SCENARIO

Maternal Collapse – Local Anaesthetic Toxicity

LEARNING OBJECTIVES

Effective team working and communication between multidisciplinary teams

SBAR to communicate

Coordinating resuscitation and preparation for theatre

Recognition and treatment of local anaesthetic toxicity

EQUIPMENT LIST

Noelle/ SimMom/Baby Hal
Fluids / giving sets
Fake hand held notes
ODP grab bag

Peri-mortem LSCS kit / arrest trolley
GA drug box for T/F to theatre
Intra lipid from Epidural trolley
Monitor for manikin

PERSONNEL

MINIMUM: 6
Obstetricians Reg/Cons
Anaesthetist Reg/Cons
Paediatricians Reg/Cons
Midwife
ODP

FACULTY

MINIMUM: 3
Facilitator
Observer (patient/partner)
Debrief Lead

TIME REQUIRMENTS
TOTAL 1.5hours

Set up: 30 mins
Pre Brief: 10 mins

Simulation: 20mins
Debrief: 30mins

INFORMATION TO CANDIDATE

PATIENT DETAILS

Name:	Martha Scott	Phx:	Generally Well
Age:	29	Allergies:	Nil
Weight/BMI:	75Kg/ 27		
Gestation:	40+14		

SCENARIO BACKGROUND

Location: Labour Ward

Situation:
G1P0 Induction for post dates
Large OP baby
5cm dilated on Syntocinon for 4hours after ARM
Epidural inserted one hour ago, was initially effective
Midwife just given epidural top up 10mls 0.25% Bupivicaine
Had ranitidine 2 hours ago
She now feels unwell and dizzy

Task: Midwife has asked both anaesthetic team and obstetric team to review

RCOG CURRICULUM MAPPING

Module 10 Management of Labour:
Manage Obstetric Collapse
Liaise with other staff
Advanced Training Skills Module:
Advanced Labour Ward Practice

INFORMATION FOR ROLEPLAYERS

BACKGROUND

Your name is Martha Scott you are 29 years old having your first baby. You are two weeks over due and have been induced. You are normally well with no allergies. Your waters were broken this morning and you have been started on the hormone drip. You are 5 cm dilated. About an hour ago you had an epidural inserted for pain relief. It was initially working well but now it is less effective. Your midwife has just given you some more pain relief through the epidural.
You begin to feel unwell and dizzy.
You feel like something bad is going to happen.
You become agitated and confused.

RESPONSES TO QUESTIONS

What's happening to me?
Am I going to die?
You become upset and angry /agitated asking for someone to help?
Then become confused, don't know where you are.
On prompt commence fitting/ move mannequin

INFORMATION TO FACILITATOR

SCENARIO DIRECTION

Identification deteriorating mother

Initiate ABCDE assessment and management of seizures in the labour ward room (STAGE 1)
Consider differential diagnoses
Obstetric Emergency call request consultant anaesthetist and obstetrician.

Patient has PEA arrest, start CPR with Uterine displacement (STAGE 2)
Call arrest team AND NEONATAL team, arrange for peri-mortem LSCS IN THE ROOM, run through 4H and 4 T's to include specifically INTRALIPID to treat LA toxicity.
Baby delivered pale and flat no breathing, pulse < 60, CPR commenced post assessment. (STAGE 3)

Arrange for transfer to theatre once return of spontaneous circulation occurs (post intralipid) for completion of peri-mortem LSCS. (STAGE 4)

Safe transfer to theatre: Ensure 2 IV lines, continue resus, VBG from blood from second cannula.
Intubate (radically reduced induction drug doses if tone / movement), continued resus with fluid / vasopressors / inotropes establish consultant anaesthetic and obstetric presence, SBAR handover.
Completion of peri-mortem LSCS and haemorrhage control, establish invasive monitoring, stabilise patient including continued intralipid infusion.

Arrange for post arrest management: critical care admission, cooling, bloods, ABG. Set up sedation and arrange for transport team.

SCENARIO OBSERVATIONS/ RESULTS

	BASELINE	STAGE 1 Initial	STAGE 2 PEA arrest	STAGE 3 Post-PeriMortem CS	STAGE 4 Transfer to OT> GA finish CS
RR	30	8	0	15	18
chest sound	Normal	Gasps	Absent	Equal	Normal
SpO2	93%	90%	70%	95%	97%
HR	50	35	35 PEA	100	115>>90
Heart sound	Brady	brady	Absent	Tachy	Tachy
BP	70/40	60/25		75/35	110/60 Adren
Temp	36.5	36.0	35.5	36.1	36.5
Central CRT	4 secs	5 secs	6 secs	4 secs	4 secs
GCS/AVPU	confused	fitting	U	U	P, extending

CTG Findings: Initially 140bpm, variability 10, reassuring variable decelerations <50% contractions
As patient feels unwell /fitting: fetal bradycardia 60bpm

ABG: Stage 2 pH 6.97 PaCO2 11.2 PaO2 70.4 HCO3 14.1 BE -13.3 Lactate 12.1
Stage 3 pH 7.09 PaCO2 8.7 PaO2 51.4 HCO3 16.1 BE -13.3 Lactate 9.1
Stage 4 pH 7.36 PaCO2 5.2 PaO2 10.4 HCO3 20.8 BE -4.5 Lactate 8.3

SCENARIO DEBRIEF

TOPICS TO DISCUSS

Effectiveness of communication and team working
Senior personnel
Ensuring neonatal team included
Use of SBAR in handover.
Coordination of initial resuscitation
Recognition of PEA arrest
Differential diagnosis- clinical differences between pathology (focal neurology, hyper/hypotension, prior PET, hypovolemia 4Ts 4Hs)
Understand the nature of Local anaesthetic toxicity management –intralipid
Peri-mortem LSCS and then transfer to theatre to complete LSCS.

REFERENCES

Maternal Collapse in Pregnancy and the Puerperium, Green Top Guideline No.56 Jan 2011 RCOG Press

Foxall, G., McCahon, R., Lamb, J., Hardman, J. G. and Bedford, N. M. (2007), Levobupivacaine-induced seizures and cardiovascular collapse treated with Intralipid®. Anaesthesia, 62: 516–518.