Endotracheal intubation : complication and trouble shoot

Slide 1

Firends, in this webinar we shall learn about the common trouble shoots and the complications of intubation in a newborn

Slide 2

We will discuss how to identify and manage incorrect placement of endotracheal tube in the right main bronchus, placement of tube in the esophagus, complications during endrotracheal intubation and finally the ways to prevent them.

Slide 3

On some occasions the endotracheal tube may go in the right main bronchus and this is suggested by the breath sounds being heard mainly on the right side of the chest. No air is heard entering the stomach and there shall be no gastric distension. In such a scenario, withdrawing the endotracheal tube and rechecking for equal air entry on both sides will confirm accurate position of the endotracheal tube.

Slide 4

The tip of endotracheal tube on chest X ray should lie at body of T2 Vertebra. The correct position of ET tube should be confirmed on X ray . In chest x ray on left side endotracheal tube tip is at the right position i.e at second thoracic vertebra. However, if you look closely at the X-ray on the right side, the tube is too far inside, as it is touching the carina and almost at the entry of the right main bronchus suggesting incorrect placement and collapse of the left lung.

Slide 5

On the other hand the incorrect placement of the endotracheal tube in the esophagus can be confirmed by absence of the breath sounds heard over chest, air is being heard entering stomach on auscultation with visible gastric distention, absence of mist in tube and no carbon dioxide detected in exhaled air One should remove the tube and do bag and mask ventilation and then reintroduce the endotracheal tube.

Slide 6

Now we shall discuss about possible complications and their management
The possible complications during intubation are:
Hypoxia that means a baby is showing low saturations or becoming cyanosed. The possible cause may be we are taking too long time to intubate or tube is not at correct position. In this scenario, we should halt intubation attempt, ventilate the baby with bag and mask and try to reposition tube.

Baby may develop bradycardia or apnea after hyoxia or a vagal response from laryngoscope or suction catheter. Here again one has to follow the same principles of ventilation with bag and mask, limiting the duration of intubation attempts and oxygenation after intubation. We should also ensure that the baby is being monitored during the process of intubation.

If baby develops pneumothorax it may be because of one lung ventilation or inadvertanat excessive pressure. Once it happens immediate measure may be required to drain it . One can prevent pneumothorax by using appropriate pressure and by ensuring correct positioning of the tube.

Baby may develop contusions and laceration of tongue due to rough handling or if the laryngoscope blade is too long. This complication can be prevented by proper application of laryngoscope and gentle handling during procedure
Baby may develop infection possibly from caregivers hands, so we should try and prevent this always by paying attention to clean techniques during intubation.
Side 7
In this webinar we learnt that intubation should be done under monitoring with pulse oximeter. Also ensure size of endotracheal tube and depth of insertion has been determined before procedure. So that complication are prevented or detected on time.