An initiative to prevent the adverse effects of metformin

**Collaboration between clinicians and a pharmacovigilance centre results in practical benefits for patients.**

Lactic acidosis is a well-known adverse effect of metformin. Although rare, it can be fatal.

Metformin accumulation increases the risk of lactic acidosis. Other risk factors include: dehydration, cardiac or respiratory failure, recent myocardial infarction, liver failure, severe acute alcohol intoxication, surgery, and impaired renal function (sometimes associated with acute intercurrent disorders or nephrotoxic drugs, including imaging contrast agents) (1).

In 2009, the French regional pharmacovigilance centre in Rouen, in conjunction with a local emergency department, reviewed morbidity and mortality resulting from the adverse effects of metformin (2). This process is one way of improving the quality of care, through collective, systematic and retrospective analysis of deaths, complications and other potentially harmful events (3).

After implementation of this review of morbidity and mortality associated with metformin, the number of reports of lactic acidosis rose from 7 to 38. However, mortality fell from 43% to 25%, as did the proportion of patients requiring intensive care, from 57% before 2009 to 35% in 2011 (2).

**In practice.** Collaboration between healthcare professionals in the analysis and prevention of adverse effects can yield concrete improvements in medical practice and patient care.

Methylphenidate: abuse in Europe

**In Europe, methylphenidate consumption is rising at an alarming rate. Reports of abuse and addiction are also increasing.**

Methylphenidate, an amphetamine-like psycho-stimulant, has been used since the 1990s in attention deficit hyperactivity disorders and narcolepsy (1,2), as a last-resort symptomatic treatment.

The potential for abuse and addiction has long been known, with cases already reported in France and elsewhere (2,3).

The regional pharmacovigilance and pharmacodependence monitoring centres in Toulouse and Marseille, and the World Health Organization (WHO), have analysed methylphenidate consumption and reports of abuse and addiction recorded in the WHO database in Upsala between 1994 and 2010.

Between 2005 and 2010, methylphenidate consumption rose sharply in Europe, increasing by 525% in Denmark, 222% in the Netherlands, 216% in Germany, and 167% in France, for example (4).

There appeared to be a proportional increase in reports of abuse and addiction, but the authors did not specify the number of cases.

**In practice.** These European data are in line with previous observations made in France (2). The risk of abuse and addiction must be taken into account when considering methylphenidate prescription.