

Neurogenic T waves as clues for diagnosing hemorrhagic stroke

Ondas T neurogênicas como guias para diagnóstico de AVC hemorrágico

Wladimir Bocca Vieira de Rezende Pinto, Lucas Amorim Vieira de Barros, Paulo Victor Sgobbi de Souza, José Luiz Pedrosa, Orlando Graziani Povoas Barsottini

A 45-year-old female was brought with sudden loss of consciousness and mental confusion. Clinical background revealed obesity and hypertension. She presented with acute respiratory failures, hypertense and comatose without focal deficits. Serial ECGs disclosed dynamic ST segment changes and neurogenic T waves. Cranial CT evinced extensive intraparenchymal hemorrhage in left cerebral hemisphere (Figure).

ST segment changes, QT prolongation and neurogenic or cerebral T waves are described in cerebrovascular events, generally related to subarachnoid and intracerebral hemorrhages^{1,2}, originated from central dysautonomia³. ECG changes may help differentiating causes of decreased level of consciousness without focal deficits, if cerebrovascular disorders are considered.

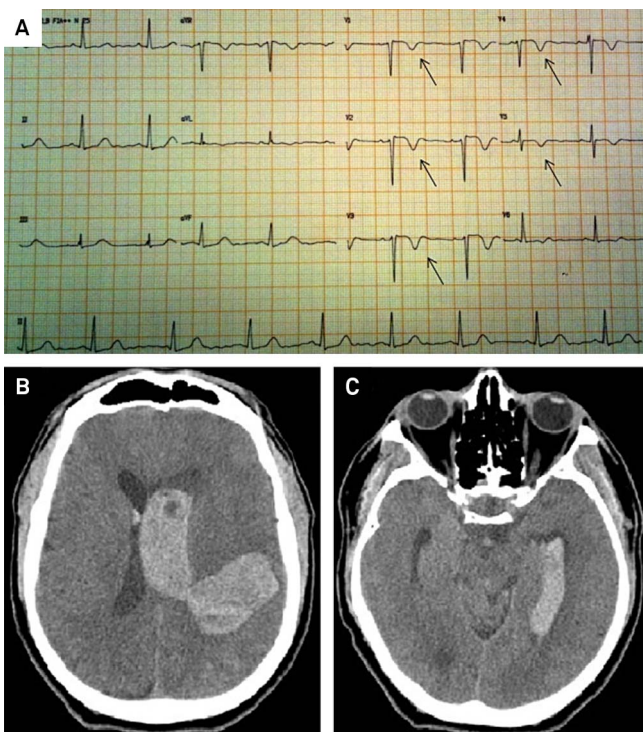


Figure. First 12-lead ECG showing diffuse precordial neurogenic T waves (A - arrows). Cranial CT disclosing extensive intraparenchymal hemorrhage in left cerebral hemisphere with intraventricular extension and significant midline shift (B and C).

References

1. Povoas R, Cavichio L, Almeida AL, et al. Electrocardiographic abnormalities in neurological diseases. *Arq Bras Cardiol* 2003;80(4):355-358.
2. Muehlschlegel S, Goddeau RP Jr., Sims JR Jr. Teaching neuroimage: cerebral T-waves from an aneurysmal cardunculus compression. *Neurology* 2008;70:28-29.
3. Mandrioli J, Zini A, Cavazzuti M, Panzetti P. Neurogenic T wave inversion in pure left insular stroke associated with hyperhomocysteinemia. *J. Neurol Neurosurg Psychiatry* 2004;75:1788-1789.

Departamento de Neurologia, Universidade Federal de São Paulo, São Paulo SP, Brazil.

Correspondence: Wladimir Bocca Vieira de Rezende Pinto; Rua Botucatu, 740; 04023-900 São Paulo SP, Brasil; E-mail: wladimirbvrpinto@gmail.com

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

Financial disclosure: We have nothing to disclose.

Received 14 November 2013; Received in final form 03 February 2014; Accepted 24 February 2014.