Emergency resternotomy

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After the identification of cardiac arrest, basic life support according to the Advanced Life Support guidelines should be initiated while preparing for emergency resternotomy . Emergency resternotomy may be required in 0.8–2.7% of all patients undergoing cardiac surgery . Emergency resternotomy is a multipractitioner procedure, which should be rapidly performed with a full aseptic technique. Preparation for emergency resternotomy /uni25CF A gown and gloves should be donned in a sterile fashion, but opening should not be delayed in the arrest situation. /uni25CF The drape is applied, ensuring that the whole bed is cov ered (if an all-in-one sterile drape is used then there is no need to prepare the skin with antiseptic). /uni25CF The scalpel is used to cut the sternotomy incision, includ ing all sutures, deeply down to the sternal wires. edges will separate a little, which may relieve tamponade. /uni25CF Suction is used to clear excessive blood or clot. /uni25CF The retractor is placed between the sternal edges and the sternum opened. /uni25CF If cardiac output is restored expert assistance should then be summoned. If there is no cardiac output, the position of any grafts should be carefully identified and internal cardiac massage and internal defibrillation performed, if required. Internal cardiac massage This is a potentially dangerous procedure. Risks include avulsion of a bypass graft, with the LIMA being at particular risk, and right ventricular rupture, especially if it is thin or distended. Therefore, it is important to carefully remove any clot and identify structures at risk such as grafts before placing - hands around the heart. There are several methods of internal - massage; however, the two-hand technique is the safest. Two-hand technique The heart should be inspected to locate the internal mammary and other grafts if present, followed by removal of any blood clots. The right hand is passed over the apex of the heart and then advanced round the apex to the back of the heart, palm up and hand flat. The left hand is then placed flat onto the anterior surface of the heart and the two hands squeezed together at a rate of 100 per minute. Flat palms and straight fingers are important to avoid an unequal distribution of pres - sure onto the heart, thereby minimising the chance of trauma. If there is a mitral valve replacement or repair, care should be taken not to lift the apex by the right hand, as this can cause a posterior ventricular rupture.

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