FONDAZIONE SIRM

Quesiti clinici al Medico Radiologo : Embolia Polmonare

- Sintomi/segni clinici

  ....

- Parametri clinico-laboratoristici
  - Score di Wells   _____
  - D-dimero (ng/mL)   _____

- Acquisizione della TC
  - Tecnica Dual-energy   (DECT)   SI ☐ NO ☐

- Qualità delle immagini (adeguato enhancement arteria polmonare)
  - Tronco comune e rami principali   SI ☐ NO ☐
  - Rami lobari   SI ☐ NO ☐
  - Rami segmentari   SI ☐ NO ☐
  - Rami sub-segmentari   SI ☐ NO ☐

- Qualità delle immagini (mappa dello iodio – se DECT)
  - Ottima   ☐
  - Buona   ☐
  - Sufficiente   ☐
  - Insufficiente   ☐
  - Scarsa   ☐

- Esito della TC per embolia polmonare (EP)
  - Non segni di EP   ☐
  - EP acuta   ☐
  - EP cronica   ☐
  - Altra diagnosi*   ☐

  *vedere referto descrittivo

- Calibro arteria polmonare (PA)
  - Tronco comune   _____mm
  - Ramo principale destro   _____mm
  - Ramo principale sinistro   _____mm

- Localizzazione del materiale trombo embolico
  - Tronco comune   SI ☐ NO ☐
  - Ramo principale destro   SI ☐ NO ☐
  - Ramo principale sinistro SI ☐ NO ☐
  - Rami lobari *(almeno in 1)*   SI ☐ NO ☐
  - Rami segmentari *(almeno in 1)*   SI ☐ NO ☐
  - Rami sub-segmentari   *(almeno in 1)* SI ☐ NO ☐

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- Gravità dell'embolia polmonare
  - Score di Qanadli (0-40)[1] _____
  - Perfusion defect score (0-40)[2] (se DECT) _____

- Segni TC di ipertensione arteriosa polmonare
  - Tronco comune PA > 30 mm   SI ☐ NO ☐
  - Rapporto tra diametro PA-aorta ascendente > 1   SI ☐ NO ☐
  - Rapporto arteria segmentale-bronco > 1 (*in almeno 3 lobi*)   SI ☐ NO ☐
  - Rapporto ventricolo destro-ventricolo sinistro > 1   (*asse corto*) SI ☐ NO ☐
  - Ipertrofia parete libera ventricolo destro (*spessore >4 mm*)   SI ☐ NO ☐

- Altre alterazioni associate all'embolia polmonare (polmonari/pleuriche/vascolari)
  - Addensamenti polmonari cuneiformi   ☐
  - Disventilazione parenchimale   ☐
  - Perfusione a mosaico   ☐
  - Versamento pleurico   ☐
  - Calcificazioni pareti PA   ☐
  - Circoli collaterali (*bronchiali/sistemici*)   ☐

Riferimenti per calcolo degli score

1. **Score Qanadli (0-40 points)**

   To define the **Qanadli score**, the arterial tree of each lung was regarded as having 10 segmental arteries (three to the upper lobes, two to the middle lobe and to the lingula, and five to the lower lobes). The presence of embolus in a segmental artery was scored 1 point, and emboli in the most proximal arterial level were scored a value equal to the number of segmental arteries arising distally (Figs. 2 and 3). To provide additional information about the residual perfusion distal to the embolus, a weighting factor was assigned to each value, depending on the degree of vascular obstruction. This factor was equal to zero, when no thrombus was observed; 1, when partially occlusive thrombus was observed (Figs. 1 and 2); or 2, with total occlusion (Figs. 1 and 3). Thus, the maximal CT obstruction index was 40 per patient.

   Qanadli SD, El Hajjam M, Vieillard-Baron A, Joseph T, Mesurolle B, Oliva VL, Barré O, Bruckert F, Dubourg O, Lacombe P. New CT index to quantify arterial obstruction in pulmonary embolism: comparison with angiographic index and echocardiography. AJR Am J Roentgenol. 2001 Jun;176(6):1415-20. doi: 10.2214/ajr.176.6.1761415.

2. **Perfusion Defect Score (0-40 points)**

   To define the **Perfusion Defect Score**, each lung was regarded as having 10 segments (three in both upper lobes, two in the middle lobe and the lingular division, and five in both lower lobes). In each segment, the perfusion defect on the iodine map was graded on the following 3-point scale: 0, normal perfusion; 1, moderately reduced perfusion; and 2, profoundly reduced or absent perfusion. The maximum theoretic score of the perfusion defect was 40 points if each of 20 segments had 2 points.

   Chae EJ, Seo JB, Jang YM, Krauss B, Lee CW, Lee HJ, Song KS. Dual-energy CT for assessment of the severity of acute pulmonary embolism: pulmonary perfusion defect score compared with CT angiographic obstruction score and right ventricular/left ventricular diameter ratio. AJR Am J Roentgenol. 2010 Mar;194(3):604-10. doi: 10.2214/AJR.09.2681

Iscritta al Registro delle Persone Giuridiche della Prefettura di Milano n. 1729 pag. 6393 vol. 8° REA MI 2615909
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