Reviewer’s report

Title: The HELLP syndrome: clinical issues and management. A Review

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The HELLP syndrome: clinical issues and management. A Review.

Kjell Haram, István Ziller, Einar Svendsen, Ulrich Abilgaard.

General comment: The aim of the authors with their review is to present an update on maternal clinical issues of the HELLP syndrome with special focus on diagnosis, complications, surveillance, timing and mode of delivery and risk of occurrence.

Description of the effects of treatment with corticosteroids make up a substantial part of this review.

The authors obtained information from clinical reports and reviews published between 2000 and 2008 by using the databases of PubMed and Cochrane. Additionally, selected papers from earlier studies were used.

In the last 8 years a number of reviews on the HELLP syndrome have already been published in the scientific literature, and this raises the question of what is new in the present review?

The title: is too pretentious as to clinical management, for example the review does not include the issue of (subcapsular) liver hematoma, a serious complication of the HELLP syndrome, that may ended in a lifethreatening rupture of the liver. And there are more clinical issues not addressed, whereas other clinical subjects have got little attention.

Abstract: management is described in generalized terms, which do not add much to what already is known. Please clearly indicate whether or not there is sufficient evidence for steroid treatment (apart from fetal lung maturation) and if so, when and how to treat the mother with HELLP.

Occurrence and clinical symptoms: because the clinical symptoms are highly variable and often mimic other more commonly occurring diseases not related to pregnancy, it is important to describe more in detail the various manifestations of the upper abdominal or epigastric pain. The character of the pain varies from a continuous feeling of discomfort to severe colic-like pain. Diaphragmatic irritation due to the pathological changes in the liver underneath may result in right shoulder pain or in between the shoulders. In our experience and those of others,
these severe attacks require administration of effective analgetics. The authors do not address these issues.

The triad signs of hemolysis etc (pp. 6,7): no specific comments except for the following: frequently, a decrease in AT III is also observed.

Diagnostic criteria: adequate description of the currently used definitions.

Differential diagnosis: table 2, add pulmonary embolism, LCHAD deficiency and cholestasis of pregnancy. Alkaline phosphatase is also produced by the placenta and therefore always increased in pregnancy.

Complications of HELLP: as already mentioned in the general comments, serious and specific complications as liver hematoma and hepatic hemorrhage/rupture are not addressed. Much attention is given to placental abruption, and the accompanying coagulation abnormalities. However, abruptio placentae is not a specific complication of HELLP, although HELLP patients certainly are at increased risk for placental abruption. In the absence of abruptio placentae, the serum fibrinogen concentrations are usually not decreased, but even tend to be elevated probably as an expression of the exaggerated inflammatory response associated with preeclampsia/HELLP syndrome.

Table 3: it should be noted that hepatic infarction as a specific complication is somewhat ambiguous because the underlying histopathology of HELLP is already characterized by periportal necrosis and focal parenchymal necrosis.

Perinatal morbidity and mortality: the aim of the authors is to focus on the maternal part of the HELLP as stated in their introduction. The description of perinatal morbidity and mortality is insufficient for a review article: too many literature references are lacking. Therefore this paragraph should be omitted which would be consistent with the primary aim of the authors.

Management: brief review is given of the various options reported in the past, but here not much new.

CS treatment: here the authors elaborate on a specific aspect of clinical management of HELLP, that has provoked controversial reactions by obstetricians over the last decade. I would suggest that the authors focus more in detail on this still controversial treatment. As far as possible, try to analyse the quality and restriction of the studies reported so far. I would also suggest that they make clear why, in view of the supposed underlying pathophysiological mechanisms of HELLP, CS treatment might be effective or not.

Practical approach/timing and mode of delivery: makes sense, but there is some repetition and overlap with other paragraphs.

Other treatment options: here the reader is surprised by introducing liver transplantation...

Tables: comments already mentioned above.
References: sufficient, with a relative large contribution of steroid studies.