

**PROTOCOL FOR DIABETIC PATIENTS TAKING METFORMIN
(GLUCOPHAGE) ATTENDING FOR RADIOLOGICAL
INVESTIGATIONS REQUIRING INTRAVENOUS CONTRAST
INJECTION (January 2002)**

1. Ask diabetic patients to contact the relevant Department prior to the investigation to ascertain whether they are taking Metformin. Booking clerks to highlight relevant patients on lists or in diary.
2. If on Metformin, a recent creatinine level should be obtained from the computer system (or referring clinician). A level less than 150 $\mu\text{mol/l}$ taken any time in the previous year is acceptable (all diabetic patients should have had their renal function checked yearly as part of district standards). This should be done by a nurse for Interventional cases and by an RDA or Radiographer for CTs and IVUs.
3. If patient is unexpectedly found to be on Metformin at the time of attendance in the Department, RDA/Radiographer or nurse to check recent creatinine on the computer as above
4. If no result available on the computer (e.g. may have been taken elsewhere), continue with study but take blood sample for urea and creatinine at the same time (via venflon or catheter). The blood sample must be taken by a person trained in phlebotomy and initially at least this should be a Doctor. Write clearly on the blood form asking for the result to be sent back to X-ray department urgently, for the attention of the Nurse-in-charge. (If taken on a Thursday, phone laboratory and ask for result to be returned the same day). Photocopy the Radiology request form and pass to Nurses so that they have patient details. Include patient's phone number and name of GP.

5. In case of (4) ask patient to stop Metformin for 48 hours (minimum) and ring department (023 - 9228 6821 QA or 023 - 9228 6000, ext. 2161 SMH) for further advice. (If sample taken on a Thursday, ask patient to ring following day; if taken on a Friday, ask patient to ring Monday a.m. and not to take Metformin until he/she has contacted department).
6. If the patient is taking oral medication for diabetic control, but does not know the name of the tablets, check for a recent (within the last year) creatinine result on the computer. If none available, take a blood sample at the time of the test and send to lab, as in (4). Ask patient to check tablets on arriving home and ring the relevant department on the next working day (give appropriate phone number to patient). If patient on Metformin, proceed as point (5). If not on Metformin, ask patient to take medication as usual; advise nurses, so that they are not chasing the patient!
7. If creatinine level $<150 \mu\text{mol/l}$, restart Metformin after 48 hours
8. If creatinine found to be above $150 \mu\text{mol/l}$ at any time, the patient should be advised not to restart Metformin. Nurse to inform referring health care professional by phone or fax.
9. Discontinuation of Metformin should not adversely affect diabetic control in the short term, but patients should be advised to seek medical advice in case of any unusual symptoms.
10. In all cases, proceed with Radiological investigation unless there is a separate contraindication.

Patient on Metformin ? ⇒ NO ⇒ Proceed with study

⇓

YES

⇓

Check creatinine (clinician/computer) ⇒ Less than 150 ⇒ Proceed with study,
stop Metformin 48 hrs

⇒ More than 150 ⇒ Proceed with study, stop Metformin,
inform referring clinician

⇒ Not available ⇒ Check creatinine at time of attendance,
proceed with study, stop Metformin and ask patient to ring
department. Then as above, depending on result