Induction of general anaesthesia

The use of simulators may assist in the teaching and assessment of some aspects of this section e.g. failed intubation drill

Learning outcomes:

➢   To conduct safe induction of anaesthesia in ASA grade 1-2 patients confidently

➢   To recognise and treat immediate complications of induction, including tracheal tube misplacement and adverse drug reactions

➢   To manage the effects of common complications of the induction process

➢   To conduct anaesthesia for ASA 1E and 2E patients requiring emergency surgery for common conditions (e.g. uncomplicated appendicectomy or manipulation of forearm fracture/uncomplicated open reduction and internal fixation)

➢   Demonstrates safe practice behaviours including briefings, checklists and debriefs

➢   Demonstrates correct pre-anaesthetic check of all equipment required ensuring its safe functioning [including the anaesthetic machine/ventilator in both the anaesthetic room and theatre if necessary]

➢   Demonstrates safe induction of anaesthesia, using preoperative knowledge of individual patients co-morbidity to influence appropriate induction technique; shows awareness of the potential complications of process and how to identify and manage them

Knowledge			
Competence	*Description*	*Assessment Methods*	*GMP*
IG_BK_01	• Recalls the pharmacology and pharmacokinetics, including doses, interactions and significant side effects of drugs used during induction of anaesthesia • Describes the factors that contribute to drug errors in anaesthesia and strategies used to reduce them	A,C,D,E	1
IG_BK_02	• Describes the basic function of monitors • Recall consensus minimum monitoring standards and the indications for additional monitoring • Explains the functions and safety features of the anaesthetic	A,C,D,E	1,2
IG_BK_03	In respect of the induction of anaesthesia: • Describes the effect of pre-oxygenation and knows the correct technique for its use • Explains the techniques of intravenous and inhalational induction and understands the advantages and disadvantages of both techniques • Describes the pharmacology of common intravenous induction agents • Describes the physiological effects of intravenous induction • Describes how to recognise an intra-arterial injection of a harmful substance and its appropriate management	A,C,D,E	1,2

Knowledge

Competence	Description	Assessment Methods	GMP
	• Describes anaphylactic reactions and explains the appropriate management including follow up and patient information • Lists the factors influencing the choice between agents for inhalational induction of anaesthesia • Discusses the additional hazards associated with induction of anaesthesia in unusual places [e.g. Emergency Room] and in special circumstances including but not exclusively: brain injury; full stomach; sepsis; upper airway obstruction • Identifies the special problems of induction associated with cardiac disease, respiratory disease, musculoskeletal disease, obesity and those at risk of regurgitation/pulmonary aspiration.		
IG_BK_04	Describes the principles of management of the airway including: • Techniques to keep the airway open and the use of facemasks, oral and nasopharyngeal airways and laryngeal mask airways	A,C,D,E	1,2
IG_BK_05	In respect of tracheal intubation: • Lists its indications • Lists the available types of tracheal tube and identifies their applications • Explains how to choose the correct size and length of tracheal tube • Explains the advantages/disadvantages of different types of laryngoscopes and blades including, but not exclusively, the Macintosh and McCoy • Outlines how to confirm correct placement of a tracheal tube and knows how to identify the complications of intubation including endobronchial and oesophageal intubation • Discusses the methods available to manage difficult intubation and failed intubation • Explains how to identify patients who are at increased risk of regurgitation and pulmonary aspiration and knows the measures that minimise the risk • Categorises the signs of pulmonary aspiration and the methods for its emergency management	A,C,D,E	1,2
IG_BK_06	Explains the importance of maintaining the principles of aseptic practice and minimising the risks of hospital acquired infection	A,C,D,E	2

Skills

Competence	Description	Assessment Methods	GMP
IG_BS_01	Demonstrates safe practice in checking the patient in the anaesthetic room	A,D	1,2
IG_BS_02	Demonstrates appropriate checking of equipment prior to induction, including equipment for emergency use	A,D	1,2

IG_BS_03	In respect of the equipment in the operating environment: • Demonstrates the functions of the anaesthetic machine including ○ Performing proper pre-use checks ○ Changing/checking the breathing system ○ Replenishing the vaporiser ○ Changing the vaporiser	D	1,2
IG_BS_04	Selects, checks, draws up, dilutes, labels and administers drugs safely	A,D	1,2,3
IG_BS_05	• Obtains intravascular access using appropriately sized cannulae in appropriate anatomical locations • Demonstrates rigorous aseptic technique when inserting cannulae	D	1
IG_BS_06	Demonstrates appropriate placement of monitoring, including ECG electrodes and NIBP cuff • Uses monitors appropriately • Demonstrates proficiency in the interpretation of monitored parameters	A,D	1
IG_BS_07	Demonstrates effective pre-oxygenation	A,D	1,2,3
IG_BS_08	In respect of intravenous induction: • Explains induction to the patient • Prepares drugs for the induction of anaesthesia • Administers drugs at induction of anaesthesia • Manages the cardiovascular and respiratory changes associated with induction of general anaesthesia	A,D	1,2,3
IG_BS_09	In respect of inhalational induction of anaesthesia: • Satisfactorily communicates with the patient during induction • Satisfactorily conducts induction	A,D	1,2,3
IG_BS_10	In respect of airway management: • Positions the patient for airway management • Maintains the airway with oral/nasopharyngeal airways • Ventilates the lungs with a bag and mask • Inserts and confirms placement of a Laryngeal Mask Airway • Successfully places nasal/oral tracheal tubes using direct laryngoscopy • Confirms correct tracheal tube placement • Uses bougies correctly • Secures and protects LMAs/tracheal tubes during movement, positioning and transfer • Correctly conducts RSI • Correctly demonstrates the technique of cricoid pressure	A,D	1,2,3
IG_BS_11	Demonstrates correct use of oropharyngeal, laryngeal and tracheal suctioning	A,D	1,2
IG_BS_12	Demonstrates failed intubation drill	D,S	1,2

IG_BS_13 (formerly ES_BS_03)	Manages rapid sequence induction in the high risk situation of emergency surgery for the acutely ill patient	A,D	1
IG_BS_14 (Formerly ES_BS_02)	Demonstrates safe perioperative management of ASA 1 and 2 patients requiring emergency surgery	A,C,D,M	1,2,3,4