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SLEEP-MEMORY-PLASTICITY:A CIRCUIT CLOSED BY GABA?

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It is already widely known that benzodiazepines, the most prolific compound for pharma industry ,are the most used psychotropic medication used at moment. It is striking that even now, after more than 50 yrs from first use of Diazepam, still exerts such a massive interest. Both mechanism, of dependence and withdrawn are not still unknown. Benzodiazepines by their structure and sites of action upon GABA receptors realise a huge effect in majority of neuronal circuits.

Objectives: The effect of BDZ in mood and affective disorders and also in major psychotic sdr-Schizophrenia realise an reduction of hyper GABA influence.acting on specific neuronal populations which posses particularly alpha 5 GABAa receptors they produce sedative but non anxiolytic effect.Also is still an “mistery” how only retrograde amnesia is produced and why plasticiticity occurs after a longtime use of BDZ facilitating the development of tolerance.

Aims: By a better intimate description of mechanisms by which GABAa receptors realise the sedative action and development of less side effects comparing with actual BDZ in use, even from different classes.

Methods: In this communication we had realised a thematical analysis of all studies(randomised clinical trials,clinical case study) but also various experimental research with this subjects-sleep, memory,plasticity. All had been indexed in PubMed, EMBASE, www.ionchannels.com and Science Direct.

Results: The conclusion of our tematical study and also ,our previous research suggests antagonists of GABA a or agonists of beta carbolines could be proven solid point of start for more efficient therapeutic substances.

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