Ghost of the central catheter

„Duszek" w miejscu cewnika centralnego

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ABSTRACT

A case of 51-year-old male patient with a history of malabsorption, nephrolithiasis, chronic pancreatitis, insulin-dependent diabetes, suspicion of celiac disease and ankylosing spondylitis was reported. Patient was admitted to the hospital to remove infected central catheter. Six days after the catheter removal short fragment of the catheter was found in computed tomography angiography in the internal jugular vein, at the junction with the subclavian vein. In fact, it was not the catheter as several days ago it was removed entirety from the patient, but the fibrous sheath covering venous catheter called "ghost".

Key words: central venous access, complication

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STRESZCZENIE

Długotrwałe użytkowanie centralnego dostępu dożylnego (CVC) jest związane z kilkoma powikłaniami — uszkodzeniem ściany naczynia lub infekcjami, co wymaga jego usunięcia. Może to być trudne lub niemożliwe, zwłaszcza gdy dochodzi do rozwoju otoczki włóknistej wokół cewnika. Co ciekawe, po interwencji usunięcia CVC można zaobserwować resztki włóknistej tkanki w miejscu usuniętego CVC, która w praktyce radiologicznej określana jest mianem „duszka". Wspomniane zjawisko jest zwykle obserwowane podczas badania echokardiograficznego, po usunięciu elementów rozruszników serca z powodu infekcyjnego zapalenia wsierdzia (CDRIE), ale jak pokazuje opisywany przypadek, może być także zaobserwowane za pomocą angiografii tomografii komputerowej, po usunięciu zainfekowanego cewnika żylnego.

Słowa kluczowe: centralny cewnik dożylny, infekcyjne zapalenie wsierdzia, rozruszniki serca

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Introduction

Long-term use of central venous access is associated with several complications — damage to the vessel wall or infections, and necessitate their removal. It can be difficult or impossible, especially when a fibrin sleeve has attached it [2]. Curiously, after the intervention, it is possible to observe the remnant of fibrous sheath covering the removed venous catheter called "ghost". The above-mentioned finding is usually observed in echocardiography after cardiac device removal, potentially associated with the diagnosis of cardiac device-related infective endocarditis (CDRIE) [3–4]. However, their presence can apply not only to CDRIE but can be also observed on Computed Tomography Angiography (CTA) after removal of infected central venous catheter, as it is shown in our case.

Case report

We report a case of 51-year-old male patient with a history of malabsorption, nephrolithiasis, chronic pancreatitis, insulin-dependent diabetes, suspicion

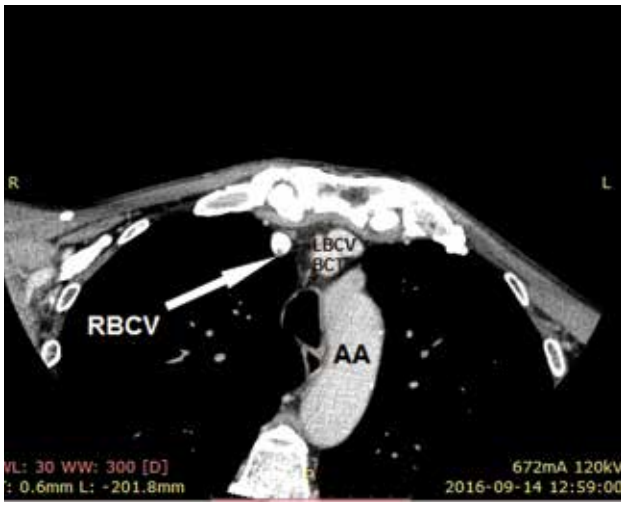

Figure 1. Computed Tomography Angiography (CTA) showing (arrow) a small defect filled with calcification in the right brachiocephalic vein (RBCV). Left brachiocephalic vein (LBCV), brachiocephalic trunk (BCT), arcus of aortae (AA)

of celiac disease and ankylosing spondylitis. He was admitted to the Clinic of Cardiac Surgery to remove infected central catheter. On admission to the hospital the selected results of blood tests were as follows: RBC 3.23 mln/ul (4.2–5.4 ml/ul), creatinine 0.67 g/dl (0.6–1.3 mg/dl), urea 13 mg/dl (15–40 mg/dl). The microbiological results revealed Staphylococcus infection. Transvenous removal went without complications. The patient was in good condition and was prescribed vancomycin, enoxaparin, sulfasalazine. He was transferred to the Department of Nutrition and Surgery. After six days, CTA was made to control the state after the removal of central catheter. In the right brachiocephalic vein there was a small defect filled with calcification resembles state after thrombosis as is shown in Figure 1. In the internal jugular vein, at the junction with the subclavian vein, a catheter measuring about 3 cm was visible. In fact, it was not the catheter, because several days ago it was removed entirety from the patient, but the fibrous sheath covering the catheter.

Conclusions

As can be seen from this case, infections of intravenous or cardiac devices, irrespective of the type, might act as a drive for 'ghost' development. What is more, the mentioned ghost can be observed not only by using echocardiography, like in case of CDRIE [3–4], but other imaging techniques including CTA as well.

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