IODINATED CONTRAST AGENTS AND DIABETES

PRESENTATION

There is 3 problems with the diabetic patient: fasting, renal failure, and ongoing medication (insulin, oral antidiabetic, metformin).

- Fasting can cause hypoglycaemic accidents.
- Renal failure can be worsened by the injection of a contrast agent.
- Metformin exposes to the risk of lactic acidosis by diminution of renal clearance in case of ICM induced nephropathy.

GENERAL ADVICE

- Have at hand a recent serum creatinine level test (less than 3 months old in the absence of intercurrent events).
- Use low osmolality agents.
- Keep the patient hydrated:
  - Orally: 2 litres of sodium rich water in the 24 hours preceding and following contrast medium injection.
  - Parenterally: 100ml per hour of saline isotonic serum or bicarbonated isotonic serum in the 12 hours to and after the injection of ICM.

PATIENTS ON INSULIN

- Insulin therapy should not be discontinued. Fasting should be avoided. However, in cases where it is recommended, put on a perfusion of glucose until the fast is broken, and do the examination as early as possible. Fasting should not exceed 6 hours.
PATIENTS ON DERIVATIVES OF METFORMIN

- Metformin is the most common of oral antidiabetic drugs. The active principle is not metabolized and is eliminated via the kidneys. Elimination is complete in 48 hours. Metformin is contraindicated in cases of renal insufficiency. Accumulation of the drug can induce lactic acidosis when contrast medium induced renal failure happens (in the 48 hours following the injection).

- The therapy should be discontinued for 48 hours from the time of iodinated contrast medium administration. Stopping it 48 hours before the examination is not advised anymore. The therapy is resumed once the renal function has been checked.

PATIENTS ON ORAL ANTIDIABETICS (OTHER THAN METFORMIN)

- The treatment is continued.

- In case of renal failure, refer to the specific advice on the prevention of renal failure.

REFERENCES