Article: 2566
Topic: 72 - Suicidology and suicide prevention

CHRONOBIOLOGICAL THYROID AXIS ACTIVITY AND SUICIDAL BEHAVIOR IN DEPRESSED PATIENTS

F. Duval[1,2], *M.-C. Mokrani*[1,2], *F. Gonzalez Lopera*[1,2], *X. Proudnikova*[1,2], *H. Rabia*[1,2], ***A. Erb***[1,2]

[1]Pole 8/9, Centre Hospitalier, [2]AF2R, Rouffach, France

Objectives: The aim of this study was to investigate the relationship between suicidal behavior and chronobiological thyroid axis activity in depressed patients.
Methods: The serum levels of TSH, were evaluated before and after 8 AM and 11 PM TRH challenges, on the same day, in 230 medication-free DSM-IV euthyroid major depressed inpatients and 50 healthy hospitalized controls.
Results: Compared to controls: 1) patients with a recent suicide attempt (n=71) showed lower TSH response to TRH (ΔTSH) at 11 PM, lower ΔΔTSH values (differences between 11PM-ΔTSH and 8AM-ΔTSH) ($p< 0.03$ and $p< 0.00001$, respectively), and lower free thyroxine (FT4) levels ($p< 0.00001$); 2) patients with a past suicide attempt (n=52) showed no major alteration of the HPT axis activity; 3) patients without a suicide attempt history (n=107) showed both lower 8 AM-ΔTSH and 11-PM ΔTSH ($p< 0.04$ and $p< 0.000001$), and lower ΔΔTSH values ($p< 0.000001$), but no alteration of circulating thyroid hormone levels.
Conclusions: Our results suggest that in patients without a suicide attempt history increased hypothalamic TRH stimulation (as evidenced by reduced TSH responses to TRH) might be a compensatory mechanism. In patients with a suicide history this compensatory mechanism is not effective. In patients with a recent suicide attempt the evening TSH blunting, associated with reduced FT4 levels, might be indicative of a decreased central TRH activity leading to a reduction in the TSH resynthesis in the thyrotrophs during the day after the morning challenge.

https://doi.org/10.1016/S0924-9338(13)77241-9 Published online by Cambridge University Press