NEPREPOZNATA PLUCNA EMBOLIJA
PRIKAZ SLUCAJA

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Plucna tromboembolija je vaskularna bolest sa respiratornim posljedicama koja zaokuplja paznju ljekara razlicitih specijalnosti: kardiologe, pulmologe, vaskularne hirurge, specijaliste nuklearne medicine, readiologe. Smatra se da je plucni tromboembolizam jos uvijek jedno od najtezih stanja , narocito u dijagnostickom pogledu. PIOPED (prospective investigation of pulmonary embolism diagnosis) studija daje u dijagnostici plucne tromboembolije kategorizaciju klinicke verovatnoce da se radi o plucnom tromboembolizmu od visoko preko srednje do niske , kao i vjerovatnocu plucnog perfuzionog skena suspektnog za plucnu tromboemboliju. (1)

Radioloske promjene koje se vidjaju na snimci pluca su nespecificne. Mnogo preciznija medtoda za detekciju plucnog tromboembolizma je plucna angiografija, medjutim, to je invazivna i skupa metoda a pacijenti su cesto u teskom stanju.Uvodjenje perfuzione scintigrafije pluca je bitno uticalo na dijagnostiku plucne tromboembolije. Kombinacija perfuzione scintigrafije sa ventilatornom scintigrafijom bitno povecava specificnost scintigrafske dijagnostike plucne embolije.(2) U koliko nije moguce da se uradi ventilatorna scintigrafija pluca u dijagnostici plucne tromboembolije uzimamo u obzir podudaranje odnosno ne podudaranje ispada perfuzije sa postojecim radioloskim promjenama. Kod perfuzionih defekata vecih od radioloskih promjena, vjerovatnoca plucnog embolizma je velika, skoro 90%.(3)

U ovom radu je prikazan slucaj 30 - godisnje bolesnice koja se u toku dva mjeseca zali na otezano disanje i gusenje sa nedostatkom vazduha, bol u prsima te lupanje srca pri najmanjem fizickom naporu. Do tada bila potpuno zdrava. Rutinski klinicki nalaz je bio normalan kao i rutinske laboratorijske analize krvi i urina. U EKG-u se vidi tahikardija f 124/min. sa znacima ishemije u desnim prekordijalnim odvodima. Na RTG snimci pluca i srca se ne vide patoloske promjene. Bolesnica je dobijala simptomatsku terapiju i vodjena je pod dijagnozom neurovegetativne distonije i kao neuroza. Zbog bolova i slabosti u nogama, uradi se Doppler ultrasonografski pregled krvnih sudova nogu. Nadje se smanjenje brzine protoka te nemjerljiv ASPI u a. tibialis posterior dex. sto govori za subokluziju protoka, odnosno stanje nakon embolizacije.

Dva mjeseca nakon pojave prvih smetnji sa disanjem bolesnica je upucena na Kliniku za nuklearnu medicinu da se uradi fleboscintigrafija vena nogu kao i scintigrafija pluca. Fleboscintigrafija dubokih vena karlice i nogu kao i perfuziona scintigrafija pluca su izvedene sa intravenskom injekcijom Tc 99m makroagregatom albumina. Vidjen je uredan protok kroz donju suplju venu i obje ilijacne vene. U desnoj nozi protok se odvija preko povrsnih vena, a protok kroz desnu v. femoralis se ne prikazuje zbog obliteracije. Na lijevoj nozi vidjen je jako slab protok kroz lijevu venu femoris. Perfuziona scintigrafija pluca pokazuje izrazito oslabljeno nakupljanje radiofarmaka u donjoj polovini oba plucna krila dok se u gornjoj polovini oba plucna krila vidi izrazito nehomogeno nakupljanje radiofarmaka. Bolesnica je upucena na Kliniku za plucne bolesti gdje je ukljucena kontinuirana infuziona terapija sa Heparinom (25000 IU/24 h) u trajanju od 25 dana a poslije toga se preslo na peroralnu antikoagulantnu terapiju. Nakon

dva mjeseca je radjena kontrolna scintigrafija pluca koja pokazuje znacajno poboljsanje plucne perfuzije. Bolesnica se subjektivno osjeca sasvim dobro i nastavila je da uzima peroralnu antikoagulantnu terapiju. Kontrolna venografija dubokih vena nogu i perfuziona scintigrafija pluca su radjeni nakon devet mjeseci i pokazuju ocuvan protok kroz desnu v. femoralis i normalnu perfuziju desnog pluca. Medjutim, i dalje je prisutna oslabljena perfuzija donjeg lobusa lijevog plucnog krila.

Slucaj nase bolesnice potvrdjuje vaznost perfuzione scintigrafije pluca u dijagnostici plucnog embolizma kao jednostavne i neinvazivne dijgnosticke metode osobito kada su klinicki znaci i RTG snimka pluca normalni i kada druge dijagnosticke metode nisu dostupne.

NON-RECOGNISED PULMONARY THROMBOEMBOLISM
A CASE STUDY

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Thromboembolism of lungs is a vascular disease with the respiratory consequences as the focus of attention of doctors of diverse specializations, namely, cardiologists, pulmonologists, vascular surgeons, nuclear medicine specialists and radiologists. The core of survival of thromboembolism of lungs lies in quick setting up of the correct diagnosis and early usage of the safest therapy. PIOPED (prospective investigation of pulmonary embolism diagnosis) study in the diagnosis of pulmonary thromboembolism gives the categorization of the clinical possibility, as well as the possibility of pulmonary perfusion scans suspicious of pulmonary thromboembolism (1).

Radiological changes within the lung thromboembolism that are seen on an X-ray are nonspecific. The most precise method in detection of pulmonary embolism is pulmonary angiography. But that is an invasive and expensive method and the patients are in a rather difficult condition. Introduction of the pulmonary perfusion scintigraphy has significantly improved the diagnosis of pulmonary embolism. The combination of perfusion and ventilation scintigraphy significantly increases the specificity of scintigraphic diagnostics of pulmonary embolism (2). If it is not possible to perform the ventilatory scintigraphy of lungs, in order to set up the diagnosis of pulmonary embolism we take into consideration the matching or the mismatching of perfusional failure on the pulmonary scintigram with the radiological changes on the lung X-ray. The possibility of

pulmonary embolism is high, almost 90%, if perfusion failure on the pulmonary scintigram is found in area larger than the radiologically verified changes (3).

This report present a case study of a 30 years old female who consulted a general practitioner with complaints of difficulty in brething, breathlessness, chest pain and palpitations with the smallest possible physical effort for a period of two months. She was apparently healthly before that. Routine clinical examination was normal. Routine blood chemistry was normal. Routine urine analysis was also normal. ECG showed tachycardia (124 heartbeats/minute) with the signs of ishaemia in the right precordial section. Pulmonary X-ray showed no pathological changes. The patient was given the symptomatic therapy and the diagnosis of neurovegetative dystonia and neurosis was made. Continued pain in the chest and subsequent pain and weakness in the legs led to a Doppler ultra sound study of the blood vessels of legs. Decreased flow speed was found and non-measurable ASPI in a.tibialis posterior vessel indicative of postembolisation occlusive state.

Two months after the first symptoms the patient was sent to the Department of Nuclear Medicine in order to complete the phleboscintigraphy of leg veins as well as the scintigraphy of lungs. Phleboscintigraphy of the large veins of pelvic region and lung perfusion scintigraphy were done with intravenous injection of Tc99m macroaggregated albumin into dorsal veins of both feet. Regular flow through the inferior venocava and both iliac veins was seen. In the right leg the flow was taking place exclusively through the superficial veins, and the flow through the right femoral vein was not shown as it was obliterated. In the right leg the flow was mostly maintaining itself through the superficial veins, and very reduced flow through left v. Femoris was shown. On the lung perfusion excessively reduced perfusion of middle and lower lobe of the right lung, and the lower lobe of the left lung was seen. These findings were consistent with deep vein thrombosis of right lower limbs and pulmonary embolism. The patient was sent to the Clinic for Lung Diseases where she was treated with continuous infusion of Heparin (25 000 IU/24 hours) for a period of 25 days, and afterwards switched to the oral anticoagulant therapy. After two months the follow-up pulmonary scintigraphy revealed significant imrovement in lung perfusion. The patient improved significantly clinically and continued to have oral anticoagulant therapy. A follow-up lower limb venography and lung perfusion scintigraphy done after 9 months revealed existence of flow through right v. Femoralis and normal perfusion of right lungs. However, weakend perfusion of lower lobe of the left pulmonary wing still existed.

This case shows the importance of lung perfusion scintigraphy in the diagnosis of pulmonary embolism as a simple and non invasive diagnostic study when the clinical findings and X-ray are within normal limits and when other diagnostic methods are not available.