Article published online: 2023-06-13

https://doi.org/10.1590/0004-282X20200035

Three territory sign in cancer-related acute ischemic stroke

Sinal de três territórios arteriais em acidente vascular cerebral isquêmico agudo relacionado a câncer

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A 64-year-old man, on regular use of apixaban due to atrial fibrillation (AF), was admitted to the hospital with sudden right upper limb weakness. Brain MRI (Figure 1) demonstrated a Three Territory Sign (TTS, bilateral anterior and posterior circulation acute ischemic diffusion-weighted imaging lesions). Complimentary etiologic investigation diagnosed an adenocarcinoma of the ascending colon by full-body 18F-FDG PET/CT (Figure 2), followed by a local biopsy.

TTS is a highly specific marker and six times more frequently observed in malignancy-related than AF-related ischemic stroke[1]. The prothrombotic state of malignancy occurs due to the ability of tumor cells to activate the coagulation system[2].

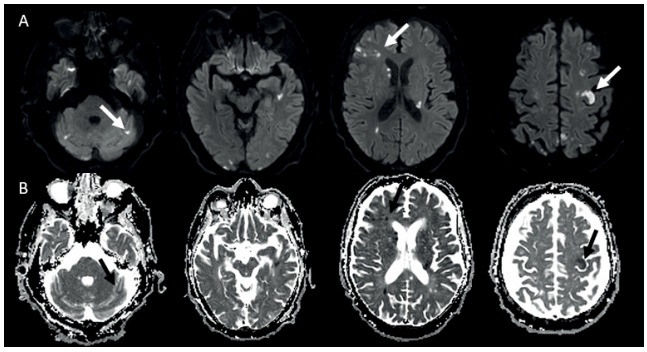

Figure 1. Brain MRI diffusion-weighted image — DWI (Row A) showing multiple high signal intensity lesions in the cerebral and cerebellar hemispheres involving three different vascular territories (Three Territory Sign), with apparent diffusion coefficient — ADC (Row B), showing the same lesions with low signal intensity.

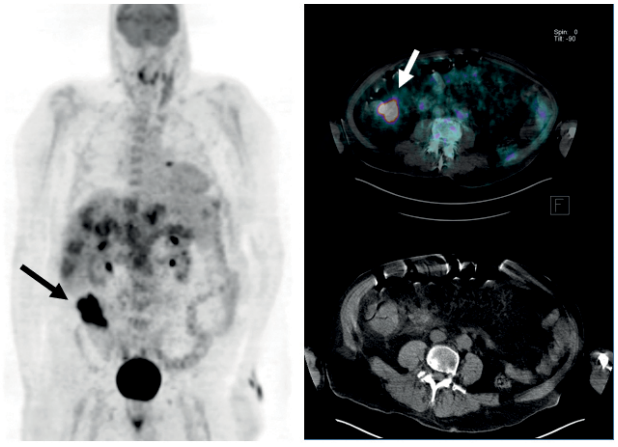

Figure 2. FDG-PET/CT showing hypermetabolic alterations compatible with cecum/ascending colon tumor (arrows) extending to adjacent adipose planes.

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Conflict of interest: There is no conflict of interest to declare.

Received on December 13, 2019; Received in its final form on March 08, 2020; Accepted on March 19, 2020.