Malignant hyperthermia is an inherited disorder of the skeletal muscle that can be pharmacologically triggered to produce a combination of hypermetabolism, muscle rigidity and muscle breakdown. The reported incidence of varies from 1:40000 to 1:50000 anaesthetics. Estimates of population prevalence of genetic susceptibility are between 1:5000 & 1:10000.

- The diagnosis of malignant hyperthermia may not be obvious at first.
- The primary features of malignant hyperthermia are a direct consequence of loss of skeletal muscle calcium homeostasis with a resulting increase in intracellular calcium ion concentration.

General treatment:
1. Abandon the procedure or terminate surgery as soon as possible.
2. Stop inhalational agents & maintain anaesthesia with iv drugs whilst surgery is concluded.
3. Give 100% oxygen and hyperventilate with 2-3x predicted minute ventilation.
4. Active cooling measures should be commenced including infusion of cold iv solutions, application of ice to the axillae and groins and a cooling mattress.
5. Give dantrolene by rapid infusion. Dantrolene is the only drug which is effective in limiting the accumulation of calcium within muscle cells. 20mg of dantrolene is in vials with 3gm of mannitol & requires 60ml of water to reconstitute. Repeated doses of dantrolene should be administered until pyrexia, tachycardia & rise in ETCO2 subsides.
6. Give a large dose of glucocorticoid (eg 2gm of methylprednisolone).
7. Acidosis is treated with HCO3- and hyperkalaemia is treated with treatment guided by regular blood gases and electrolyte measurements.
8. A diuresis of 2ml/kg/hr is maintained to limit renal tubular damage by myoglobin.
9. Given inotropes to maintain CO.
10. Be aware that body temperature may be unstable for 24-48 hours.
11. After acute episode monitor for electrolyte abnormalities, myoglobinuria and DIC. If procedure cannot be abandoned then:
   (i) Use a regional block
   (ii) Use safe agents

Ensure follow-up with patient and family.