Health Education Thames Valley

POST TONSILLECTOMY BLEED

MODULE: ENT

TARGET: CT 1 – ST4

BACKGROUND:

Whilst tonsillectomy is a commonly performed ENT operation with around 30,000 tonsillectomies performed per year in the UK. The majority of these patients are children and whilst most have an uneventful recover the morbidity rate of this procedure is 2 - 4% due to post-operative bleeding. The mortality rate for this procedure is 1 in 15,000 due to bleeding, airway obstruction or anaesthetic complications.

This scenario was written in response to a case in which a child was seen by a junior surgical trainee at a hospital site with no out of hours ENT cover. Fortunately the child did not come to harm although required a significant blood transfusion, this raised important issues about junior trainees providing cross-cover out of hours in specialties with which they are unfamiliar. Out of hours ENT cover is often provided by junior surgical trainees based in other specialties and it is essential that they are equipped with the skills required to deal with such emergencies.

RELEVANT AREAS OF THE CURRICULUM

Module 4 – Assessment and Management of the Surgical Patient

Surgical history and examination (elective and emergency)
Clinical decision making
Case work up and evaluation; risk management
Taking consent for intermediate level intervention - emergency
Interactive clinical communication skills: patients

Module 7: Surgical care of the paediatric patient

Physiological and metabolic response to injury and surgery
History and examination of the paediatric surgical patient
Assessment of respiratory and cardiovascular status
Undertake consent for surgical procedures (appropriate to level of training) in paediatric patients

Module 10: Professional behaviour and leadership skills

To provide good clinical care
To be a good communicator

INFORMATION FOR FACULTY

LEARNING OBJECTIVES

To understand the initial treatment and management of post-tonsillectomy bleeding

To develop assertive communication strategies when requesting specialist help

To practice and receive feedback upon communicating with an anxious parent

SCENE SETTING

Location: Minors cubicle Accident and Emergency

Expected duration of scenario: 20 mins Expected duration of debriefing: 15 mins

EQUIPMENT AND CONSUMABLES

Can use DS 'igloo' as backdrop or SimSuite room
Examination couch
Hospital sheet
Hospital pillow
Metal procedure trolley
Sterile pack
Tongue depressors
Pen torch
Cannulae - various sizes and cannulae dressings
SimMonitor - controlled via iPADS or SimMan monitoring screen
2 vomit bowls
Oxygen mark with reservoir bag
Fake blood
Consent forms
Pen
Telephone

PERSONNEL-IN-SCENARIO

Patient (child actor must look under 16) The Harry Partnership £250
Parent (actor) The Harry Partnership £250
A and E F2 doctor

PARTICIPANT BRIEFING

You are covering ENT out of hours and have been called down to A and E to assess a child who has vomited up some blood. She had a tonsillectomy 7 days ago.

FACULTY BRIEFING

The trainee in this learning simulation will be 'covering ENT' he / she is expected to take a short history, start immediate management – ask A and E doctor to cross match some blood and then to phone the ENT registrar to come in from home to help. The trainee may wish to call theatres and book Serena for a 're-look' and may go through a consent form for this.

Scenario will end after ENT SpR referral.

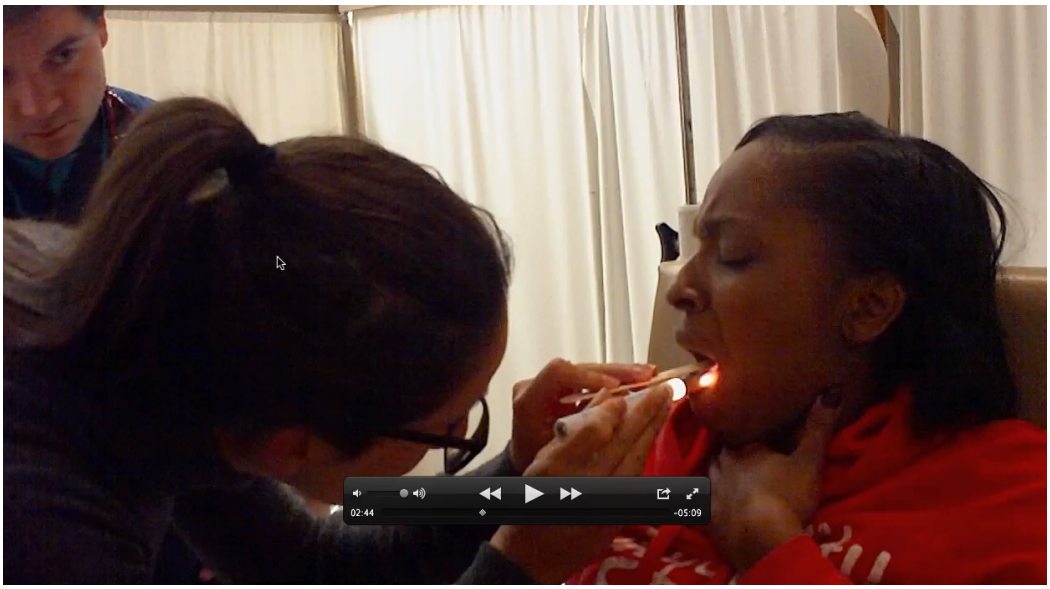
ACTOR BRIEFING

Mother (Jasmine Hargreaves) 14 year old daughter (Serena Hargreaves)
Mother gives most of the story as Serena not talking much due to difficulty opening her mouth wide. Initially, Mother is relatively relaxed but during the consultation when Serena vomits again she becomes increasingly anxious that Serena is loosing a lot of blood.
Serena is quiet and withdrawn. If she is asked to stand up she feels like she is going to faint. She has a sore throat. 'Grumpy' 'moody teenager'. If asked direct questions she struggles to reply as her throat is sore – gesticulates to Mum to answer on her behalf. During the consultation Serena vomits another bowl full of blood. (this will be concealed under an empty bowl and 'produced')

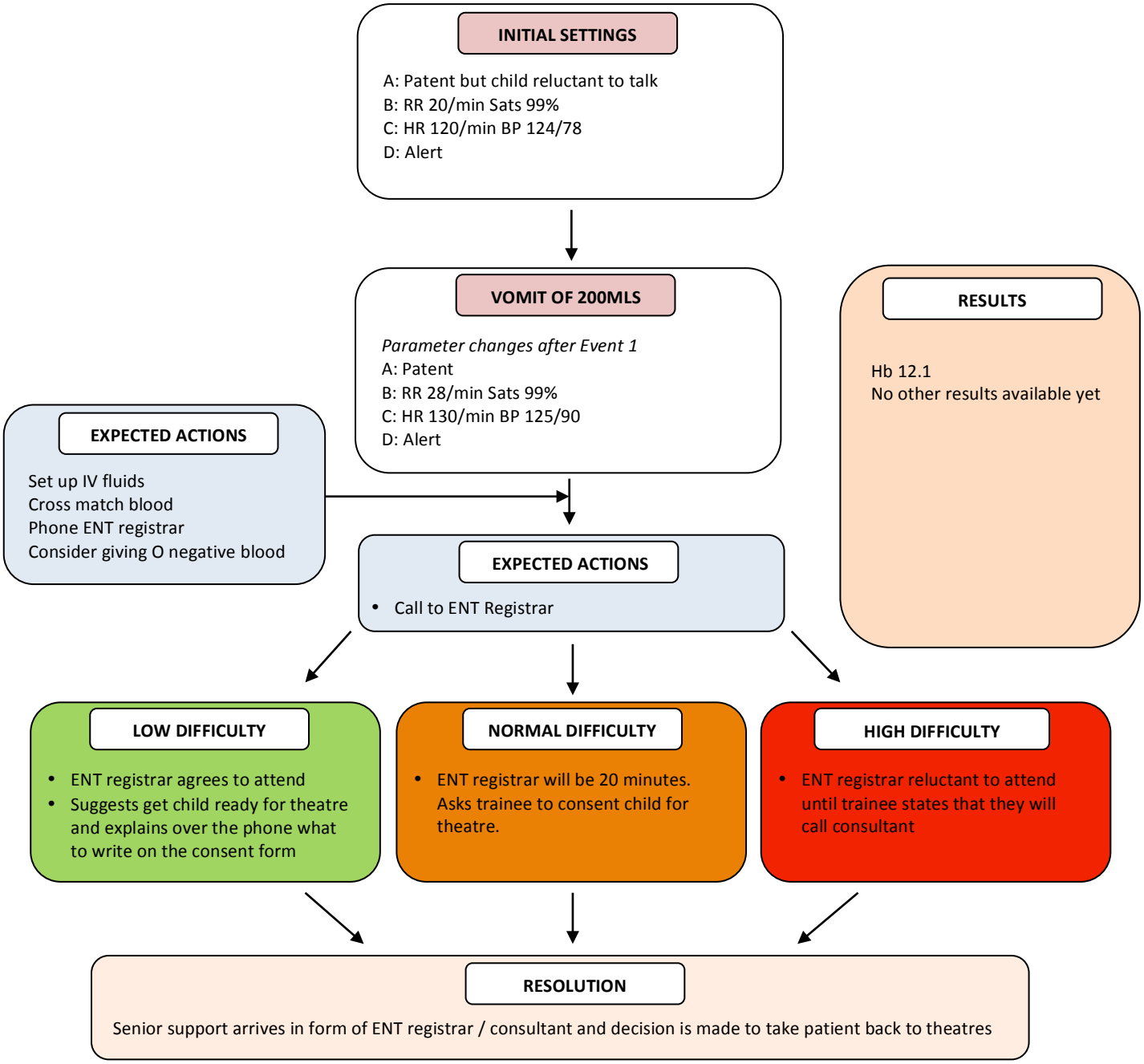
Serena has had a tonsillectomy operation under the care of Mr. X 7 days ago. She had her tonsils out because she had repeated bouts of tonsillitis and had been off school for a week on 3 separate occasions in the last year.

After the operation Serena was kept on the paediatric ward overnight (routine practice) and then discharged home in the morning. She was not discharged on antibiotics. She has been eating ice cream and jelly and a bit of soup but nothing really solid as her throat has been too sore. She hasn't gone back to school yet after the surgery.
This afternoon at around 4pm she felt sick and vomited up a whole bowl full of clotted blood. Her Mum brought her by car to the hospital, Serena vomited once more on the way in - another whole bowl full of bright red vomit with clots.
Before the scenario starts Serena and her Mum have been seen by an A & E junior doctor, who has placed an iv cannula, taken some bloods and made a referral to the doctor covering ENT.

ADDITIONAL INFORMATION



CONDUCT OF SCENARIO



DEBRIEFING

Debriefing to be led by external ENT surgeon faculty

Parent actor from in scenario to give debriefing on communication skills

POINTS FOR FURTHER DISCUSSION

ENT examination - active bleeding? clot?
Hydrogen peroxide gargle
Adrenaline soaked swab
Need for an anaesthetist
Estimated volume of blood loss
Being polite but assertive
Antibiotics

DEBRIEFING RESOURCES

Acknowledgements to Mr. Vik Veer and www.clinicaljunior.com for debriefing resource information

Patients tend to bleed about 5-10 days after a tonsillectomy, and this is normally secondary to infection of the tonsillar fossae. Typically they bleed a little and then pour blood afterwards and so this must be considered seriously in all cases. It is a life threatening condition, which requires resuscitation management in all cases (even if they spat out a little blood and then it stopped again – all these cases should be dealt with caution – particularly the children).

The management plan with these patients should be:

- Resuscitation – 2 large cannula with bloods – including clotting and group and save
- IV antibiotics with 1.2g Benzyl Penicillin and 500mg of Metronidazole IV
- Analgesia without NSAIDs (to try and protect the clotting system)
- Hydrogen peroxide gargle

On examination you could see several different situations: There is no active bleeding and there is a hint of blood in a corner of one of the tonsillar fossa. The fossae will have a white slough over them, which is normal. You are looking for a small grey or clotted blood area. In this situation you follow the plan given above and add to the drug chart 20mls of hydrogen peroxide, gargle which should be diluted with water in a ratio of 1:6. this gargle should be used every 4 hours and the patient admitted to the ward and be kept nil by mouth with IV fluids. You should inform your ENT registrar as there maybe an emergency operation to do that night.

Again there could be no bleeding but this time you see a large clot overlying one of the tonsil beds. In this situation you should follow the advice given above including the hydrogen peroxide gargle. The difference now would be that you would get the patient prepared for an operation immediately as you will need to remove this clot to see if it is bleeding behind it. Inform the ENT registrar and the anaesthetic teams and then prepare yourself with a Magill's forceps, some gauze, 1:10,000 adrenaline, tongue depressor and a headlight. Now with everything set up use the magill's to pull off the clot and watch what happens. If there is no bleeding then you can follow the advice given above and admit the patient with H2O2, IV fluids, and NBM.

If the patient then starts bleeding you quickly soak a gauze with the 1:10,000 adrenaline. Grip the gauze tightly with the tip of your magill's forceps and push the gauze into the fossa and hold it there for as long as your patient can cope with it. The idea is to soak the fossa with adrenaline whilst also stemming the flow of blood. Lean the patient forward so he/she can spit out the blood and saliva (they won't be able to swallow with a big

instrument in their mouth). The direction of the pressure should be directly into wall of the mouth (so laterally rather than any posterior or inferior pressure which will cause the patient to gag).

Continue this until either the bleeding stops or help arrives in the form of a registrar or someone who can take the patient to theatre.

Some people say they sometimes use silver nitrate sticks to cauterise the bleeding spot. However I've not needed to use this before so I can't give you any precise direction with this.

If you have a patient who is bleeding uncontrollably and you don't have any equipment you can buy some time with gauze and a firm finger on the bleeding point. With a little luck the proper equipment and adrenaline will be at hand soon.

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INFORMATION FOR PARTICIPANTS

KEY POINTS

Estimate the blood loss
Compare this with blood volume for child of this weight
Consider involving the paediatricians
Achieve adequate iv access before using hydrogen peroxide gargle
Cross match blood early
Organise the information before telephoning senior

WORKPLACE-BASED ASSESSMENTS

There is a WBA for post-tonsillectomy bleeding on the ISCP which may be used in a modified format during this simulation

Otolaryngology PBA: Arrest of tonsillar haemorrhage		
Trainee:	Assessor:	Date:
Assessor's Position*:	Email (institutional):	GMC No:
Duration of procedure (mins):	Duration of assessment period (mins):	Hospital:
Operation more difficult than usual? Yes / No (If yes, state reason)	[ ] Tick this box if this PBA was performed in a **Simulated setting**.	

* Assessors are normally consultants (senior trainees may be assessors depending upon their training level and the complexity of the procedure)

IMPORTANT: The trainee should explain what he/she intends to do throughout the procedure. The Assessor should provide verbal prompts if required, and intervene if patient safety is at risk.

Rating:
N = Not observed or not appropriate
D = Development required
S = Satisfactory standard for CCT (no prompting or intervention required)

Competencies and Definitions		Rating N/D/S	Comments
I. Consent			
C1	Demonstrates sound knowledge of indications and contraindications including alternatives to surgery		
C2	Demonstrates awareness of sequelae of operative or non operative management		
C3	Demonstrates sound knowledge of complications of surgery		
C4	Explains the procedure to the patient / relatives / carers and checks understanding		
C5	Explains likely outcome and time to recovery and checks understanding		
II. Pre operation planning			
PL1	Demonstrates recognition of anatomical and pathological abnormalities (and relevant co-morbidities) and selects appropriate operative strategies / techniques to deal with these		
PL2	Demonstrates ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. radiology		
PL3	Checks materials, equipment and device requirements with operating room staff		
PL5	Checks patient records, personally reviews investigations		
PL6	Specifically asks patient/carer about current dental state e.g. loose teeth		
III. Pre operative preparation			
PR1	Checks in theatre that consent has been obtained		
PR2	Gives effective briefing to theatre team		
PR3	Ensures proper and safe positioning of the patient on the operating table		
PR5	Demonstrates careful draping of the patient's operative field		
PR6	Ensures general equipment and materials are deployed safely (e.g. diathermy)		
PR7	Ensures appropriate drugs administered		
PR8	Arranges for and deploys specialist equipment effectively		
IV. Exposure and closure			
E1	Demonstrates knowledge of optimum access		
E2	Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly		
E3	Completes a sound wound repair where appropriate		
V. Intra operative technique: global (G) and task-specific items (T)			
IT1(G)	Follows an agreed, logical sequence or protocol for the procedure		

IT2(G)	Consistently handles tissue well with minimal damage		
IT3(G)	Controls bleeding promptly by an appropriate method		
IT4(G)	Demonstrates a sound technique of knots and sutures		
IT5(G)	Uses instruments appropriately and safely		
IT6(G)	Proceeds at appropriate pace with economy of movement		
IT7(G)	Anticipates and responds appropriately to variation e.g. anatomy		
IT8(G)	Deals calmly and effectively with unexpected events/complications		
IT9(G)	Uses assistant(s) to the best advantage at all times		
IT10(G)	Communicates clearly and consistently with the scrub team		
IT11(G)	Communicates clearly and consistently with the anaesthetist		
IT12(T)	Identifies site of bleeding and decides on appropriate method to control it e.g. diathermy, ties and/or suturing of the palatal pillars		
IT13(T)	Inserts NG tube and aspirates blood from stomach		
IT14(T)	Ensures haemostasis is achieved at end of the procedure and that the postnasal space and pharynx is free from blood clots		
VI. Post operative management			
PM1	Ensures the patient is transferred safely from the operating table to bed		
PM2	Constructs a clear operation note		
PM3	Records clear and appropriate post operative instructions		

Global Summary

Level at which completed elements of the PBA were performed on this occasion		Tick as appropriate
Level 0	Insufficient evidence observed to support a summary judgement	
Level 1	Unable to perform the procedure, or part observed, under supervision	
Level 2	Able to perform the procedure, or part observed, under supervision	
Level 3	Able to perform the procedure with minimum supervision (needed occasional help)	
Level 4	Competant to perform the procedure unsupervised (could deal with complications that arose)	

Comments by Assessor (including strengths and areas for development):	
Comments by Trainee:	
Trainee Signature:	Assessor Signature:

Assessor training?
[ ] No
[ ] Written
[ ] Web/CD
[ ] Workshop

Time taken for feedback ..... mins

	Not at all									Highly
Trainee satisfaction with PBA	1	2	3	4	5	6	7	8	9	10
Assessor satisfaction with PBA	1	2	3	4	5	6	7	8	9	10

PARTICIPANT REFLECTION

What have you learned from this experience? (Please try and list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?

PARTICIPANT FEEDBACK

Date of training session:.....

Learner grade:.....

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this skills simulation useful					
I understand more about the simulation subject					
I have more confidence to deal with this operative case					
The material covered was relevant to me					

How could this simulation be improved for future participants? This is especially important if you have ticked anything in the disagree/strongly disagree box.

FACULTY DEBRIEF – TO BE COMPLETED BY FACULTY TEAM

What went particularly well during this simulation?

What did not go well, or as well as planned?

Why didn't it go well?

How could the simulation be improved for future participants?

Date of training session:.....