

Assessment Criteria Diagnostic Radiology fluid Mediastinal Mass, Cystic and Pseudocystic

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ABSTRACT The incidence of side (AP) radiography of thoraco-pleuro-mediastino-lung, the heart is the organ best developed in the transverse direction and therefore some of its cavities are tangent Get X-ray beam, it generates lateral contours mediastinal opacity, with large vessels in the heart. Other mediastinal structures, which overlap in posterior-anterior end, are difficult to see on X-ray-mediastino thoraco-pleuro-pulmonary, the incidence of side. An exception is the trachea, which is visible in the first thoracic vertebra and the superior mediastinum, as radiotransparentă structure, tubular, located on the midline. Mediastinal pleura over the structures formed by the reflection lines, separating the transparent areas of the lung mediastinal opacity. The incidence of side-mediastino radiography thoraco-pleuro-pulmonary, central radius, moving perpendicular to the sagittal plane of the mediastinum, structures are viewed obvious overlapping lung parenchyma over the mediastinum

KEY WORDS *mediastino, cystic, pseudocystic, radiology, fluid mediastinal mass*

Introduction

The incidence of side (AP) radiography of thoraco-pleuro-mediastino-lung, the heart is the organ best developed in the transverse direction and therefore some of its cavities are tangent Get X-ray beam, it generates lateral contours mediastinal opacity, with large vessels in the heart.

Other mediastinal structures, which overlap in posterior-anterior end, are difficult to see on X-ray-mediastino thoraco-pleuro-pulmonary, the incidence of side. An exception is the trachea, which is visible in the first thoracic vertebra and the superior mediastinum, as radiotransparentă structure, tubular, located on the midline. Mediastinal pleura over the structures formed by the reflection lines, separating the transparent areas of the lung mediastinal opacity.

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Contours mediastinal opacity

Contour right mediastinal opacity

And outline called "vein" of the mediastinum has two arcs:

Right upper arch, almost linear is given by large veins - veins brahiocefalică its downward path right in the VCS, they continued to divide the country a net limit;

Arch lower right - convex - is given the right atrium, the outline form of cardio-phrenic diaphragm right angle, at which one can see sometimes, inferior vena cava junction with right atrium.

Springs between the upper and lower right, sometimes oval opacity is visible once the putter azygos vein, on its way to the back of the VCS;

Ascending aorta in the elderly conducted compresses VCS, causing an arc convex middle right, the child may appear normal thymus as a widened mediastinum opacity which, more often right and sometimes bilaterally. Due indentării the sterno-costal cartilage, may be wavy contours opacity thymic (sign Mulvey)

Contour left mediastinal opacity

Is determined by large arteries and left ventricle, is called contour "artery" of mediastinal opacity. Start subclaviculară artery either left or by superimposing it over the left primitive carotid artery, both vertical trajectory despite the left artery subclavii left, above the lung apex.

Continue with the 3 springs left:

Arch top left - the convex lung parenchyma - is composed of button corresponding aortic aorta clubs, it became prominent with age and can have a triangular or round opacity, prominent left superior intercostal vein due to crossing

Arch middle - is determined in 2/3 upper left pulmonary artery and in

1/3 lower lug left atrium, located posterior;

Arch lower left - led by the left ventricle boundaries, the parenchyma is convex.

Fluid mediastinal masses, cysts and pseudocyst

Cysts represent 15-20% of all mediastinal tumor masses. The most common are bronhogenice, pleuro-pericardial, thymic, neuro-enteric, etc..

Most cystic mediastinal tumors are asymptomatic, being discovered incidentally

during imaging investigations or radio, when the emergence of symptoms resulting from the presence of compressive phenomena caused by the volume of their representative and / or complications (bleeding, infection) in these their cases surgical excision is recommended.

Cysts bronhogene

Resulting in delayed development of a bud detached from the trachea or a large bronchial containing mucoid fluid and has a wall composed of connective tissue and epithelium, often incomplete, they may contain mucous glands, muscle, cartilage or calcification islands.

Radiology observed a homogeneous opacity, usually single, round-oval, unilateral, with net shape, which distorts the local upper and middle mediastinum, around the tracheal bifurcation (paratraheale cysts, Carini, hilarious paraesofagiene.). The emergence of water-level at this aeric opacities, suggesting bronchial communication, but that communication is very rare, unlike bronhogene intraparenchimotoase cysts. Finally peripheral calcification may, in some cases, fluoroscopic examination is ascensionare movements in swallowing (Robbins), is deeply inspired by its shape (Miller). Considerable size can grow to before or after mediastinal compartment.

Pleuro-pericardial cysts

Anomalies arising from the delimitation celomică pericardial cavity. Cystic formations of various sizes are between 10 and 15 cm, formed a cystic cavity filled with serous fluid, lined by a thin wall, covered by connective mezoteliale cells. Are frequently located in the cardio-phrenic angle as above, but can form any location pleuro-pericardial (Pleuro-pericardial recess posterior superior pericardial recess).

Radiology - opacity homogenous, well circumscribed, round, oval, heart and positioning assembly cardio-phrenic angle.

Enteric cysts

Represents pseudo 0,5-2,5% of lesions of the esophagus. Segments of the digestive tract are separated during embryonic development, of varying sizes and covered the gastric mucosa, rarely intestinal secreting fluid content of these cysts.

Enteric cysts are frequently located in the posterior mediastinum, often paraesofagian law. Manifests relatively early, since early years through phenomena of compression and, occasionally, by disturbances due to cyst infection. Adults, is rarely encountered, but with the same openness, in terms of symptoms. Of this group are also stars Chi intramural esophageal,

like previous ones, except the location. in some cases may be mixed - broncho-esophageal.

Thoraco-pleuro-mediastino radiography-pulmonary opacities revealed the presence of a round oval shape consistent with the net or a nonspecific mixed images, located in the posterior mediastinum. Examination of the esophagus may illustrate Barite Barite substance entering the specified opacity.

Neuro-enteric cysts Meningocelele

Leptomeningelui Meningocelul is a hernia of the conjugation of holes, single or multiple, unilateral or bilateral, containing CSF pseudocyst appearance. Approximately 75% of thoracic meningocelele appear associated with neurofibromatosis.

Radiological aspects of meningocelelor is totally similar to that of nerve tumors, detrminând widening hole conjugation.

Thymic cysts

Thymic cysts can be congenital or acquired. Congenital thymic cysts are rare cystic degenerated compared with thymic tumors. The congenital defect is formed due to channel closing timo-pharyngeal and can locate anywhere in the mandible to sternal manubriul. Except intraglandulare location, their characters are similar to any congenital cyst.

X-ray examination in these cases may reveal the presence of a homogeneous opacities located in mediastinum above the cervico-mediastinal localization, nonspecific.

Cystic lymphangioma

Rare congenital abnormality of lymphatic tissue, lymphangioma manifested in its classical form as a posterior cervical cystic masses, often found in children, the first two years of life and, more rarely in adults.

Limfangioamele with cystic mediastinal topography is less than 1% of mediastinal tumors and primitive, are common in adults over 75% of cases. Isolated mediastinal forms are exceptional, in general, this is the cervico-mediastinal lesions (3-10% of cervical limfangioamele), with preferential localization in the mediastinum above.

X-ray examination revealed the presence of a homogeneous opacification cervico-mediastinal mediastinal or less, round, oval or polilobate, nonspecific, which distorts the symmetrical or asymmetrical contours and mediastinal opacity located in the mediastinum above. Chilotorax cited cases are associated.

Materials and method

Due to the great variability etiopathogenic mediastinal mass, crucial therapeutic and

prognostic implications of their diagnosis as early as possible corollary, this study has proposed a retrospective statistical analysis of 504 cases examined in the Department of Radiology and Medical Imaging Emergency Hospital Craiova period 2005 - 2009, Clinical and biological investigation, radiology, ultrasound, computed tomography, magnetic resonance and, in some cases the histological diagnosis, sheet extension, therapeutic conduct and, in some cases, evaluation posttherapeutic.

Results and discussions

Lung X-ray examination was the examination of first choice in all 504 cases investigated imaging mediastinal masses. Were identified mediastinal mass producing change contours and lines of pleural reflection, inside mediastinal mass

mediastinal contours and those masked by normal anatomical structures or pathological formations escaped X-ray diagnosis.

Pseudocyst fluid and cystic masses

Fluid mediastinal masses were characterized according to various aspects of radiological nature. Thus, enlargement and deformation of bilateral mediastinal opacity was present in 41.17% of them and, to 58.83% one-sided. If thymic cysts were characterized by bilateral asymmetric deformation mediastinal opacity and the presence of a homogeneous space opacities prevascular - 5.88%, the pleuro-pericardial were characterized due to their location, the presence of homogeneous opacity in the cardiovascular angles phrenic right - 11.76%) and left respectively - 5.88%, with consequent distortion of the anterior-inferior mediastinum.

Table 1

Radiological aspects	Thymic chyst (1)	Pleuro-pericardial chyst (3)	Chysts bronhogene (2)	Mediast. abscesses, hematic collections (7)	Pancreatic pseudocyst (2)	Achalazie (2)
Mediastinal opacity deformation	Bilat. + 5,88%(1)	Unilat. + 17,64%	Unilat. +5,88% Bilat.+5,88%	+41,17% + 11,76% unilat. +29,41% bilat.	Cont.left lower. + 11,76%	Unilat.+11,76%
Enlarging mediastinal opacity	Bilat. asymmetric. +5,88%	Unilat. + 17,64%	Bilat. +5,88% Unilat. +5,88%	+11,76% unilat. +29,41% bilat	Unilat. left. lower - +11,76%	Unilat.-+ 11,76%
Opacity mediastinal present	Homogeneous, PV +5,88%	Cardio-pfrenic angle + 17,64%	+ 11,76% high average. +middle	Homogeneous +17,64% Heterogeneous +23,52%	Homogeneous Med. post.-inf. +11,76%	Homogeneous +5.88% Heterogeneous +5,88% Paravert. + 11,76%
Mediastinal displacement contours	+5,88%	+11,76% righ. Inf, left inf. +5.88%		+ 11,76% unilat. +29,41% bilat	Unilat.+11,76%	Bilat.+ 11,76%
Movement, compression., The struct. normal			+5,88%	+29,41%	+5,88%	+5,88%
Other associated signs				Pleurezie +35,29% Alte leziuni traumatice tor-pulm +35,29%	Pleurisy -+5,88%	

Bronhogene cysts were accompanied by deformation of uni-and bilateral mediastinal opacity in all cases and expanding upper and middle mediastinum - 11.76%. Mediastinal abscess, caused most frequently bilateral widening of the mediastinum, - 29.41% from that alone, which was present in 11.76% of the total mass of fluid. Homogeneous appearance of mediastinal opacity was present more frequently compared to the homogeneous (23.52% vs. 17.64%).

Pleuro-pulmonary lesions associated form and the break of traumatic unilateral effusion were present in 35.29% of cases.

Pseudochistele pancreatic led unilateral widening of mediastinum, the presence of homogeneous opacities in the lower left-posterior mediastinum in all cases - 11.76%). Achalaziile identified led to widening bilateral mediastinum with homogeneous or heterogeneous appearance.

Conclusions

Radiology exam is completed with data provided by modern imaging that provides further characterization of mediastinal masses primitive side, stationed at this area, characterized by the richness and variety of anatomical structures with different origins. In this context, specify the

sectional imaging, the origin, morphological aspects and anatomical relationships, contribute significantly to establishing the evolutionary status and future therapeutic conduct.

Fluid masses, cystic and pseudocyst 3.37%, the result of septic complications with mediastinal localization of the inflammatory processes that start subdiaphragmatic or the existence of congenital cysts, could be stated and differentiated from other mediastinal lesions and, supervision and monitoring evolving some of these lesions, including posttherapeutic, which included performing interventional maneuvers, contributed significantly to influence or behavior modification treatments of these lesions.

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