### Hyperprolactinaemia

#### Background

Hyperprolactinaemia is a side effect of antipsychotic medications. The older 'typical' antipsychotics all increased levels of prolactin (Tandon 2002). This elevation remains consistent in female patients. The extent zotepine (Taylor et al 2003) is an issue with amisulpride, risperidone and to a lesser extent olanzapine, while quetiapine has a very low incidence or severity of hyperprolactinaemia (Taylor et al 2003). An atypical with a low incidence of hyperprolactinaemia will resolve.

#### Aim

The aim of this article, the fifth in the care maps series, is to describe a care map that enables health professionals, especially community mental health nurses, and patients to manage hyperprolactinaemia. The flow chart for hyperprolactinaemia is shown in the care map. The evidence base that has informed the care map is also included.

#### Management options

The atypical antipsychotics most closely associated with hyperprolactinaemia are amisulpride, risperidone and zotepine (Taylor et al 2003). The decision to switch medication should consider the merits of switching to an atypical antipsychotic known to have a high incidence or severity of hyperprolactinaemia: amisulpride, risperidone and zotepine. The older 'typical' antipsychotics all increased levels of prolactin (Tandon 2002). This elevation remains consistent in female patients. The extent zotepine (Taylor et al 2003) is an issue with amisulpride, risperidone and to a lesser extent olanzapine, while quetiapine has a very low incidence or severity of hyperprolactinaemia (Taylor et al 2003). An atypical with a low incidence of hyperprolactinaemia will resolve.

#### Assessment

In the care map, the clinician should consider taking a full sexual history and investigating menstrual difficulties or inconsistencies in female patients. This will help the clinician determine whether or not symptoms developed symptoms associated with hyperprolactinaemia. The clinician should discuss the merits of switching to an atypical antipsychotic known to have a high incidence or severity of hyperprolactinaemia: amisulpride, risperidone and zotepine. The older 'typical' antipsychotics all increased levels of prolactin (Tandon 2002). This elevation remains consistent in female patients. The extent zotepine (Taylor et al 2003) is an issue with amisulpride, risperidone and to a lesser extent olanzapine, while quetiapine has a very low incidence or severity of hyperprolactinaemia (Taylor et al 2003). An atypical with a low incidence of hyperprolactinaemia will resolve.

#### High incidence or severity

- Infertility: in cases where infertility is suspected, specialist advice should be sought.
- Osteoporosis: the presence of side effects associated with raised prolactin levels may lead to decreased bone mineral density.
- Continuous breast tissue which is likely to cause embarrassment should be noted. The Functioning Checklist (Healy 1997) may lessen the potential for embarrassment and add rigour to the assessment.

#### Very low incidence or severity

- Galactorrhoea: increased prolactin levels can cause abnormal breast milk production in both male and female patients.
- Amenorrhoea: raised prolactin levels can cause amenorrhoea and female patients to result in disrupted menstruation.
- Ejaculatory volume, impotence and difficulty developing symptoms associated with hyperprolactinaemia.

#### Low incidence or severity

- Sedation
- Postural hypotension

#### Further reading

Care maps series:

- Tandon 2002.

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**Box 1. Atypical antipsychotics and hyperprolactinaemia**

<table>
<thead>
<tr>
<th>Antipsychotic</th>
<th>Incidence/Severity</th>
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</thead>
<tbody>
<tr>
<td>Low</td>
<td>Olanzapine</td>
</tr>
<tr>
<td>High</td>
<td>Amisulpride, Risperidone, Zotepine</td>
</tr>
<tr>
<td>Very Low</td>
<td>Quetiapine</td>
</tr>
</tbody>
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**References**

- Bennett et al 1995.
Enhanced by using well-evidenced tools such as the Brief Psychiatric Rating Scale (Ventura et al 1993).

1.6 In some cases reducing the dose may have an adverse effect on the efficacy of the antipsychotic medication or fail to reduce prolactin levels sufficiently. In these situations the clinician should discuss with the patient switching to a medication known to have a low incidence of hyperprolactinaemia such as quetiapine (Taylor et al 2003).

1.7 Female patients whose prolactin levels have been high but have reduced sufficiently will need to be encouraged to consider that they may start menstruating again. They should, where appropriate, be given advice about family planning and contraception.

**Conclusion**

Sexual side effects may be underassessed and subsequently unidentified in some individuals with severe mental illness, not only as a result of lack of knowledge but also because of the reticence of some clinicians to ask the right questions in a detailed manner. This is an issue that needs to be addressed by educators, who should consider the merits of role play and mental health service user involvement. This may help to address issues that may otherwise prove too sensitive and embarrassing. Clinicians should also attempt to use tools such as Healy's 'Effects of drugs on sexual functioning' (1997), which can provide not only a baseline but also a structure for detailed assessment.

**Figure 1. Flow chart for hyperprolactinaemia**

1.1 Pre-treatment consideration of risk factors for hyperprolactinaemia:
- If high, then inform the patient about the potential for sexual side effects
- Take a full sexual history
- In female patients assess for menstrual difficulties or inconsistencies

1.2 Use side-effect rating scales

1.3 If the patient develops symptoms associated with hyperprolactinaemia consider switching to a low-association atypical antipsychotic

1.4 Consider eliminating other possible causes of raised prolactin

1.5 Reducing the dose of the atypical antipsychotic may help. Remember to monitor the patient's mental state closely

1.6 If the reduced dose has a negative effect on efficacy or prolactin levels remain high:
- Consider switching to a low-association atypical antipsychotic

1.7 Female patients may experience a return of menstruation, libido and fertility. Provide appropriate advice and support

**REFERENCES**


