

Widespread subcutaneous haematoma after thrombolytic therapy in stroke patients. Mild falls at stroke onset may be dangerous

Krwiaki podskórne po leczeniu trombolitycznym u chorych z udarem niedokrwiennym mózgu – niebezpieczne powikłanie terapii

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Abstract

Recombinant tissue Plasminogen Activator (rtPA) is one of the more and more often used therapies in ischemic stroke. Main adverse effect of rtPA could be bleeding in different anatomical sites. Onset of the stroke is often associated with falls due to sudden limb weakness. Mild trauma can be not reported by patients and their families and can leave no visible signs on the skin. Thrombolytic therapy given in such cases can cause potentially dangerous complication such as subcutaneous or subfascial hematoma. The article presents two cases of patients with ischemic stroke who received thrombolytic therapy with subsequent complication of wide-spread subcutaneous hematomas.

Key words: ischemic stroke, hematoma, thrombolytic therapy.

Streszczenie

Rekombinowany tkankowy aktywator plazminogenu (rtPA) jest coraz częściej stosowany w leczeniu udaru niedokrwiennego mózgu. Głównym działaniem niepożądanym leku może być krwawienie z różnych struktur anatomicznych. Często pierwszym objawem udaru jest osłabienie kończyn i związane z tym nagłe upadki, które mogą nie pozostawiać zmian na skórze i zostać przeoczone w trakcie badania. Zastosowanie leczenia trombolitycznego u takich chorych może spowodować potencjalnie groźne powikłania krwotoczne, np. krwiaki podskórne czy podpowięziowe. W artykule przedstawiamy dwa przypadki chorych z udarem niedokrwiennym mózgu, u których po leczeniu trombolitycznym wystąpiło powikłanie w postaci rozległych krwiaków podskórnych.

Słowa kluczowe: udar niedokrwienny, krwiaki podskórne, leczenie trombolityczne.

Intravenous thrombolysis with recombinant tissue plasminogen activator (rtPA) is a safe and effective treatment for acute ischaemic stroke when all other treatment criteria are fulfilled [1]. One of the major

contraindications is significant trauma within 3 months before treatment. It increases the risk of bleeding or haematoma. However, a mild fall, although it is not a contraindication, can cause subcutaneous or even

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subfascial haematomas. Even no history of recent superficial trauma does not exclude the risk of haematoma after thrombolysis [2]. This may result in infections and sometimes may even require surgical interventions.

Due to impaired consciousness or aphasia at stroke onset, falls may not be reported at admission. Mild trauma can leave no remarkable signs on the skin and can be easily overlooked on admission. Lack of visible vascular lesions does not mean they will not occur after thrombolytic treatment. A literature search revealed that this topic is not well documented.

We present two patients who received thrombolytic therapy with complications of widespread subcutaneous haematomas.

Case 1

80-year old male referred to the neurological department because of left limb weakness. He was admitted 2 hours after he was found by his family lying down on the courtyard grass. He had no signs of trauma and reported no pain.

According to the inclusion criteria the patient was randomized to the International Stroke Trial (IST-3) and qualified for thrombolytic treatment [3]. After rtPa, the patient improved remarkably but he started to complain of pain of the lower extremities.

Within a few hours widespread bruises appeared on his abdomen and lower extremities (Fig. 1).

Case 2

A 53-year-old male with symptoms of severe motor aphasia, hemiparesis of the right extremities (NIHSS – 4 in the upper extremity, NIHSS – 1 in the lower one) was admitted to the Neurological Department within 2 hours after stroke onset when he fell to the floor on the right side of his body. At admission no visible signs of injury were seen. Four days before the patient underwent pacemaker implantation due to tachycardia-bradycardia syndrome. Despite this we decided to treat him with rtPA.

Within 24 hours subcutaneous haematomas in the place of pacemaker implantation (Fig. 2) as well on the opposite side of the trunk and the right upper extremity were observed (Fig. 3). The neurological deficit gradually resolved within the next few days and the patient was discharged with pure motor aphasia.



Fig. 1. Wide-spread bruises on the left lower extremity in 80-year-old male patient treated with rt-PA



Fig. 2. Wide-spread subcutaneous hematoma in the place of the pacemaker implantation in 53-year-old male patient treated with rt-PA



Fig. 3. Wide-spread subcutaneous hematoma on the right upper extremity and right part of the trunk in 53-year-old male patient treated with rt-PA

Both patients were observed for a few days following rtPA treatment but no other haemorrhagic symptoms occurred. Control CT scans were negative for intracranial haemorrhage. The described cases suggest that precise history should be taken from the patient and patient's family before thrombolysis. Physicians must be aware that even an apparently insignificant fall, with no visible signs of injury, may be responsible for complications, especially in elderly patients.

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