



METFORMIN ASSOCIATED LACTIC ACIDOSIS: FACT OR FICTION - BUT NEEDS ATTENTION?

Metformin is the oral antidiabetic drug of choice in overweight patients and is being increasingly used in the management of Type 2 diabetes. There has long been debate about the possible association of metformin with lactic acidosis although this is an exceedingly rare complication with 31 cases reported to the CSM between 1963 and 1997 with only 19 fatalities (1). A recent Cochrane Review concluded that metformin use was probably not linked with the risk of lactic acidosis when taking in to account contraindications (2). However contraindications include renal impairment, hepatic impairment, age over 65 years, sepsis, respiratory failure, recent MI and hepatic impairment as well as general anaesthesia and surgery (1, 3). Although there are no universal guidelines, the British National Formulary recommends stopping metformin 2 days before surgery and only restarting when renal function returns to normal and using insulin for management of glycaemia during the perioperative period.

Two cases have recently come to light where elderly orthopaedic patients, with other risk factors continued metformin up to the day of operation and restarted shortly after. Both developed a metabolic acidosis and renal failure in the postoperative period and despite treatment died.

Surgeons and anaesthetists should ensure that they have protocols in place to manage type 2 diabetics taking metformin and be aware of the potential postoperative problems relating to restarting metformin and other drugs which may contribute to renal impairment and metabolic acidosis.

Reference:

- 1 Chan NN, Brain HPS and Feher MD Metformin-associated lactic acidosis: a rare or very rare clinical entity. *Diabet Med* 1999 16: 4 p273.
2. Salpeter S, Greyber E, Pasternak G and Salpeter E. Risk of fatal and non-fatal lactic acidosis with metformin use in type 2 diabetes mellitus. *Cochrane Database of Systematic Reviews*: 2003 last update Nov 2004
3. British National Formulary Section 6.1.2.2.

Non compliance data

One of the great strengths of SASM is the extraordinarily high compliance by the surgeons and anaesthetists in Scotland with the audit. There are very few surgeons who do not complete and send back 85% of their forms and even fewer who do not comply at all. As participation with the Audit is now being used as a governance measure for job planning and appraisal, individuals who do not comply will have to provide evidence of governance from other sources.

There are increasing demands upon SASM to provide information relating to the work of surgeons and anaesthetists across Scotland. The audit is committed to defending the confidentiality of the information provided but it may be difficult to justify not releasing information on non-compliers, if requested, as those individuals who do not participate or comply are not within the audit structure.

Feedback to trainees

SASM presently feedback to the Consultant Surgeon and Anaesthetist all cases with areas of consideration or concern. If indicated by ticking the front page that they wish feedback on all cases then cases with no areas of concern or consideration will also be returned to the Consultants. At present, unless trainees are identified on the inside front page of the forms, feedback will not be made to them. This is an issue for trainees particularly as they may visit several units for short periods of time and outcomes are important in their RITA assessments. Trainee representatives on the Liaison Group have highlighted this as an issue for trainees. In the last newsletter SASM suggested increased use of the present feedback mechanisms and will be modifying the inside front cover for next years audit to facilitate this. In the meantime two copies of feedback will be sent to every Consultant so that they may forward a copy to trainees involved in the care of that patient.

The SASM Management Committee

The remit of the Management Committee is to oversee the day to day running of the audit, to produce the Annual Report, to reflect on the issues relating to surgical and anaesthetic practice and to modify and alter the data collected to inform the Consultant body and the Health Boards within Scotland. It reports to the SASM Board

The committee is made up of an elected chairman, elected co-ordinators from anaesthesia and surgery in both East and West of Scotland, specialist co-ordinators from vascular and orthopaedic surgery, chairman of the Liaison Group, a nursing advisor, representation from the NHS NSS and the SASM National Co-ordinator, who is secretary to the Management Committee with the secretary to the Board of SASM in attendance.

The chairman is elected for a 3-year term of office, renewable annually for up to a further 3 years. The other clinical members have a fixed 4-year term of office. The co-ordinators review all cases with areas of consideration or concern, coding them appropriately and respond to any points raised from these codings. Additionally each clinical member has an area of individual responsibility within the Audit.

The Management Committee is to hold a Strategy meeting on 4th October 2005 and invites comments from the participants about the direction in which the audit should progress. Comments in the first instance should be made to Professor Peter Stonebridge, the demitting Chairman at p.a.stonebridge@dundee.ac.uk.

Building a framework of trust

The British Medical Journal recently published an article reviewing the assessment processes of SASM and the trends in data collected over the first 10 years of the audit. It reflects on the changes in practice over that time and future developments to the Audit (1). Although the accompanying editorial questioned whether the audit was transferable (2), subsequent correspondence has described the successful implementation of a modified version of SASM to Western Australia (3).

Reference:

1. Thompson AM, Stonebridge PA. Building a framework for trust: critical event analysis of deaths in surgical care. *BMJ* 2005;330:1139-43
2. Baxter NN. Monitoring surgical mortality. *BMJ* 2005; 330: 1098
3. Aitken RJ. Scottish model for surgical mortality used in Australasia. *BMJ* 2005;330: 1389-90

Extensions to the audit

A Nursing Pro Forma is being piloted in Tayside from 1st August 2005 to allow multidisciplinary participation and more closely examine the pathway of care for these patients. Drafts of the pilot audit form are available on the website. Discussions are also taking place with the Scottish Intensive Care Society Audit Group to extend the Anaesthetic Pro Forma to include management in Intensive Care Units as the present Anaesthetic Pro Forma has been identified as being deficient in this area. It is hoped that a new Intensive Care Pro Forma, utilising data from the Scottish Intensive Care Society Audit will be in place in 2006.

SASM needs you! - Urgent need for general surgical first and second line assessors

The last newsletter asked for volunteers to put their names forward to assess cases as first line assessors or to undertake case note reviews as second line assessors. There has been a good response from all specialties except general surgery and the problem is most acute in the East of Scotland office in Dundee for second line assessors. The East of Scotland office handles the general surgical deaths from the East of Scotland and includes hospitals from Inverness to Edinburgh. Without case note reviews, areas of consideration or concern cannot be identified and the audit loses important data. The data for the 2004 report is now being analysed and SASM is concerned that the backlog may have a negative effect on this report. Participation in SASM is seen as important in terms of appraisal and both first and second line assessors will be given feedback in the future in terms of workload and comments as part of their individual annual reports. General surgeons who would like to contribute to this part of the work of SASM are invited to contact George Gray, the West of Scotland Surgical Co-ordinator at g.r.gray@ntlworld.com as the East of Scotland Surgical Co-ordinator post is being filled at the present time.

Apology

In the last newsletter contact details were given for the Liaison Group. Apologies for missing out Ken McKenzie who represents the ENT surgeons.

Ken can be contacted at kmk2x@clinmed.gla.ac.uk