

Importance of cognitive coping in facilitation of hypno-relaxation in stressed students and in anxious patients: holistic psycho-neuroendocrino-immunological analysis (Building telepathic contact with the inner adviser)

Results:

Our aim was to compare the effect of standard and cognitive hypnorelaxations on the psycho-neuro-immunological status in healthy stressed students (before-during examination term) and in chronic anxious patients. The patients (n=30, mean age: 47.5) and the students (n=20, mean age: 20.5) completed perceived stress and coping (Rahe), depression (BDI), hypnotizability (Harvard), trait and state anxiety (Spielberger) tests. Tensions of 7 muscles were measured by computer-assisted surface EMG. ACTH, cortisol and special immunological markers (LL-37, lactoferrin, sICAM-1, IL-6, galectin-3) were assayed in blood plasma. Biosamples were collected before and after one cognitive and two standard hypnorelaxations.

In students, significant decrease of ACTH level was detected after each hypnorelaxation session ($p<0.05$); only standard sessions were effective in downregulating cortisol level ($p<0.01$). Onset of the examination term enhanced muscle tension dramatically in students ($p<0.0001$). In patients, state anxiety score was significantly decreased after each hypnorelaxation ($p<0.05$), and cortisol was reduced after the cognitive ($p<0.001$) and the second standard ($p<0.01$) sessions. Interestingly, cognitive hypnorelaxation resulted in an increase of muscle tension (especially on the left side) both in students and in patients. Standard hypnorelaxation reduced muscle tension only in patients ($p<0.01$). No significant changes were seen in immunological markers. All in all, muscle tension scores appeared to be sensitive indicators of psychological stress in addition to stress hormones (ACTH, cortisol). Relaxed psychosomatic state seemed to be more facilitated by standard hypnorelaxation than by a cognitive coping one.

Published Works:

Area(s) of interest:

Psycho-neuro-immunology, psychophysiology

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