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|--|---|--|---|----------------|-------|
| Name: | P Ward | Observation at start | CRT: | 2s | |
| D.O.B.: | 31/11 (42Y) | RR: | (ventilated) | Temp: | 36.7 |
| Address: | (Insert local address) | ETCO2 | Normal | BM: | 8.2 |
| | | Sats: | 97% | Weight: | 110kg |
| Hospital ID: | 446 579 1515 | Heart Rate: | 105 | Allergy | NKDA |
| Ward: | General surgery | BP: | 110/65 | | |
| Background to scenario | | Specific set up | | | |
| A patient undergoing a laparoscopic cholecystectomy, suffers from a vascular injury and massive blood loss. This scenario can be modified for any relevant common case performed at your local centre. | | Mannequin, on theatre table Intubated and ventilated Cannulated with fluid running Anaesthetic drugs and chart Surgical drapes and laparoscopic equipment Suction and 'blood' to suction Treatment for major haemorrhage inc blood | | | |
| Required embedded faculty/actors | | Required participants | | | |
| Junior anaesthetist (starting scenario) Surgeon | | Anaesthetist ODP/theatre staff can be included in MDT sim | | | |
| Past Medical History | | | | | |
| 42 year old patient, high BMI otherwise well Recent admission with acute cholecystitis, recovered and now admitted for elective cholecystectomy No issues with anaesthetics Airway MP II, Good MO, Short neck, normal neck and jaw movement | | | | | |
| Drugs Home | | | Drugs Hospital | | |
| Nil reg | | | Anaesthetic induction drugs Appropriate analgesia and anti-emetics | | |
| Brief to participants | | | | | |
| You are the anaesthetic on call team You hear a call for help from theatre X On arrival – junior anaesthetist handover – 42 year old, undergoing a laparoscopic cholecystectomy Induction was uneventful, grade IIa intubation, surgery was started about 30 mins ago. In the last 10 minutes the patient has been more tachycardic, I have since given some analgesia and muscle relaxant but not resolving | | | | | |
| Scenario Direction | | | | | |
| Stage 1, 0– 5 minutes | | | | | |
| A | Intubated | | | | |
| B | As per ventilation settings, sats 97% | | | | |
| C | HR 105 BP 110/65 | | | | |
| DE | Anaesthetised with choice of anaesthetic, temp 36.7 Surgeon – not communicative at this point. Suctioning increasing blood, asking for irrigation, getting more frustrated at difficulty visualising due to bleeding | | | | |
| Rx | Recognise potential cause as bleeding Communicate with team, declare critical incident, call for senior help Increase FiO2, reduce inhalational anaesthetic IV access | | | | |
| Stage 2, 5–10 minutes | | | | | |
| A | Intubated | | | | |
| B | As per ventilation settings, ETCO2 starting to decrease. Sats 95% | | | | |
| C | HR 140, BP 85/42, peripherally cool, CRT 4s | | | | |
| DE | Anaesthetised? Surgeon frustrated about bleeding, task focused. If directly alerted to changing physiology, will engage in MDT management | | | | |
| Rx | Blood transfusion, consider activating major haemorrhage protocol, consider rapid infusion devices/cell salvage Active warming MDT discussion re management options, including haematology, IR Monitor progress, POC testing including TEG. Discussion re transfusion goals Replace Ca, give TXA Consider ongoing management and destination for ongoing care Scenario can run till appropriate management decisions are made | | | | |

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| Guidelines | |
| AoA QRH handbook – Massive blood loss https://anaesthetists.org/Portals/0/PDFs/QRH/QRH_3-2_Massive_blood_loss_v2.pdf?ver=2018-07-25-112713-610 | |
| Guidance for Patient Role | |
| Anaesthetised | |
| Guidance for ODP role | Guidance for Surgeon role |
| Opening lines/questions/cues/responses/Concerns Concerned about quick deterioration | Opening lines/questions/cues/responses/Concerns Can someone get more irrigation please? Suction keeps getting blocked Does the suction bottles need changing again? |
| Actions Alert team to blood in suction if not noticed Support as appropriate for participant grade | Actions Task focused, does not communicate ongoing bleeding Increasingly frustrated at difficult view due to bleeding If directly alerted, will engage with MDT approach to management |
| Guidance for Role e.g. ITU/Anaesthetic Senior | Additional challenges |
| Expectations/actions Support as appropriate for participant grade – direct to over the phone | Access to help Noise in theatre Could incorporate into robotic surgery case |
| Session Objectives | |
| Clinical | Management of intra-operative massive haemorrhage |
| Non-technical skills | |
| Teamworking | Coordinating activities of the team in emergency, exchanging information at points of handover, using assertiveness if required, assessing capabilities of team |
| Task management | Planning for next steps, prioritising management options, following guidelines, identifying and utilising resources – personnel and technical |
| Situational awareness | Gathering information on arrival, recognising critical incident, anticipating next steps |
| Decision making | Identifying options at all stage, balancing risks and selecting options, continuous re-evaluation |

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