

## **Electromiography of Superior Members in the Purpose of a Case of Poland Syndrome. Poland Syndrome. Agenesis of Both Pectorals. With Patient Permission**

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### **Introduction**

Poland's syndrome is a rare malformation, prevalent in men, it is estimated that the incidence is 1 / 30,000 live births, which associates degrees of thoracic anomalies, and alteration of homolateral MMSS, the case that concerns us is bilateral, there is an important agenesis of the bilateral pectoral muscles.

It is characterized by hypoplasia or aplasia, dysplasia, at the level of various muscle groups, for example the pectoralis major and minor, and other muscles of the scapular region. The absence of the pectoralis major muscle can be accompanied by hypoplasia of the subcutaneous tissue, and there is no axillary hair. It usually accompanies deformity of the chest wall and breast (from discrete hypoplasia or complete absence or amastia).

It may have involvement at the ipsilateral level of the upper limb, with hypoplasia of the limb (brachydactyly), deformity of the forearm and wrist (ectromelia), attachment of the fingers (syndactyly) and even absence of the distal phalanges. Of Moebius syndrome in addition to the so-called winged scapula.

### **Causes**

The syndrome of Poland, has no hereditary basis. It develops as a result of an intrauterine developmental anomaly, in the sixth week of gestation, due to insufficiency, hypoplasia of the subclavian arteris that hinders the correct embryogenesis of the pectoral musculature and osteotendinous structures, producing musculoskeletal malformations.

### **Patient: With Patient Permission. Poland Syndrome. Agenesis of Both Pectorals**

It is a male, who works in the field, who has supplemented his pectoral muscle deficiency by doing sport, you can see a healthy and strong male. Very developed the musculature of the shoulder girdle and both arms. Bilateral winged scapula. Significant atrophy of both pecs. As can be seen in Figure 1. The alterations in this syndrome are muscular, osteotendinous, and cutaneous glandular nature. This syndrome owes its name to Alfred Poland that around 1841 when dissected a corpse described the agenesis of the pectoral.



**Figure 1:** Poland Syndrome. Agenesis of Both Pectorals. With Patient Permission.

### EMG

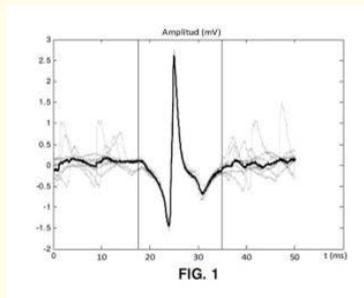
Patient with Poland's syndrome, with limitation to anteversion and abduction of both shoulders, bilateral winged scapula, and muscular atrophy, hypogenesis and hypoplasia of both pectorals of the sternum-costal portion of the major and left pectoralis, referred for suspicion of injury Plexular, vs. radicular, vs Neuropatica in Hand DCHA VS STC DCHO. VS Cervical Radiculopathies.

### Findings

EMG Deltoides and Biceps DCHO AND IZQ: Chronic Neuropathic Pattern Light, In Porobable Relationship with Radiculopatia Cronica C5 Bilateral Leves. No Reorganization Data.

EMG Both Pectoral: With hypogenesis and hypoplasia of both pectorals of the sternum-costal portion of the major and left pectoralis, and as the only EMG Manifestation of the Registers the Presence of a Very Atrophic Pectoral Muscle, with Pump, Normal, with Length and Length in the Normality but less activity than in those in the rest of musculature explored. Both at rest and in effort.

Conventional EMG: In the study with needle electrode at rest, no spontaneous activity was detected in explored muscles. In the qualitative study of motor units, signs of chronic denervation (units of increased size) have been detected in muscles innervated by different nerves but sharing C5 dcho root territory. And left (15 days - 5 Months) Recent Signs of Active Denervation, which Will Speak for Aguda- Subaguda Reagudization (15 days - 5 MONTHS), with a slight gradation (deltoids and biceps) The EMG of the muscles of the left pectoral region shows Small, Normal PUM, with Length and Duration within Normality but less activity than in the rest of the musculature (Supraspinatus, infraspinatus, rhomboid, normal) The EMG of the muscles of the left pectoral region shows Small, Normal PUM, with Length and Duration within Normality but less activity than in the rest of musculature explored, both at rest and in effort. Musculature of the waist esca Skip left (Supraspinatus, infraspinatus, rhomboids normal).

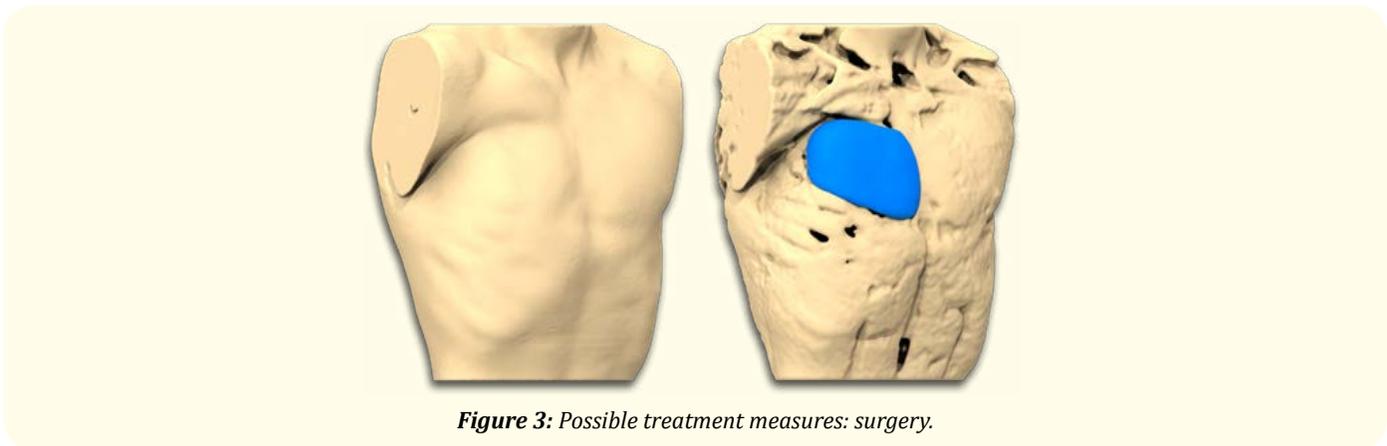


**Figure 2:** PUM within the normal imitations found in the pectoral muscle with a duration less than 12 MSEC. and up to 10 MSEC.

**Conclusion EMG**

Findings are compatible with:

- Chronic radiculopathy (more than 6 months of evolution) C5 left of degree LEVE, old, without signs of exacerbation at the moment of the exploration.
- Bilateral carpal tunnel currently presenting a mild to moderate degree. With data of mild neuropraxia, without axonotmesis. Chronic mononeuropathy in manual worker.
- Winged scapula due to marked atrophy of both major and minor pectorals.
- No Data of Plexopathy, DCHA and IZQ. Giving the Preservation of all the Sensitive Potentials Studied in Both MMSS and Dependents of the Top, Middle and Lower Trunks.
- The EMG of the muscles of the left pectoral region shows Smooth, Normal PUM, with Amplitude and Duration within Normality but less activity than in the rest of musculature explored. Both at rest and in effort. Musculature of the left scapular girdle (Supraspinatus, infraspinatus, rhomboids normal)
- Clinical and EMG Findings Compatible with AN SD. Bilateral Polymer, with symmetrical, with hypogenics and hypoplasm of both pectorals of the sternum-costal portion of the major and left pectoralis, AND AS A single EMG Demonstration of the Record of the Presence of a Pectoral Muscle with Pump, Normal, with Length and Duration within of Normality but less activity than in the rest of musculature explored. Both at rest and in effort. Musculature of the left scapular girdle (Supraspinatus, infraspinatus, rhomboids normal).



*Figure 3: Possible treatment measures: surgery.*

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