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Pregnancy, Labour And Delivery Post Spinal Cord Injury

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CASE REPORT

A 35-year-old woman presented at the Casualty outpatient department with the history of having felt her spine snap while lifting a heavy table. She thereafter experienced severed back pain and weakness of her lower limbs. Two days later, she was unable to walk. There had been a previous similar episode precipitate by a fall when she was 16 weeks thereafter suffered from recurrent weakness of her limbs.

She was 39 weeks pregnant and had previously had 5 children with an uneventful obstetric history.

General physical examination was unremarkable. However, examination of the spine revealed a gibbus at the level of T12, L1. The injury left her with no movement in either perception. A singleton fetus was in longtitudinal lie and cephalic presentation. Fetal heart sounds were present and regular.

A diagnosis of spinal cord injury at the T12-L1 level was made. She was admitted to the obstetric ward for combined management with the orthopedic surgeons. Bladder and bowel sensation and control were present. However, an indwelling urethral catheter was inserted as the patient complained of urinary frequency and urgency. A catheter specimen of urine culture confirmed a urinary tract infection and appropriate antibiotic treatment was instituted. An X-ray of the lumbosacral spine revealed a compression fracture at T12-L1 level. She was placed on a hard bed and care was taken in preventing decubitus ulcers by placing a pillow between the patient's legs and frequently moving her from side to side. Also, hyperextension of the spine was maintained with a pillow beneath the spine. Concerns that the patient might not become aware of the onset of labour and that autonomic hyperreflexia might occur necessitated continuous maternal and fetal monitoring and regular assessments for signs of labour.

On the fifth day the patient's resting blood pressure had increased from 90/60 mmHg to 130/100 mmHg. The prostaglandin Misoprostol was used to ripen the cervix, which was unfavourable. She went into labour shortly thereafter. The indwelling catheter was checked regularly to ensure that descent of the fetal head was not obstructing the flow of urine and encouraging bladder over-distension. Progress of labour was rapid and uncomplicated. A 3.1 kg male baby was delivered vaginally four hours later. Apgar scores were 9 at 1 minute and 10 at 5 minutes. She breast-fed successfully. Inpatient rehabilitation was continued and good progress made.

DISCUSSION

A number of issues are relevant to the management of the pregnant patient with spinal cord injury. Urinary tract infection is common in non-pregnant spinal cord damaged women (Fey-Waboso, 1992). Pregnancy in females with a spinal cord injury may be complicated by frequent urinary infections; pressure sores and anaemia (Nygaard et al, 1990). These patients may have painless delivery and the occurrence of autonomic hyperreflexia. (Popov et al, 2003) of these potential complications autonomic hyperreflexia remains the most serious and life threatening during labour and delivery. (Abouleish 1980) it is important that doctors understand its aetology, pathophysiology and clinical presentation in order to provide prompt and appropriate management to prevent morbidity and mortality in the patient and her fetus. Autonomic hypereflexia has been defined as an acute syndrome of massive unchecked reflex sympathetic discharge that occurs in patients with spinal cord lesions above the major sympathetic outflow (Kurnick 1956), it can occur in up to two-thirds of women with spinal cord injury above the T6 level who are in labour (McGregor et al 1985) in this case, even though the cord was damaged below the T11, autonomic hyperreflexia was still considered a risk as the blood pressure of 90/60 mmHg at rest had increased to 130/100 mmHg. The most hypertension from an unchecked sympathetic activity increases of systolic blood pressure by at least 40 mmHg should alert the physician to the possibility of autonomic hyperreflexia (Lee et al 1995) systolic blood pressures as high as 300 mmHg and diastolic blood pressures ranging from 170 to 220 mmHg have been reported. (Lee et al 1995) such massive increases haemorrhage (Eltorai et al 1992) sympoms and signs of autonomic

hyperreflexia may include acute distress, nausea, chest pain, respiratory distress, desire to void, and severe occipital, bitemporal, or bifrontal pounding headache. (Schumacaher et al 1951) fortunately this had no evidence of autonomic hyperreflexia during labour which constituted the greatest threat of her doing so. During labour uterine contractions commonly evoke autonomic hyperreflexia. (Guterman et al 1965) cervical dilatation either during labour or from a speculum or digital examination, suprapubic pressure or perineal manipulation are also potentil triggers. (Brain et al 1998) also, the bladder should be kept from overfilling by permanent drainage with an indwelling catheter. Labour is usually rapid and often painless. The use of forceps to shorten the second stage and thus reduce the risk of autonomic hyperreflexia has been advocated. (Young 1994) assisted vaginal delivery had been planned in this patient but as is often the case she had a precipitate labour and unfortunately the fetal head was seen to be crowing before arrangements were made.

CONCLUSION

Patients with spinal cord injury may be expected to have a reasonably normal pregnancy outcome provided that potential problems particularly related to immobility and autonomic hyperreflexia are anticipated and those involved in their care are familiar with the management of such patients.

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