LOW PREGNENOLONE IS FOUND IN PATIENTS WITH ANXIETY DISORDERS


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BACKGROUND: Animal studies have shown that neuroactive steroids modulate the activity of the gamma-aminobutyric acid type A/benzodiazepine receptor complex and that these steroids display anxiolytic or anxiogenic activity depending on their positive (e.g. allopregnanolone) or negative allosteric modulation (e.g. dehydroepiandrosterone sulphate) of this receptor. This study compared plasma levels of allopregnanolone, dehydroepiandrosterone sulphate and pregnenolone sulphate in healthy controls and in patients with generalized social phobia, as assessed with the Mini-International Neuropsychiatric Interview.

METHODS: Plasma concentrations of allopregnanolone, pregnenolone sulphate, and dehydroepiandrosterone sulphate were measured in 12 unmedicated male patients with generalized social phobia and 12 matched healthy male volunteers.

RESULTS: Concentrations of pregnenolone sulphate were significantly lower in patients with generalized social phobia than in healthy controls. No statistically significant differences were found for the concentrations of allopregnanolone and dehydroepiandrosterone sulphate in plasma.

CONCLUSIONS: These results are particularly interesting since we also observed lower pregnenolone sulphate concentrations in male patients suffering from generalized anxiety disorder. Their relevance to the pathophysiology of social anxiety disorder remains to be determined.