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ACUTE PERICARDITIS ON EXAMPLE OF ILLUSTRATIVE CLINICAL CASE

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Pericarditis is an important diagnosis to consider in a patient presenting with chest pain. This article describes the common features and management of pericarditis in the general practice setting on the example of clinical case. To the cardiologic department was admitted middle aged male. He complained of sharp retrosternal pain, and fever. The survey revealed distinctive features of pericarditis: pericardial friction rub on auscultation, diffuse PR segment depressions on ECG, pericardial effusion on echocardiography, but etiology was not elicit. Most cases are labeled as «idiopathic» because the traditional diagnostic approach often fails to identify the etiology. The presence of febrile fever and neutrophilic leukocytosis indicates that a bacterial etiology take place. Prompt antibacterial and anti-inflammatory treatment led to recovery of the patient. He was completely free of symptoms and had returned to his pre-morbid state.

KEY WORDS: acute pericarditis, treatment of acute pericarditis, clinical case

ПЕРЕБІГ ГОСТРОГО ПЕРИКАРДИТУ НА ПРИКЛАДІ ПОКАЗОВОГО КЛІНІЧНОГО ВИПАДКУ

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При обстеженні пацієнта з болями в грудній клітині, важливо мати на увазі, що біль може бути обумовлена ураженням перикарда. Дана стаття на прикладі клінічного випадку описує найбільш типові прояви перикардиту та його лікування. В кардіологічне відділення поступив чоловік середніх років зі скаргами на загрудинну біль, лихоманку. В ході обстеження були виявлені характерні для перикардиту дані: шум тертя перикарда, лейкоцитоз, типові зміни ЕКГ, такі як депресія сегмента PR, а також виявлено перикардіальний випіт при ехокардіографії, проте етіологія не була визначена. Нерідко традиційні діагностичні методи не здатні ідентифікувати етіологічний фактор, тому найчастіше встановлюється діагноз «ідіопатичний» перикардит. Наявність фебрильної лихоманки та лейкоцитозу вказує на те, що найімовірніше має місце бактеріальна етіологія. Відповідна антибактеріальна та протизапальна терапія призвела до поліпшення стану та одужанню пацієнта.

КЛЮЧОВІ СЛОВА: гострий перикардит, лікування гострого перикардиту, клінічний випадок

ТЕЧЕНИЕ ОСТРОГО ПЕРИКАРДИТА НА ПРИМЕРЕ ПОКАЗАТЕЛЬНОГО КЛИНИЧЕСКОГО СЛУЧАЯ

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При обследовании пациента с болями в грудной клетке, важно иметь в виду, что боль может быть обусловлена поражением перикарда. В данной статье на примере клинического случая описываются наиболее типичные проявления перикардита и его лечение. В кардиологическое отделение поступил мужчина средних лет с жалобами на загрудинные боли, лихорадку. В ходе обследования были выявлены характерные для перикардита данные: шум трения перикарда, лейкоцитоз, типичные изменения ЭКГ, такие как депрессия сегмента PR, а также выявлен перикардиальный выпот при эхокардиографии, однако этиология не была определена. Зачастую традиционные диагностические методы не способны идентифицировать этиологический фактор, поэтому чаще всего устанавливается диагноз «идиопатический» перикардит. Наличие лихорадки и нейтрофильного лейкоцитоза указывает

на то, что вероятнее всего имеет место бактериальная этиология. Соответствующая антибактериальная и противовоспалительная терапия привела к улучшению состояния и выздоровлению пациента.

КЛЮЧЕВЫЕ СЛОВА: острый перикардит, лечение острого перикардита, клинический случай

INTRODUCTION

Acute pericarditis is the inflammation of the pericardial sac caused by infectious or noninfectious noxa with the possible increased production of pericardial fluid as exudates and less than 4 weeks duration [1]. Pericarditis is the most common disease of the pericardium encountered in clinical practice. But epidemiologic data are lacking, likely because this condition is frequently in apparent clinically, despite its presence in numerous disorders. Acute pericarditis caused 0.20 % of all cardiovascular admissions. The clinical diagnosis can be made with two of the following criteria:

– Chest pain (> 85–90 % of cases);

– Pericardial friction rub (≤ 33 % of cases);

– (ECG) changes (up to 60 % of cases): new widespread ST elevation or PR depression;

– Pericardial effusion (up to 60 % of cases, generally mild).

Additional signs and symptoms may be present according to the underlying etiology or systemic disease (i.e. signs and symptoms of systemic infection such as fever and leukocytosis, or systemic inflammatory disease or cancer) [2].

A leading expert on the study of pericarditis David H. Spodick believes, that contemporary understanding of acute pericarditis rests on 3 main considerations: (1) pericarditis occurs in every category of disease, common and exotic (the spectrum is so broad that with every new case, the clinician should devise an appropriate differential diagnosis), (2) to avoid therapeutic mishaps, pericarditis must not be mistaken for other syndromes, and (3) the etiological and clinical spectra of acute pericarditis change frequently and some classic assumptions and descriptions, perpetuated in some publications, are outdated [3]. Following clinical case display diagnostics and management of the patient with acute pericarditis in clinical practice.

CLINICAL CASE

The patient was 46 year old unemployed male. On admission he complained of dull, aching pain in the retrosternal region with radiation to the cervical spine, shoulders, interscapular area, which became worse on inspiration and supine position. It was persistent and three weeks duration. Occasionally patient noted palpitations. Other symptoms included: weakness, fatigue, fever (up to 39,5°C), body weight about 2 kg.

Three weeks prior to presentation, patient had been exposed to cold, since that moment in patient developed low grade fever (up to 37,5°C) and pain in the heart region. Patient thought he had been caught the cold, and used NSAIDs to relief symptoms, however, symptoms were not reduced, and fever gradation increased up to 39,5°C. General practitioner had prescribed for patient Amoxicillin 1000 mg tid. Five days of treatment were not effective and patient had been referred to cardiologic department.

No relevant past medical and social history were detected.

On examination it was revealed middle aged good mood man, who was well developed and well nourished. His appearance was consistent with his stated age. Fever (39.5 C) and tachycardia (100 bpm) occurred. Skin and mucous membranes were pink and clear. Edema was absent. Lymph nodes were not palpable. Vesicular breath sounds of the lungs to auscultation. The point of apex beat was diffuse (3 cm in diameter), impulse was diminished force, unchanged location. S1 and S2 were soft; pericardial frictions rub, best heard along the left lower sternal border. Gastrointestinal and urinary systems examination was unremarkable.

Complete blood count revealed signs of inflammation: neutrophilic leukocytosis (WBC 13.9 109/L, neutrophils 12.5 109/L – 89.9 %), increased ESR 34 mm/h. Urine analysis fell in normal ranges. Liver function tests and kidney function were normal. Troponin and, thyroid tests fell in reference range. ASL-O and RF were negative. Level

of C-RP was increased. Blood culture and PCR serum viruses' identification were negative. ECG revealed sinus rhythm, 89 bpm, normal heart axis, and pericarditis signs: PR-segment depression in II, III, AVF, PR-segment elevation in AVR, flattened T waves in all leads. Echocardiography showed signs of mixed serous-fibrinous mild pericardial effusion: presence of echo-free pericardial space up to 10 mm and floating fibrin threads there. Abdomen ultrasound showed splenomegaly with diffuse changes of parenchyma, other organs were normal. Thyroid ultrasound was normal. Chest X-Ray revealed enlarged heart, but lungs were not changed. Chest CT-scan detected fluid in the pericardial sac with max thickness up to 20 mm.

The presence of high, spiking fevers and neutrophilic leukocytosis indicates a bacterial etiology, but obtained blood culture was negative. Therefore in this case took place bacterial unspecified etiology. Based upon complaints, patient's past medical history, physical examination, and workup data final diagnosis had been established.

Main disease: Acute bacterial unspecified etiology serofibrinous (seroplastic) pericarditis with small amount of effusion.

Complications: Inflammatory splenomegaly.

Patient received following treatment. Wide spectrum antibiotic therapy: IV ceftriaxone 1000 mg bid and IV levofloxacin 500 mg qd in the course of ten days. Antiinflammatory therapy: Ibuprofen 600 mg po qid, Methylprednisolone 32 mg po for fourteen days, followed by dose tapering 4 mg every 2 weeks, and Pantoprazole 40 mg po bid simultaneously for gastroprotection [4]. Because after ten day course of antibacterial therapy complete recovery was not achieved – temperature and lab tests (persisted neutrophilic leukocytosis, WBC 11.2 109/L and neutrophils 9.9 109/L – 87.8 %) were not normalized, antibiotic treatment changed to Azithromycin 500 qd po for 5 days [5]. Whereupon resolution occurred.

On the background of the therapy the patient's condition improved: symptoms abated, body temperature turned into normal: 36.6–36.90°C, lab tests (WBC, ESR) were normalized, echocardiogram control after the treatment revealed significant reduction of the pericardial effusion. Patient was discharged from the hospital. It was recommended observation of the cardiologist and continuing methylprednisolone tapering.

CONCLUSIONS

Clinical case displayed particular features of the acute pericarditis, diagnostic consideration, and treatment recommendations. Characteristic clinical findings in pericarditis include chest pain and pericardial frictions rub on auscultation of the left lower sternal border. Electrocardiography reveals diffuse PR depressions and diffuse flattened T wave. Echocardiography showed mild pericardial effusion. The treatment includes empiric antibiotic and antiinflammatory therapies. This patient had uncomplicated course of disease. And in this isolated case take place positive trend of illness against the background of the conservative therapy. But 15 % to 30 % of patients with acute pericarditis recurrence may develop. The risk of recurrence is higher for women and for patients who do not have a response to initial treatment with NSAIDs.

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