



Liver volume assessment using MRI in fetuses with congenital cytomegalievirus infection

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Objective

The aim of the study was to correlate liver volume, measured by MRI in fetuses with confirmed cCMV infection, with fetal GGT levels.

Methods

Retrospective analysis of consecutive cases of fetuses infected with CMV. Clinical MRI system operating a 1.5 tesla T2-weighted imaging was obtained using a single-shot half-Fourier TSE (HASTE) sequence in coronal and sagittal planes according to the fetal orientation. Liver volume was assessed by manually tracing the region of interest on each slice with tissue present using Fiji Image-J2 software. This measurement was subsequently correlated with fetal serum GGT obtained by cordocentesis.

Results

Fetal MRI and blood sample was obtained in 7 cases between 23 and 36 weeks. After adjusting for gestational age, we found no correlation between the liver volume and GGT levels ($p=0.322$).

Conclusion

Measurement of fetal liver volume is feasible by MRI, and it could be a new tool for the assessment of fetuses infected with CMV. According to our results, in infected fetuses, GGT levels do not correlate with liver volume.