For chest wall reconstruction and deformity repair

MatrixRIB® Fixation System

Product Brochure

DePuy Synthes
PART OF THE johnson & johnson FAMILY OF COMPANIES
Pectus Deformity Repair

Pectus excavatum repair is performed primarily for relief of physiologic symptoms, and rarely only for cosmetic reasons. The main goals of open Pectus Excavatum repair with internal sternal support are:

• Reduce the occurrence of postoperative respiratory distress caused by paradoxical chest motion of respiration
• Reduce pain
• Permit early ambulation and deeper respiration
• Maximize the extent to which the deformity is permanently corrected

The MatrixRIB Fixation System provides

• Anterior plating technique designed to avoid surgical disruption of intercostal soft tissues
• Stiffness of 1.5 mm MatrixRIB® System plate constructs is similar to cadaveric osteoporotic rib, allowing for flexibility of the rib cage
• A variety of plate options to stabilize the anterior chest wall:
  • Sternal plates to fixate sternal osteotomies
  • Long straight plates to fixate costochondral cartilage resections from rib to sternum or across the sternum from rib-to-rib
  • Precontoured plates to fixate rib osteotomies
Resections of defects greater than 5 cm in diameter require skeletal reconstruction to maintain physiologic respiratory function and protect vital intrathoracic organs.\textsuperscript{3}

Flail chest and paradoxical respiration may occur without proper stabilization causing pain, respiratory distress, and/or possible long term mechanical ventilation needs.\textsuperscript{3}

The main goals of reconstruction are:
- Maintenance of physiologic respiration
- Protection of thoracic organs
- An acceptable cosmetic result

The MatrixRIB Fixation System provides

- Pre-contoured plates to fit the average rib shape to minimize intra-operative bending
- Stiffness of 1.5 mm MatrixRIB System plate constructs is similar to cadaveric osteoporotic rib, allowing for flexibility of the rib cage\textsuperscript{2}
- Straight Plates capable of spanning defects up to 24 cm in length*
Indications

The DePuy Synthes MatrixRIB Fixation System is indicated for the fixation and stabilization of rib fractures, fusions, osteotomies and osteoporotic bone. DePuy Synthes MatrixRIB precontoured plates are indicated for the fixation, stabilization and reconstruction of:

- Rib fractures, fusions, osteotomies, and/or resections, including spanning gaps and/or defects
- Pectus Excavatum, Pectus Carinatum, and other chest wall deformities

DePuy Synthes MatrixRIB straight plates are indicated for the fixation, stabilization and reconstruction of:

- Rib and sternum fractures, fusions, osteotomies, and/or resections, including spanning gaps and/or defects
- Pectus Excavatum, Pectus Carinatum, and other chest wall deformities

DePuy Synthes MatrixRIB sternal plates, 2.8 mm thickness, are indicated for the fixation, stabilization and reconstruction of:

- Sternum fractures, fusions, and/or osteotomies
- Pectus Excavatum, Pectus Carinatum, and other chest wall deformities

The DePuy Synthes MatrixRIB intramedullary splints and the universal plate are indicated for the fixation and stabilization of ribs.

Contraindications

The MatrixRIB Fixation System is contraindicated for:

- The fixation of the sternum in acute cardiac patients, due to the potential delay if emergent re-entry is required
- Screw attachment or fixation to the clavicle or spine
- Use in patients with latent or active infection, with sepsis, or who are unwilling or incapable of following postoperative care instructions.

Warning: The MatrixRIB Fixation System is contraindicated for use as a permanent implant for bridging gaps after chest wall resections. Metallic internal fixation devices cannot withstand activity levels and/or loads equal to those placed on normal healthy bone as these devices are not designed to withstand the unsupported stress of full weight-bearing, load-bearing, or gap-spanning, which may result in fatigue failure of the device. Additionally, using the device for spanning gaps in patients that put excessive strain on the implant may further contribute to premature device failure.

Warning: These devices can break intraoperatively when subject to excessive forces or if used in a manner other than the recommended surgical technique. The surgeon should determine whether to remove the broken part based on the associated risk. DePuy Synthes recommends that whenever possible and practical for the individual patient, the broken part should be removed.

Warning: When implants are used to bridge gaps after chest wall resections there is potential risk for herniation and adhesion of the underlying organs/soft tissue. Please refer to package insert for full list of contraindications, warnings, cautions, and/or possible adverse events.

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