Case report - Thoracic general
Right postpneumonectomy gained dextrocardia
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Abstract
The negative pressure realized into the hemi thorax with lung pneumonectomy has consequences upon the mediastinum organ statics. This aspect results in expansion of the other lung. These changes are usual but limited in the adult lung pneumonectomy. In the right lung pneumonectomy, the mediastinum moves to the operated part and disturbs the function of the vessels and cavities with thin wall or low pressure (vena cava, right atrium). These aspects are not described in the left lung pneumonectomy. Taking into consideration the previous factors, we present a particular case of a young woman with right lung pneumonectomy; this intervention was made in childhood, at ten years of age. After sixteen years of evolution it was realized a real mediastinum reshuffle, the heart was moved in the right hemi thorax, with dextrocardia-like aspect. This case is interesting because it involves the positive and differential diagnosis problems – dextrocardia, associated disorders, real complications.

Keywords: Pneumonectomy; Childhood; Mediastinum reshuffle; Dextrocardia

1. Introduction
1.1. General data about pneumectomies
The first pneumonectomy was realized in many stages by Macewen in 1895 to a lung tuberculosis case and thorax epiem. The first successful left pneumonectomy was performed by Radalf Nissen in 1930. In 1933, Graham and Singer reported the first left pneumonectomy in full for lung cancer, followed by Overhold who reported the first right pneumonectomy in full, and successfully operated on a patient with carcinoid tumor in 1935 [1].

2. Materials and methods
A 27-year-old female housewife presented with anamnesis, patient C.V.C., and reported a respiratory intercurrence, sore, mostly nocturnal cough, dyspnoea to effort but also to pause, nocturnal shivers, polyarticular pains, with these symptoms presenting after approximately one week.

The physician prescribed large spectrum antibiotics and anti-inflammatory drugs (not specified by the patient).

Besides right pneumonectomy for suppurated bronchiectasis and hypotrophy right lungs, a caesarean and appendectomy were performed on the patient in the same year, 2003.

The objective examination: height = 155 cm, weight = 48 kg.

The asymmetric thorax with dorsolumbar kypho-scoliosis with right lateral-thorax scar post-pneumonectomy; the diminished transmission of normal vocal vibrations on the right hemi thorax, increased sonority and bronchial crackles (sibilants) on the left hemi thorax.

To the cardiovascular apparatus: central and peripheral pulse 75/min, a considerable amount of faded cardiac noises in the precordial region, arterial tension 120/70 mmHg.

Usual investigations were normal.

EKG (Fig. 1): Regular sinus rhythm 72/min; QRS Axes +90°; Qi, II, II Aspect (cord with straight forwarded point), complex of qRS aspect in V1 and qR up too.

Fig. 1. EKG of studied patient. (a) Standard derivations of EKG; (b) and (c) right precordial derivations of EKG.
was hard to believe that the heart, with its pericardia, and other fixed anatomical elements, in a 17-year evolution, moved so much and they permitted the appearance of a gained dextrocardia.

For this reason, the way of splitting the diagnosis was found: the bronchoscope showed the two secondary lobar branches of the left lung. This case, very rare in our opinion, and in the experience of well-known consultant cardiologists, raised problems more through diagnosis than therapeutical problems, the latter being solved by the final reorientation of the given diagnosis:

- Gained dextrocardia secondary to right postpneumonectomy
- Extrinsic bronchial asthma to its debut
- Mixed pulmonary dysfunction, predominantly obstructive
- Secondary pulmonary hypertension
- Severe compensated core pulmonale
- Tricuspidian insufficiency, the second degree.

4. Conclusion

- the pneumonectomy performed during childhood permits, through the disorganization of the thorax architecture and the expansion of the left lung, the appearance of gained dextrocardia;
- the overloaded pulmonary circulation induced pulmonary hypertension, right ventricular hypertrophy and tricuspidian insufficiency [2];
- the pulmonary symptoms and the emphasis of the softening to allergens evidence the possibility of association of the allergic bronchial asthma on single surgical lung;
- the evolution and prognosis of cardiopulmonary disease, existing interdependently, depend on the causes which sicken the mixed pulmonary dysfunction (‘the sick live as pulmonary patients and die as cardiac’);
- dispensation measures and interdisciplinary medical team should be imposed for the improving of quality of life.

References