Case based learning: infective endocarditis presenting as lumbalgia

Karl-Patrik Kresoja, Mounir Khafaga, Dirk von Lewinski, Albrecht Schmidt

Introduction: The implementation of e–learning and the virtual medical campus (VMC) provides an ideal platform for clinical case-based learning. There is a growing need for a pool of good educational cases that teach students appropriate differential diagnosis and what mistakes to avoid in clinical practice.

Case report: A 71-year-old patient with dilative cardiomyopathy and COPD was admitted to our emergency ward with lumbalgia and dyspnea. The patient had an ICD-CRT pacemaker system. Two weeks before admission, he was treated for pulmonary artery embolism. Upon transfer to our intensive care unit we immediately started with CPAP therapy and stabilized the patient’s cardiorespiratory state. After two days his dyspnea was under control and he could be transferred to the normal ward, yet his back pain was worsening and required morphine treatment.

The patient’s son reported that his father was in psychotherapeutic treatment due to depression and psychiatric instability and that his father was just simulating the back pain to draw attention (factitious disorder). Despite this information we insisted on performing an abdominal CT scan to exclude an aortic dissection. There were no signs of aortic dissection or aneurysm, but a splenic infarction was found. In search for potential sources of embolism a transesophageal echocardiography was performed and showed infective endocarditis with floating vegetations on the anterior mitral leaflet and on the ICD-CRT lead. Blood cultures were positive for Enterococcus faecalis. The patient was transferred to the surgical department and underwent a mitral valve replacement and a pacemaker lead exchange. This prevented further embolic complications. After 6 weeks of ampicillin and gentamicin i.v. therapy the patient was released in good clinical state.

Lesson: This case highlights the importance of taking expressed physical pain seriously, even in situations of potentially simulated pain expressed by patients with a known psychiatric history (factitious disorder). Excluding dangerous conditions underlying the pain in these patients is crucial and must not be neglected in favor of relying on analgesia and psychiatric treatment alone.

Conclusion: Case-based learning is an effective learning tool for medical students and practicing residents, as it gives insight into real life problems facing medical staff on a regular basis. Sophisticated cases like the one described here may be presented as virtual patients on an e-learning platform and formatted in a step-by-step approach (from symptoms to diagnosis) - thereby serving as good learning material and applied problem solving models for both medical students and medical staff.