

A GIANT LUNG HYDATID CYST IN A PATIENT WITH SEVERE THORACIC KYPHOSCOLIOSIS – A CASE REPORT.

Ivan P. Novakov

Department of Special Surgery; Medical University - Plovdiv

Abstract.

The aim of this article is to present a rare case of a giant lung hydatid cyst in an adult patient with severe thoracic kyphoscoliosis.

We report a case of a 23-year-old-patient that was presented with moderate and constant chest pain. On physical examination, the patient appeared with severe kyphoscoliotic deformation of the thorax. Chest X-ray had shown the deformity of the thorax and thoracic computed tomography established giant right-sided lung hydatid cyst. Surgical treatment of the cyst was performed.

Conclusion. We consider the presented case interesting because the need of thoracotomy due to the lung echinococcosis in patient with severe thoracic deformation is a rare situation. No other similar cases are found in the literature.

key words: *thoracic kyphoscoliosis, lung hydatid cyst.*

address for correspondence: inovakov2003@yahoo.com

Introduction.

Kyphosis is a condition in which the thoracic region of the spine in the upper back has an excessive curvature. A kyphotic curve looks like the letter "C" with the opening of the C pointing towards the front. When a person's spine twists and develops an "S"-shaped side-to-side curve, it is a condition known as scoliosis. The term "kyphoscoliosis" describes an abnormal curvature of the spine in both a coronal and sagittal plane - is is a combination of kyphosis and scoliosis. These musculoskeletal disorders often leads to other issues in patients, such as underventilation of lungs and pulmonary hypertension due to pressure put on the lungs (1,5,6,8,9,10).

It is a great challenge of the thoracic surgeon to perform thoracotomy in patients with expressed deformation of the thoracic spine like kyphoscoliosis. The thoracic surgeon must bear in mind with the position of such patients on the operating table, extension of the thoracic incision and the stage of the ribs retraction – to ensure optimal access to the lung, preventing ribs of iatrogenic fractures. It's a challenge of the thoracic surgeon to treat effectively any severe postoperative chest pains and to prevent postoperatively deterioration of the lung ventilation in such patients with thoracic spine deformations.

The aim of this article is to present a rare case of a giant lung hydatid cyst in an adult patient with severe thoracic kyphoscoliosis, underwent surgical treatment of the parasitic disease.

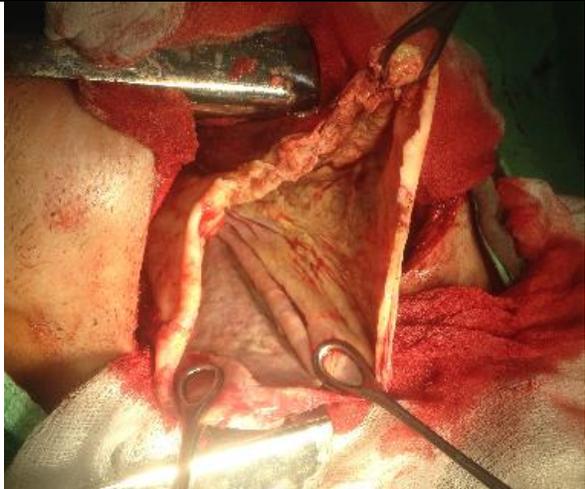
Case presentation.

We report a case of a 23-year-old man that was presented to our thoracic surgery department with moderate, continuous right-sided chest pain. Since one week before the admission patient has have non-productive cough. Chest X-ray, performing in an outpatient clinic established massive right-sided pleural effusion, which was indication of the patient's hospitalization, with severe right-sided displacement of the trachea and smaller dimension of the right hemithorax (fig. 1). Physical examination established: expressed thoracic kyphoscoliosis, right-sided dullness to percussion and diminished breath sounds (fig. 2). Physical examination on other organs did not reveal any positive

findings. Medical history established idiopathic form of thoracic kyphoscoliosis.

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| <p>Figure 1. Thoracic X-ray demonstrates massive right-sided pleural effusion and right-sided displacement of the trachea and smaller dimension of the right hemithorax.</p> | <p>Figure 2. Posterior view of the patient - severe thoracic kyphoscoliosis is shown.</p> |

Thoracic computed tomography demonstrated thoracic kyphoscoliosis, with a giant right-sided lung hydatid cyst (having oval shapes, well-defined margins and air-fluid level with membranes floating in the fluid) / (fig. 3).

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| <p>Figure 3. Thoracic computed tomography of the kyphoscoliotic thorax, with right-sided large air-fluid level and floating membranes.</p> | <p>Figure 5. A giant fibrotic capsule is shown / (after removing the hydatid membranes).</p> |

Right lateral thoracotomy was performed and a giant hydatid cyst [dimension more than 20 cm, origin - the upper lobe, with several daughter cysts) was found (fig. 4)]. We performed Posadas

method, as a surgical procedure, which includes: cystostomy; removing the membranes of the parasite with daughter cyst, closure of the bronchial openings and capitonnage of the residual fibrotic cavity. At the end of the operation fully inflation of the lung was established (fig. 5) and thoracic cage was closed. The patient was discharged from the hospital at the 12th postoperative day.



Figure 6. Well-inflated right lung / (after capitonnage of the residual fibrotic capsulae).

Discussion.

The spine deformity (kyphosis, scoliosis and kyphoscoliosis) most commonly affects the thoracic spine. Adult thoracic spine deformities can have varying symptoms and degrees of severity, from minor changes in the shape of the back, to severe deformity, nerve problems, and chronic pain. For most of the affected people, these deformations do not cause serious health problems. On the other side are the patients with severe the thoracic spine deformity with excess pressure on the spine, continuous back pain and even though paraplegia. Due to pressure put on the lungs and heart, some cases may express breathing difficulties, cardiac failure and fatigue (1,5,6,8,9,10).

We present an adult patient with idiopathic form of kyphoscoliosis. The patient has well-expressed deformation of the thoracic spine in both planes (sagittal and frontal) but doesn't express clinical symptoms, except inconvenience and embarrassment due to the cosmetic deformity. That's why we consider the case as very interesting not exactly because of the severe deformity of the thoracic spine and because of the need to perform thoracic surgery.

It is a challenge for us to perform thoracotomy in this patient (because of the need for surgical treatment of the lung hydatid cyst). The great challenge was to perform such thoracotomy with enough retractions of the ribs that must ensure access to the lung without iatrogenic fractures of the abnormally curved ribs. Definitely, we spare the patient's chest wall, ensuring access to the giant hydatid cyst of the right lung. As a rule the term "giant hydatid cyst" is used for the cysts with large dimension that occupy more than half of the hemithorax, established by conventional thoracic X-ray. The minimal invasive surgery isn't suitable method for the treatment of giant lung hydatid cyst – method of choice is conventional open surgery, which was used in the presenting case (2,3,4,7).

We didn't find citing in the medical literature case of expressed thoracic spine deformation with

the need for the open thoracic surgery (thoracotomy). This fact had confirmed our decision to present and public this clinical case. The operation doesn't provoke any symptoms and signs connected with the thoracic spine deformity. It is evidence that we deal successfully with the challenge to operate this patient.

Conclusion.

We consider the presented case interesting because the need of thoracotomy due to the lung echinococcosis in patient with severe thoracic deformation is a rare situation. No other similar cases are found in the literature.

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