severe anaphylactic reaction at induction of anaesthesia
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Objective
Dealing with rare life threatening scenario and crisis management under General Anesthesia.

Methods
A 53 years old female with no known comorbidities was scheduled to undergo wide local excision of right breast lump for carcinoma of the breast. At preoperative assessment she was stable with normal systemic examination. Her laboratory investigations were normal and her electrocardiogram (ECG) and chest radiograph were within normal limits. She had no history of previous exposure to general anaesthesia and she was premedicated with tablet midazolam 7.5mg. In the operating room ECG, non-invasive blood pressure (Bp), pulse oximeter and capnograph were applied. She had a heart rate of 71 beats per minute, "Bp of 132/72 mmHg and oxygen saturation (SpO2 98%: ). An infusion of Ringer lactate solution was started, pre-oxygenation anaesthesia was induced with slow intravenous (IV) pethidine 50mg and sodium thiopentone 350mg. After ensuring manual ventilation of the lungs with facemask, 35mg of atracurium was given. Afterwards, manual ventilation of the lungs became difficult with no visible chest movement and the patient became flushed all over. The pulse was weak and on the auscultation of the chest was silent. SpO2 dropped to 70% and capnogram became unrecordable. She developed tachycardia of 120 beats/minute. A call for help was given and the patient was intubated and manually ventilated with 100% oxygen. Her blood pressure dropped to 74/50mmHg but responded quickly to rapid IV infusion of Ringer's lactate solution. Once the BP improved, volatile anaesthetic agent halothane was started to relieve the bronchospasm" SpO2 improved slowly to 92% and an up-going tracing of capnogram began to appear, but widespread bronchospasm was still present with high airway pressures. Epinephrine was prepared in a strength of 1:10000 while halothane was replaced with isoflurane, as a combination of halothane and epinephrine can lead to serious arrhythmias. Before epinephrine was administered patient developed increasing ST elevation. Epinephrine was not advisable in this situation and glyceryltrinitrate (GTN) was administered in aliquots of 100 micrograms and nebulization with salbutamol 5mg was started. Oxygen saturation improved to 97-98% & ST elevation resolved after two doses of GTN. Hydrocortisone 100mg and chlorpheniramine 10 mg were administered to further stabilize the condition”. An arterial line was placed and blood sample was collected for Troponin I levels and cardiology consultation was sought. A 12-lead ECG did not reveal any acute ischaemic changes and a portable echocardiogram showed an ejection fraction of 55-60Vo, with no wall motion abnormality. Arterial blood gases were normal. Since the patient had needle localization performed in radiology department and had traveled from another city to undergo this surgery, the relatives requested to proceed with the surgery. After discussion amongst the anaesthesiologist, surgeon, and cardiologist it was decided to go ahead with the surgery. As the reaction had followed atracurium administration, no neuromuscular blocking agent was used to avoid the risk of cross-reactivity” Surgery was carried out with midazolam boluses of 1mg and fentanyl boluses of 50 microgram“ as required. patient was ventilated with oxygen 50% in air and isoflurane 1-2% As some residual bronchospasm was still present, injection aminophylline 250mg was given stat followed by infusion of 0.5mg/kg/h and nebulization with salbutamol 5mg was repeated. SpO2 improved to 100%.

Results
The surgery was uneventful and patient woke up with good cardiorespiratory function. She was extubated smoothly and shifted to recovery room. Her chest x-ray did not reveal any acute changes and her bronchospasm resolved completely within six hours with regular salbutamol nebulization. Her I troponin levels were normal.

Conclusion
Anaphylaxis during general anaesthesia is a dramatic event that can lead to serious consequences. Prompt diagnosis and correct management is the key to a successful outcome in Severe reactions.