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Comment

Digitalis and diabetes

Digitalis has been used for over 200 years, and there is extensive literature on the subject. A search in PubMed on 27 February 2012 with the search word «digitalis» turned up more than 12 000 citations. Despite the long tradition, many questions concerning digitalis had not been resolved until fairly recently. It has two important areas of use: heart failure and atrial fibrillation. It was not until the large DIG study of 1997 (Digitalis Investigation Group (1) that it was determined that digitalis (digoxin) really did have a beneficial effect in connection with heart failure. One thing that was learned from this study was that the serum concentration should be lower than had been usual earlier (2). The reference intervals for digitoxin and digoxin were reduced.

In the present case report, the authors show that a patient's levels of HbA_{1c} and glucose rose significantly after commencement of digitalis (digitoxin) therapy. In the past, there have been a few reports of diabetes being exacerbated by digoxin (3). If there really is a connection between digitalis and exacerbated diabetes, it is very strange that this was not discovered earlier, a point the authors also make. Possible explanations are that the effects in most patients are less pronounced than in the present case, or that diabetes is so common among persons who take digitalis that exacerbation or a few extra cases are not noticed. We will probably never have a definite answer. It would be very difficult to find funding for a prospective trial to study diabetes in patients who are taking digitalis. Perhaps more could be learned from looking

at patients from the major blood pressure and heart failure studies who were given digitalis. In order to do this, access to original data will probably be necessary.

The authors recommend that the HbA_{1c} and glucose levels of patients with known diabetes be closely monitored after they start taking digitalis. I do not think the basis for such a recommendation is strong enough, and believe patients can manage with ordinary diabetes follow-up.

In Norway, pharmacies dispensed digitoxin to some 24 000 persons and digoxin to over 1 000 in 2010. The use of digitoxin is a Norwegian tradition; most other countries use digoxin. Digitoxin has a number of advantages, and I am tempted to assert that Norway is right and the rest of the world is wrong. Unfortunately, this will not help now that digitoxin has been taken off the market in this country, and we have to switch all patients digoxin in the course of 2012 and 2013. The Norwegian Medicines Agency has drawn up guidelines for the transition in collaboration with cardiologists and clinical pharmacologists (4). Unfortunately, one death as a result of overdosing of digoxin in connection with a change of medication has already been reported. Digitoxin and digoxin are both drugs with a narrow therapeutic window and regular checking of the serum concentration is necessary to avoid both overdosing and underdosing.

Observant clinicians who describe unusual incidents in case reports can call attention to the problem and draw other researchers into the debate. The most famous

case report in medical history is probably the description of abnormalities in the babies of mothers who had used thalidomide (5).

Perhaps Norwegian clinicians can contribute to solving the riddle: does one get diabetes from digitalis?

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