusion. The fetal growth remained satisfactory. She was instructed on how uterine contractions can be palpated manually. At 34 weeks gestation, she woke up and noticed that she had spontaneously delivered a female baby that weighed 2.6 kg and had apgar score of 8 and 10 at 1 and 10 minutes respectively. The perineum was intact. She was discharged 7 days after delivery and asked to continue physiotherapy at home. The rest of the puerperium was uneventful. Three months after delivery the baby was doing well while the mother remained a paraplepic rehabilitated on a wheelchair.

Case report 2

A 35-year old gravida 5 para 4 was involved in a road traffic accident at 28 weeks gestation. She was ejected from her vehicle following a burst front tyre. There was no loss of consciousness but she immediately noticed that she could only move her head. She was brought to the hospital 6 hours later complaining of severe neck pain. Examination revealed a conscious gravid woman in obvious painful distress. She was neither pale nor dehydrated. There was no obvious laceration. Pulse rate was 110/minute and blood pressure 80/60 mmHg. The right side of the neck was tender. There was no abdominal tenderness and the fundal height was compatible with 28 weeks gestation. Presentation was cephalic and the fetal heart rate normal.

Paper received on 03/02/2005 ; accepted on 18/05/2005

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Sensation was present to the level of C6. There was grade 2 power in both upper limbs but none in the lower limbs. A cervical collar was put in place and she was stabilized on crystalloids and colloids for the next 48 hours. Urinary catheter was inserted and left in situ. Her hemoglobin was 12.5g/dL while the urinalysis and electrolytes were within normal limits. The cervical x-ray showed complete cervical spine injury (Frankel A) with unstable C5 and C6 spinal fracture. Chest x-ray was normal and ultrasound confirmed 28 weeks normal pregnancy. On the third day of admission she became dyspnic, and was progressively getting worse. There was associated headache and blurring of vision. She was not pale and chest was clinically clear. The blood pressure was elevated to 160/100mmHg and strong uterine contractions were palpated. Vaginal examination revealed a fully dilated cervix. She delivered a live male baby weighing 1.2 kg and subsequently became unconscious. She died one hour after delivery. After 3 weeks the baby weighed 1.65 kg and was discharged from the newborn special care unit. At the age of 3 months he weighed 5 kg and was doing well.

Discussion

Although rare, pregnancy and delivery in women with spinal cord injuries (SCI) are becoming more frequent. There appears to be a changing pattern for external causes of SCI in West Africa over the last two decades; with fall from a height [1] being surpassed by road traffic accident [2]. The severity and anatomic location of the spinal cord lesion depend on the type of autocrash. Complete spinal cord injury, as in the second case is more with persons ejected from their vehicle.

These two cases are reported to highlight the significant challenge of performing nursing on an unstable spine with rapidly enlarging gravid uterus and the risk of autonomic hyperreflexia in those with high spinal lesion in labor. The first case, although successfully managed suffered a lot of morbidity due to pneumonia, urinary tract infection, anemia and infected pressure sores. Prolonged catheterization and difficulty in turning the gravid patient in bed accounted for part of these complications. Also the poor perception of contraction by the patient resulted in unattended birth, which is associated with increased perinatal loss [3]. There is therefore a need to instruct the patient on how uterine contractions can be palpated manually. Premature contractions and precipitate labor are also common in this group of patients. The danger of hyperreflexia of the autonomic nervous system, which affects the vital function of the mother, was highlighted by the second case. Epidural analgesia, which is effective in its management, is not readily available in most tertiary health institutions in developing countries [4].

The management of patient that becomes paraplegic during pregnancy requires acute care and more effective rehabilitation involving the obstetrician, orthopedic surgeon, clinical psychologist, social worker and pediatrician. Establishment of special centers for management of such patients in developing countries will help in acquiring wide experience that will ultimately improve their care.

References

1. Okonkwo CA. Spinal cord injuries in Enugu, Nigeria – preventable accidents. Paraplegia 1988;26:12-8.
2. Solagberu BA. Spinal cord injuries in Ilorin, Nigeria. West Afr J Med 2002;21:230-2.
3. Kulkarni S, Morgan OS. Pregnancy outcome in paraplegic women. West Indian Med J 1992;41:99-100.
4. Katz VL, Thorp JM Jr, Cefalo RC. Epidural analgesia and autonomic hyperreflexia: a case report. Am J Obstet. Gynecol 1990;162:471-2.