**The Wayward Epidural: From Tuohy to ECMO**

**Abstract Type:** Case Report/Case Series  
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**Introduction:** Women choose epidural analgesia (EA) in labor because of it’s known efficacy and safety, however it is not without risk. We describe a case of unexpected cardiac arrest after insertion of a labor epidural in a healthy woman with a low risk pregnancy.

**Case Report:** RK, a 22 year old, full term primip, requested EA at 3cm cervical dilation. The epidural was inserted at L3/L4, with loss of resistance to saline at 6cm. The catheter was left 5cm in the space, no blood or cerebro-spinal fluid was aspirated. A 10ml test dose of 0.1% bupivacaine + 2mcg/ml fentanyl (LDM) was given. After 5 minutes the blood pressure read 124/65, there was no evidence of catheter malposition and a further 10ml LDM was given. 1 minute later, RK collapsed, stopped breathing and lost her pulse. The anesthetic resident commenced bag mask ventilation and basic life support with midwifery assistance, as help arrived. The initial rhythm was pulseless electrical activity. Advanced Life Support (ALS) was commenced with a left lateral tilt (LLT). On laryngoscopy the airway was full of gastric contents but successfully intubated. After 5 minutes of ALS, cardiac output (CO) returned, however oxygenation was increasingly difficult and CO was lost again. ALS was restarted, cesarean section delivery performed in the room, and CO was restored. RK remained unstable with oxygen (O2) saturations of 50-60%. The chest X-ray showed significant aspiration and a small left sided pneumothorax (secondary to the high airway pressures needed) – a chest drain was placed. She was stabilised and moved to the ICU where she required high dose inotropes, 100% O2 and protective ventilation to maintain hemodynamics and O2 saturations of 85-90%. The epidural catheter was aspirated prior to removal and revealed CSF. RK deteriorated over 72h as she developed severe aspiration pneumonitis. Conventional ventilation was not adequate and RK was transferred out for extracorporeal membrane oxygenation (ECMO) therapy. RK recovered well after 7 days of ECMO and a further month in hospital. Baby also did well.

**Discussion:** The case highlights the importance of tests to detect epidural position, catheters can move or get blocked and should be aspirated before and during any drug administration. Rarely, despite safe testing of epidurals, such serious complications occur*. The initial management of maternal cardiac arrest is key – ALS, LLT and delivery of the fetus. The case was managed well. RK however developed severe aspiration pneumonitis (Mendelson’s syndrome) due to inhaled gastric contents, the life saving role of ECMO was identified early and perhaps is why RK survived. Due to advances in training, drugs and regional techniques, aspiration in pregnancy is rare, as such eating and drinking policies in labor have relaxed in the UK**. When rare complications such as this occur however, it should provoke discussion.

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*Epidural information card. OAA. 2008  
**Intrapartum Care. NICE guideline 2007