PECTUS EXCAVATUM, PECTUS CARINATUM AND POLAND’S SYNDROME: SURGICAL CORRECTION
BlueReview POSTED DATE: 3/23/2004
EFFECTIVE DATE: 7/1/2004

COVERAGE:

Surgical repair of Pectus Excavatum and Pectus Carinatum is considered reconstructive and medically necessary if the patient meets ALL the following criteria:

1) Well documented evidence of complications arising from the sternal deformity. Complications include, but may not be limited to:
   a) Cardiopulmonary impairment documented by respiration and/or cardiac function tests;
   b) Frequent lower respiratory tract infections;
   c) Asthma;
   d) Exercise limitations;
   e) Atypical chest pain; AND

2) An EKG or echocardiogram has been done if a heart murmur or known heart disease is present to define the relationship of the cardiac problem to the sternal deformity; AND

3) A CT scan of the chest demonstrates a pectus index greater than 3.25. This is derived from dividing the transverse diameter of the chest by the anterior-posterior diameter.

Surgical repair of Pectus Excavatum and Pectus Carinatum is considered cosmetic if the procedure is primarily to alter appearance.

Surgical repair of the deformities associated with Poland’s Syndrome is considered reconstructive and considered medically necessary.

In order to determine medical necessity for the repair of Pectus Excavatum, Pectus Carinatum or deformities associated with Poland’s Syndrome, all of the following information must be provided:

1) Copies of diagnostic studies with radiologic interpretation;

2) Medical documentation describing indications for the procedure with signs and symptoms of complications arising from the sternal deformity;

3) History and physical; AND

4) Photographs of deformities.

DESCRIPTION:

Pectus Excavatum (also known as Funnel Chest) is the most common of...
the major congenital deformities of the sternum. This occurs when the sternum is displaced posteriorly to produce a funnel shaped depression. The degree of sternal depression is assessed on a CT scan or lateral chest X-Ray by measuring either the sternovertebral distance or a ratio of sternovertebral distance to transthoracic diameter. The etiology is not precisely understood, but overgrowth of the lower costal cartilages and ribs is thought to be responsible. The extent of the depression varies from person to person. Pectus Excavatum can cause medical complications when cardiopulmonary function is impaired.

Both traditional open surgery (Ravitch repair) and newer minimally invasive techniques (Nuss repair) can be used to correct pectus excavatum. Both techniques generally improve chest appearance. They also improve rib and sternum configuration as well as cardiopulmonary (heart and lung) functioning. Both techniques result in a return to normal activity and improved exercise tolerance within the first few months following surgery.

Pectus Carinatum, often called "pigeon breast," is caused when the sternum (breastbone) is pushed outward and is also a congenital deformity of the sternum. The forward protrusion of the sternum often causes pain during exercise or during times of increased respiratory effort. It increases in severity with age and generally worsens during growth spurts that occur during late childhood and adolescence. While pectus carinatum occasionally interferes with overall health, it generally does not interfere with cardiopulmonary functioning. The etiology is not precisely understood, but overgrowth of the lower costal cartilages and ribs is thought to be responsible.

Surgery may be necessary to restore normal chest contour. Open surgery in boys is performed through a horizontal incision on the anterior chest well, usually just below the nipple area. In girls, this incision is placed to coincide with the lower breast margins when possible. The lower four to five cartilages that are abnormal are removed, leaving the perichondrium (the lining that envelops the outer portion of rib cartilage). This allows the cartilage to regrow in its new position. The sternum is surgically fractured and placed in the correct position. The incision is usually closed with internal sutures that minimize scarring.

Poland's Syndrome is a congenital absence of the pectoralis major (chest muscle), absence or hypoplasia (underdevelopment) of the pectoralis minor, absence of costal cartilages, or hypoplasia of the breast and subcutaneous tissue. There can also be brachysyndactyly (missing fingers, missing phalanges, webbing between the fingers, one hand shorter than the other, or a combination of these deformities).
As children with these deformities grow older, the defects usually become more severe.

RATIONALE:

Correction of pectus excavatum and pectus carinatum is usually performed to restore normal appearance, although some patients may have associated medical complications, such as:

- Respiratory Infections,
- Pneumonia,
- Asthma,
- Cardiac Arrhythmias,
- Atypical chest pain, or
- Exercise intolerance.

It is the severity of the medical complications and the objective results of diagnostic studies that will help determine the medical necessity for surgical repair of pectus excavatum and pectus carinatum.

Poland’s syndrome is a congenital defect and patients may require reconstructive surgery to the chest wall musculature, breasts and subcutaneous tissue.

PRICING:

None

REFERENCES:

PECTUS EXCAVATUM, PECTUS CARINATUM AND POLAND’S SYNDROME: SURGICAL CORRECTION
BlueReview POSTED DATE: 3/23/2004
EFFECTIVE DATE: 7/1/2004


DISCLAIMER:

State and federal law, as well as contract language, including definitions and specific inclusions/exclusions, takes precedence over Medical Policy and must be considered first in determining coverage. The member’s contract benefits in effect on the date that services are rendered must be used. Any benefits are subject to the payment of premiums for the date on which services are rendered. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically. HMO Blue Texas physicians who are contracted/affiliated with a capitated IPA/medical group must contact the IPA/medical group for information regarding HMO claims/reimbursement information and other general polices and procedures.