Median sternotomy closure

Assessment of competences for a qualified SCP

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Please note: SCPs can add DOPS and PBAs as evidence.**

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| --- | --- | --- | --- | --- |
| instinct | | **NOT competent** | **Competent** | **Signature and date** |
| Inspection and performing median sternotomy closure in the operation theatre | | | | |
| 1 | Introduction   * Confirm patient name and ID * Discuss the patient’s condition * Explain full surgical procedure * Consent (confirm that you explained to the patient that you will be performing median sternotomy closure under supervision) |  |  |  |
| 2 | Anatomy and position   * Explain anatomy of the sternum * Discuss anatomical variations * Discuss the adjacent vital structures * Discuss the problems associated with median sternotomy closure * Discuss the plan of action if things go wrong |  |  |  |
| 3 | Comorbidities and generic conditions   * Skin conditions (psoriasis, eczema, dry skin tissues) * Body build   + Thin build   + Moderate build   + Muscular   + Obese * Diabetes   + Well controlled   + Poorly controlled   + Check:     - HbA1c level     - Blood glucose level     - Random glucose level * Discuss the patient’s age and sex   + Discuss the elderly patient’s skin tissue healing   + Discuss the difficulties of sternal thickness and selection of wires for particular type of quality of sternum   + Discuss the female sex and potential plan to avoid any complications |  |  |  |
| 4 | Surgical procedure   * Demonstrate the use of sternal closure instruments * Demonstrate the use of diathermy and carry out haemostasis appropriately * Demonstrate and understand the importance of sternal wiring and how many wires are needed to close the sternum * Demonstrate the importance of 2 wires in the manubrium, 3–4 wires in the body of the sternum and 1 or 2 wires on the xiphoid process * Demonstrate and understand the figure of eight, single wiring technique and double wire and its importance and complications * Demonstrate and bring the sternum into two equal distance and place the sternal wire on equal distances * Demonstrate and understand the parasternal and through the sternum wiring techniques on difficult sternum * Demonstrate and understand crossing the wires and tightening the wire with appropriate force rather than breaking the wires * Demonstrate good twisting and burying technique of the sternal wires * Demonstrate the closure technique with appropriate sutures on two-layer muscle closure and skin closure according to local protocol * Demonstrate the sternum into two equal distances from the midline * Demonstrate the use of good haemostatic techniques before and after opening the sternum |  |  |  |
| 5 | Communication   * Discuss problems with the multidisciplinary team * Discuss the potential plan with the surgical team in the team briefing |  |  |  |
| 6 | Potential issues   * Complications   + Discuss the potential complications of wire bleeding and re-exploration   + Discuss the potential complications of sternal infections   + Discuss the importance of sternal wire burying in thin patients   + Discuss the potential complications of sternal dehiscence   + Discuss the potential and preventive technique complications of puncturing the right ventricle, innominate vein and aorta during sternal wiring   + Discuss the potential benefits and complications of using bone wax on the sternum   + Discuss the benefits and complications of using haemostatic agents on the sternum before closure   + Discuss the potential benefits and complications of using topical antibiotics during sternal closure |  |  |  |
| **Assessor’s comments:** | | | | |
|  | | | | |
| **The SCP has completed these outcomes to the appropriate standard.**  **Assessor’s name:**  **Signature and date:** | | **SCP’s signature:**  **Date:** | | |

\*Please note that junior SCPs have to do at least 25 competences to develop their portfolio of evidence.