Poster

[P27-10] P27-10: Pharmacokinetics and pharmacogenetics

Chair: Andrew Somogyi, Australia

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[P27-10-2] Mesalazine and foetal anaemia —a case report

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Background

Mesalazine and its prodrug sulfasalazine are both used for inflammatory bowel disease. Sulfasalazine has been associated with haematological side-effects such as aplastic and haemolytic anaemia in patients, but also in foetuses after intrauterine exposure. To our knowledge, we describe the first case of a foetus with severe anaemia, and subsequent hydrops, where a relationship to mesalazine seems likely.
A uniparous woman was referred at 31 weeks of gestation due to a hydropic foetus with massive ascites and cardiomegaly. She was treated with 4 g mesalazine daily due to Crohn’ s disease. The foetus had an initial haemoglobin level of 51 g/L.

Methods

Intrauterine chordocentesis was performed and plasma sampling was performed from both foetus and mother at three different occasions about one week apart. The first sampling was performed 12.5 hours after the last intake of mesalazine. After sampling of the foetus, intrauterine transfusions were performed. Mesalazine pure substance was kindly provided by a Swedish pharmaceutical manufacturer (Cambrex AB, Karlskoga). An LC-HRMS method was developed for plasma analysis of mesalazine.

Results

After discontinuing the maternal medication and three intrauterine erythrocyte transfusions, a healthy baby was born after 37 full weeks of gestation. Plasma levels of mesalazine were non-conspicuous in neither mother nor foetus. The mesalazine half-life in the foetus (37 h) was half that of the mother (80 h), both considerably longer than previously reported (about 19 h).

Conclusions

A causal relationship must be suspected between the foetal anaemia and the maternal use of mesalazine. After assessment of the adverse drug reaction report, the Medical Products Agency considered a causal relationship possible. This foetal side-effect should be considered in pregnant women on mesalazine (and its prodrug sulfasalazine).