

Table 1. Summary of the key characteristics and main conclusions of the 16 papers included in the systematic review and the meta-analysis

Study*	Comments on reason for non-inclusion in meta-analysis	Sample	Summary of main conclusions
Cabaleiro et al. 2013		61 (29 female, 32 male) healthy volunteers given a single oral dose of olanzapine.	Although this study looked at prolactin levels and CYP2D6 genotype the authors made no comment on the association between the two. Unpublished data provided by authors. See forest plots, figures 2-4.
Cabaleiro et al. 2014		36 (18 female, 18 male) healthy volunteers given a single oral dose of risperidone.	Although this study looked at prolactin levels and CYP2D6 genotype the authors made no comment on the association between the two. Unpublished data provided by authors. See forest plots, figures 2-4.
Cabaleiro et al. 2015		26 (16 female, 10 male) healthy volunteers given a single oral dose of quetiapine.	Although this study looked at prolactin levels and CYP2D6 genotype the authors made no comment on the association between the two. Unpublished data provided by authors. See forest plots, figures 2-4.
Roke et al. 2912	Included in meta-analysis and systematic review	46 patients (all male cohort) with autism spectrum disorders and disruptive behavioural disorders treated with risperidone.	Prolactin level was higher in normal versus reduced or no activity of CYP2D6. See forest plots, figures 2-4.
Troost et al. 2007		23 patients (all male paediatric cohort) with pervasive developmental disorder treated with risperidone.	Prolactin level was positively correlated with the number of functional CYP2D6 alleles. See forest plots, figures 2-4.
Yasui-Furukori et al. 2001		76 (48 female, 28 male) patients with schizophrenia treated with haloperidol.	Males with one to two mutated alleles showed higher prolactin levels than those without. No difference was observed in females. See forest plots, figures 2-4.
Youngster et al. 2014		35 (6 female, 29 male) patients with autism spectrum disorders treated with risperidone.	The only two poor metaboliser patients included both had hyperprolactinemia. See forest plots, figures 2-4.

dos Santos Junior et al. 2015		120 (22 female, 98 male) children and adolescents treated with risperidone.	Only one CYP2D6 polymorphism (CYP2D6*10) tested. No association between this polymorphism and hyperprolactinemia was observed.
Sukasem et al. 2016	These papers measured hyperprolactinemia. However, the samples in the dos Santos Junior et al. (2015) paper could not be subdivided into the four CYP2D6 metabolic phenotypes and thus these studies could not be meta-analysed.	147 (20 female, 127 male) children and adolescents treated with risperidone.	Investigated several CYP2D6 polymorphisms (CYP2D6*4, *5, *10, *41). Found no association between these polymorphisms and hyperprolactinemia.
Ivanona et al. 2016		122 (65 female, 57 male) patients with schizophrenia treated long-term with neuroleptics.	Compared patients with hyperprolactinemia to patients with normal prolactin concentrations and found no significant difference in the genotype and allele distribution for the studied genes (CYP2D6*3, *4 as well as CYP1A2*1F)
Choong et al. 2013		42 (12 female, 30 male) psychiatric patients treated with risperidone	Prolactin levels and CYP alleles tested, but no comment made on the relationship between prolactin levels and CYP2D6 metabolic phenotype.
Novalbos et al. 2010		36 (18 female, 18 male) healthy volunteers given a single oral dose of risperidone	No significant influence of CYP2D6 variant on prolactin levels identified.
Ozdemir et al. 2007		22 Chinese-Canadian healthy volunteers (all male cohort) given a single oral dose of perphenazine	No effect of CYP2D6 variant on prolactin levels identified following single oral dose of perphenazine.
Schoretsanitis et al. 2018	Prolactin levels reported in papers, but not possible to obtain information on prolactin levels by CYP2D6 metabolic phenotype	110 (49 female, 61 male) patients treated with risperidone	Grouped participants based on number of fully active CYP2D6 alleles. Found that each active CYP2D6 allele was associated with a 30% decrease in plasma prolactin levels, but effect seen only in men.
Vandenberghe et al. 2015		150 (68 female, 82 male) psychiatric patients treated with risperidone	Prolactin levels found to be significantly higher in poor compared to extensive, but effect seen only in women.
Wang et al. 2007		118 (78 female, 40 male) Chinese schizophrenia patients treated with risperidone for 8 weeks	Prolactin levels and CYP alleles tested, but no comment made on the relationship between prolactin levels and CYP2D6 metabolic phenotype.

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