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Management of Antipsychotic Induced Hyperprolactinaemia in Older People. Can we extrapolate from existing guidance?

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Conflicts of Interest

Nil

Hyperprolactinaemia (HPRL) is a term used to describe prolactin (PRL) concentrations above the normal limit (20ng/ml for men and 25ng/ml for women) and is a common, but often neglected, side effect of antipsychotic drug treatment. Mediated through antagonism of dopaminergic control over PRL release, HPRL is associated with significant morbidity (reduced libido, menstrual cycle dysfunction, galactorrhoea, hypogonadism, infertility, osteopaenia) and, in the longer term, an increased risk of breast cancer, cardiovascular disease and osteoporosis (1). There has been a lack of clear guidance on appropriate screening, monitoring and management of antipsychotic-induced HPRL, which Griff et al (2017) have addressed in a recently published evidence synthesis and integration of existing guidelines (2). Their proposed recommendations offer gender-specific guidance on the management of HPRL, based on the clinical presentation, the magnitude of PRL elevations, and objective evidence of hypogonadism or reduced bone mineral density.

It is unclear how relevant this guidance is to older people, particularly those of extreme age, as this area of research has been largely absent. We have recently investigated amisulpride use in older people with Alzheimer's disease (AD) related psychosis (n=25) (3) and Very Late-(>60 years) Onset Schizophrenia-Like Psychosis (VLOSLP) (n=8), (4) who were participating in an open treatment study (REC reference 11/SC/0486), which involved serial sampling of amisulpride and PRL concentrations. Data from participants who completed the study and remained on amisulpride once the study ended (24 AD, 6 VLOSLP), are shown in Table 1 and Figure 1. Asymptomatic HPRL was observed across a 25-100mg/day dose range, and was of a similar magnitude to that reported in young adults; moderate (>50ng/ml) in all participants; and >100ng/ml in 9 (45%) women and 1 (10%) man.

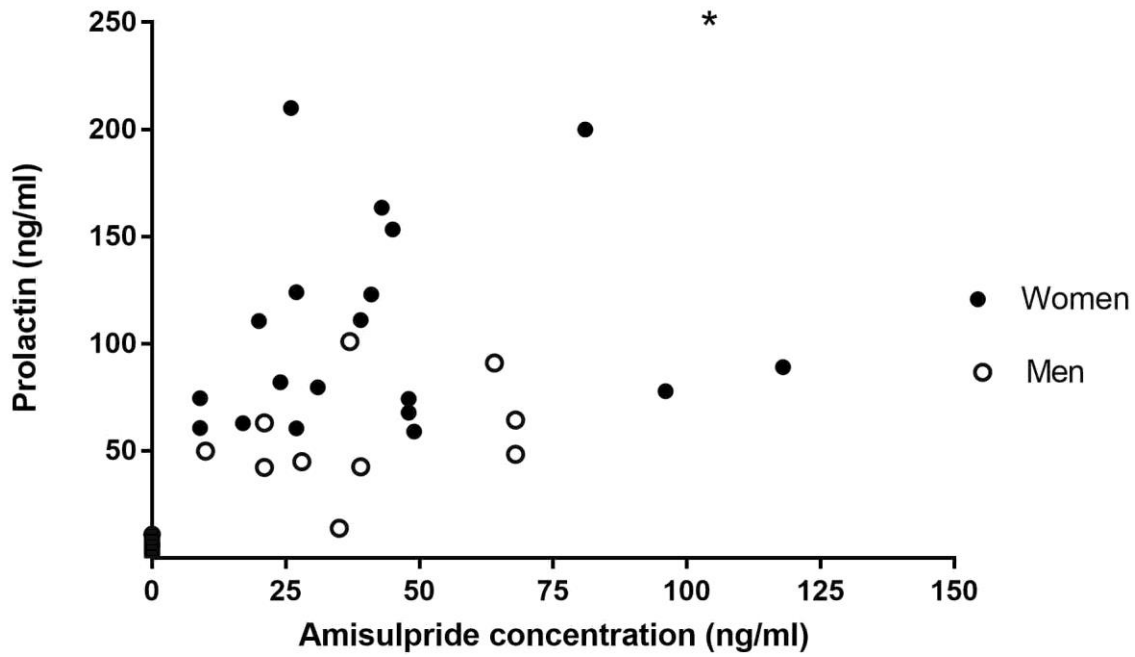
Griff et al recommend that, if asymptomatic, HPRL should be monitored (6 monthly if >50ng/ml, 3 monthly if >100ng/ml) with secondary monitoring of sex hormone status, bone health (Vitamin D, thyroid function, bone mineral density), an assessment of fracture risk in post-menopausal women and men aged over 50 years, and breast screening in women aged over 50 years. To our knowledge, this is not happening in clinical practice, and prospective

studies on older people with HPRL are warranted, to establish the extent of the associated risks and provide appropriate evidence-based guidance.

Table 1. Older people with Alzheimer's and Very late-onset Schizophrenia-like Psychosis		
	Women (n=20)	**Men (n=10)**
Age, years	81.3 +- 6.4	80.3 +- 8.0
Weight, kg	65.6 +-1 6.3	76.2 +- 10.4
Amisulpride dose, mg	52.8 +- 19.5	52.5 +- 11.2
Time since last dose, hours	15.5 +- 1.2	16.1 +- 31.
Amisulpride concentration, ng/ml	45.3 +- 31.6	44.0 +-22.2
Prolactin concentration, ng/ml	119.1 +- 81.4	56.3 +- 25.4

All participants were sampled during steady state treatment, at an optimum dose

Figure 1. Amisulpride concentration (ng/ml) and corresponding prolactin concentration (ng/ml) in older men (white circle) and women (black circle). Data from an 85 year old woman (amisulpride concentration 109ng/ml, prolactin concentration 403ng/ml) is shown as an asterix.



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