INTRODUCTION:
Chlorhexidine is a common antiseptic agent used in the orthopaedic field. Hypersensitivity to chlorhexidine has been reported but life-threatening anaphylactic shock is rare. We present a case of life-threatening anaphylactic shock to chlorhexidine in a patient occurring during a surgery.

Case Report:
Mr. HH, a 23-year-old Indonesian gentleman with no known medical illness and allergy, had an uneventful surgical fixation of the pelvic, right tibia and fibula fractures following a motor-vehicle accident. Post-operatively, he developed eczematous skin overlying his back and bilateral lower limbs which he did not report to any medical personnel.

Two months later, he had another surgery under general anaesthesia for debridement of the right leg infected wound and pelvic external fixator removal. Povidone iodine and chlorhexidine were used as disinfectants of the wounds intraoperatively. Towards the end of the surgery, he developed severe bronchospasm followed by pulseless electrical activity (PEA). He had facial flushing, angioedema of the lips and flushing of bilateral upper and lower limbs with periorbital, hands, and feet oedema. Cardiac resuscitation was commenced immediately for 5 minutes. Post-operatively, he was treated at the intensive care unit (ICU) with triple inotropes. He subsequently recovered and was discharged home well.

His specific IgE to chlorhexidine was found to be raised to 0.77 kUA/L (reference <0.35kUA/L). A repeated intradermal testing two months later revealed a wheal with flare at the chlorhexidine intradermal site. Skin prick test to chlorhexidine was also positive.

The table summarized his immunology testing results.

DISCUSSIONS:
Literatures suggest that profound anaphylactic shock to chlorhexidine is commonly preceded by milder, non-specific reactions. These mild symptoms are often dismissed by both the patient and physicians alike. In our patient, he was sensitized to the chlorhexidine antigen during the first surgery, and this explains the rashes developed after the first surgery. He developed an anaphylactic shock during the second surgery when he was again exposed to the same antigen.

CONCLUSION:
Life-threatening chlorhexidine anaphylaxis is rare but it is normally preceded by milder symptoms. Direct questioning of these symptoms is necessary as a part of the pre-operative assessment and the patient should be referred for further immunology testing if indicated.

REFERENCE: