

## Antipsychotic-induced hyperprolactinaemia

Conventional antipsychotics are associated with a 2-10 fold increase in prolactin levels. This increase appears to be dose dependent, and reversible after discontinuing the antipsychotic. There are some indications that tolerance may develop in patients treated with antipsychotics over extended periods of time.

Second generation antipsychotics in general induce lower increases in plasma prolactin levels. More specifically, clozapine, olanzapine, quetiapine and ziprasidone have been shown to produce no significant sustained prolactin increase in adult patients. This may not hold true for children and adolescents, where at least olanzapine, the only one of these drugs studied in this younger population, has been shown to increase prolactin in the majority of patients. On the other hand, amisulpride and risperidone and possibly zotepine do lead to increased plasma prolactin.

Most data concerning the medical consequences of hyperprolactinaemia stem from studies of patients with disorders of the hypothalamic-pituitary axis such as for instance prolactinomas. Sexual dysfunctions, menstrual disturbances, a reduction of bone mineral density as well as an increased risk of breast cancer have been reported.

Whether or not antipsychotic induced hyperprolactinaemia is also linked to such disorders is still discussed controversially, as only very few systematic studies addressing this issue are currently available. Sexual dysfunctions are commonly associated with schizophrenia per se and may or may not be related to hyperprolactinaemia. As most clinical trials with antipsychotics require effective contraception, mostly in the form of oral contraceptives, such data are not useful with regard to studying menstrual irregularities. The largest currently available study with regard to the potential risk of chronic antipsychotic treatment to induce breast cancer found a very small effect which led the authors to recommend no change in respect to current treatment practice.

Current recommendations suggest that a mere rise in prolactin concentrations should not be of concern unless complications in the form of a clinical signal (sexual dysfunction, galactorrhea, menstrual irregularities or the like) develop. On the other hand, if such symptoms occur, prolactin levels should be checked. In a case of a suspected link, this needs to be discussed with patients and a risk-benefit analysis should be established together with a specialist. This may eventually necessitate the switch to an antipsychotic that does not induce an increase in prolactin levels.

### References:

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