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Interest of tianeptine in the treatment of mood disturbances and mixed anxious depressed disorders

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Introduction

A REVIEW OF THE BIOCHEMICAL AND CLINICAL PROFILE OF THE ATYPICAL ANTIDEPRESSANT TIANEPTINE

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Whereas classical tricyclic antidepressants (TCA) and newer specific serotonin reuptake inhibitors (SSRI) exert their effects via monoamine reuptake inhibition, tianeptine, a tricyclic compound with a long side chain (heptanoic acid), does not show this characteristic. In pharmacological tests, e.g. swim test, indicating antidepressant activities, it is effective. Activating properties and improvement of memory are described in animals as well. -
In contrast to TCA's and SSRI's, a significant enhancement of serotonin reuptake was found in various specific brain areas. In platelets of rats and of men, treated with tianeptine, this results could also be observed. However, the blockade of 5-HT_{1B} receptors is similar as seen with other antidepressants. The stress induced augmentation of CRF, ACTH and cortisol in animals was diminished with tianeptine depending on the dosis, thus also indicating a possible common mechanism with other antidepressants. The alterations of neurotransmitter release led via second messengers to altered gene expressions of various mRNA's. The stress induced increase of the mRNA tyrosin hydroxylase and the mRNA preproenkephalin could be prevented by tianeptine and desmethylimipramine treatment in rats. Furthermore, the 3-H paroxetine labelled serotonin transporter was decreased by DMI and tianeptine showing further common similarities. -
The efficacy and good acceptability of tianeptine has been demonstrated in numerous clinical studies with patients showing symptoms of depression and anxiety. Compared to classical tricyclic antidepressants less side effects with regard to the cardiovascular system were described. Side effects corresponding to anticholinergic properties of classical antidepressants were less pronounced as well. In a recent multicenter double-blind study with tianeptine versus imipramine and placebo in patients with major depression and depressed bipolar disorder, 186 patients were investigated over 42 days. Tianeptine (37,5 mg/day) and Imipramine (150 mg/day) significantly reduced the MADRS scores at 62% and 54%, respectively. The rate of responders was significantly higher with tianeptine (56%) as compared to placebo (32%). Significantly more adverse side effects were seen with imipramine. The clinical efficacy of tianeptine and the unusual biochemical-pharmacological profile are a new challenge for the understanding of the action of antidepressants.