



SD. 02. Influences of circadian rhythm in rtPA treatment for patients with stroke: a prospective study

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Introduction: The circadian rhythm relates to several biological functions such as apoptosis, drugs metabolism, homeostatic mechanisms, protrombotic factors, *etc.* Unclear results have been displayed about the influence of chronotherapeutic factors related to the use of rtPA in cerebral vascular attack (CVA). Some studies indicate improvements in capacity and independence of patients treated with rtPA during the day, whilst others show no chronotherapeutic differences. **Objectives:** Our current objective was to assess the results of therapy using rtPA in patients with CVA and compare the differences of treatment during day or night. **Methods:** We analyzed the data of 67 patients (61.2%= males), with ages ranging from 22 to 85 (60.4 ± 14.5), in a prospective manner. The measures of disclosure evaluated after one year were: the Modified Ranking Scale (MRS), new CVA and death. Those data were obtained through telephone interviews with the patient and/or the family. **Results:** The therapy using rtPA was done in 50.7% of cases during the night. On the first evaluation, there was no difference in the groups treated during day or night time considering factors such as: age (58.2 ± 15.2 e 68.5 ± 13.7 ; $p=0.23$), gender (46.1 e 53.8% males; $p=0.08$); Body Mass Index (BMI) (25.3 ± 2.9 e 28.1 ± 5.4 ; $p=0.06$) and *National Institute of Health Scale* (12.6 ± 5.8 e 11.3 ± 6.6 ; $p=0.26$), respectively. After one year, there was no significant difference on the groups, considering capacity and dependency (mRS), although there was a slight tendency for a better result on the group treated during the day ($F=2.64$, $p=0.08$). There was no difference considering new CVAs (CI 0.33-29.0, $p=0.31$) and death (CI 0.10-30.0 $p=0.89$). **Conclusions:** There are no indications of an actual chronotherapeutic effect related to the use of rtPA. A better partition of day and night periods may improve our understanding of circadian variations on those patients.

MOREIRA, A.M.M.; OLIVEIRA, P.B.; DINIZ, D.L.O.; NETO, P.B.; BRUIN, V.M.S. 2013. Influences of circadian rhythm in rtPA treatment for patients with stroke: a prospective study, p.29. In: Oriá, Reinaldo Barreto; Andrade, Geanne Matos de; Bruin, Veralice Meireles S. de. **I International Symposium in Neuroscience Meeting** [Blucher Neuroscience Proceedings n.1 v.1]. São Paulo: Blucher, 2014
<http://dx.doi.org/10.5151/isnm-sine24>