

# Perioperative anaphylaxis: An approach toward drug allergy

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## **ABSTRACT**

Perioperative anaphylaxis is an acute and potentially life-threatening event. The incidence is estimated to be around 1:353 to 1:18600. In the 6th National Audit Project (NAP6) in UK, the estimated incidence of severe perioperative anaphylaxis is 1:10000. Diagnosis of perioperative anaphylaxis is difficult due to multiple factors and many differential diagnoses can mimic the clinical features of anaphylaxis. Grading of severity is according to the modified Ring and Messmer Scale, consisting of grade 1 to 4. Guidelines on the management of perioperative anaphylaxis include the ANZAAG guidelines published in 2016. Mainstay of treatment remains supportive and early administration of adrenaline, the dose of which depends on the grade of the reaction. Subsequent management include blood investigation (mast cell tryptase) and referral to the anaesthetic allergy clinic. Indications for referral include generalized rash/ urticaria, angioedema, unexplained cardiac arrest, hypotension and or bronchospasm during anaesthesia. The referral should include legible photocopies of anaesthetic record, drug charts, description of reaction and time of onset of reaction in relation to drug administration. The anaesthetic allergy clinic in Hospital Kuala Lumpur is the only testing centre in Malaysia to investigate perioperative anaphylaxis. It was established in March 2014 and receives referrals from across the whole country. At the clinic, skin testing including intradermal test and skin prick test for all suspected agents would be performed, followed by serum testing including total and specific IgEs. Neuromuscular blocking agents (NMBA) remain the commonest or second commonest causative agent in many countries. In Malaysia it is the most commonly identified culprit. Incidence of different NMBAs and cross-reactivities varies between different countries. Chlorhexidine anaphylaxis is also common in many countries including Malaysia where it is the second commonest. In NAP6, antibiotics were the most common culprit for perioperative anaphylaxis, whereas it is the 3rd commonest in Malaysia. A decrease in the incidence of latex allergy has been observed in many countries but is still a problem in Malaysia. Importance of allergy testing following perioperative anaphylaxis has been shown in many studies. Thus, it is important to refer to the anaesthetic allergy clinic following an episode of perioperative anaphylaxis to improve patient safety and outcome in subsequent surgeries and anaesthesia.