The effects of hormonal contraceptive use among women with viral hepatitis or cirrhosis of the liver: a systematic review

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CRD summary
This review concluded that combined oral contraceptives did not affect the rate of progression or severity of cirrhotic fibrosis or risk of hepatocellular carcinoma liver dysfunction in women with chronic hepatitis. Given the poor reporting of the review methods and the poor quality of the evidence base, the authors' conclusions should be interpreted with caution.

Authors' objectives
To evaluate the effects of hormonal contraceptive use among women with viral hepatitis or cirrhosis of the liver.

Searching
PubMed and the Cochrane Library databases were searched, with no language restrictions, from inception to June 2008; search terms were reported. Reference lists of relevant articles, as well as review articles, were manually searched to identify additional studies.

Study selection
Eligible studies examined the effects of any method of hormonal contraceptive use on viral hepatitis or cirrhosis of the liver among women of a reproductive age. Studies of women with a history of viral hepatitis that were serologically confirmed to be no longer infected, and studies investigating hormonal steroids used at non-contraceptive doses were excluded.

The majority of included studies evaluated women with chronic hepatitis. Included outcomes were the results of serological liver function tests during and after acute infection, progression of hepatic fibrosis, and development of hepatocellular carcinoma. Included studies assessed the effects of contraceptives for the most common viruses: hepatitis viruses A, B and C. Studies were undertaken in Belgium, Finland, France, Egypt, China and the USA.

The authors did not state how the studies were selected for the review.

Assessment of study quality
Study quality was assessed using the United States Preventative Services Task Force Quality Rating Criteria (USPSTF). Studies were classified as good, fair or poor quality.

The authors did not state how many reviewers performed the quality assessment.

Data extraction
The authors did not state how the data were extracted for the review or how many authors performed the data extraction.

Methods of synthesis
The studies were combined in a narrative synthesis grouped by severity of hepatitis.

Results of the review
Six studies were included in the review (n= 587, range 10 to 159); study quality was 'poor' in two studies, 'fair' in three and 'good' in one.

Acute hepatitis

Combined oral contraceptive (COC) use did not affect either the duration of hospitalisation or disease resolution (one
Chronic hepatitis or its sequelae

Combined oral contraceptive use has minimal to no effect on chronic hepatitis and its sequelae (five studies); the rate of progression or severity of cirrhotic fibrosis were not affected, nor was the risk of hepatocellular carcinoma or the risk of liver dysfunction.

Authors' conclusions

Data from one study suggested that combined oral contraceptives did not affect the course of acute hepatitis. Limited data from several studies on women with chronic hepatitis (or its sequelae) suggested that combined oral contraceptive use did not affect the rate of progression or severity of cirrhotic fibrosis, the risk of hepatocellular carcinoma, or the risk of liver dysfunction in hepatitis B virus carriers.

CRD commentary

The review addressed a clear research question, supported by appropriate inclusion criteria. A limited search of relevant databases was undertaken without language restrictions, reducing the potential for language bias. There did not appear to be any attempt to locate unpublished material, so some studies may have been missed. The authors did not state how many reviewers were involved in the review process, which may have introduced bias and error.

An appropriate assessment of study quality was reported; the majority of studies were of poor or fair quality and comprised small sample sizes. In view of the diversity among studies, a narrative synthesis was appropriate. The studies included the most common viruses that can cause hepatitis, so there may be issues over generalisability to women affected by other aetiologies.

Given the poor reporting of the review methods and the poor quality of the evidence base, the authors' conclusions should be interpreted with caution.

Implications of the review for practice and research

The authors did not state any recommendations for practice or further research, but the World Health Organisation Expert Working Group reviewed the evidence and made a number of recommendations for hormonal contraceptive use among women with viral hepatitis and women with cirrhosis (see paper).

Funding

World Health Organization, Department of Reproductive Health and Research; Centers for Disease Control and Prevention; US Agency for International Development; National Institute of Child Health and Human Development.

Bibliographic details

Kapp N, Tilley IB, Curtis KM. The effects of hormonal contraceptive use among women with viral hepatitis or cirrhosis of the liver: a systematic review. Contraception 2009; 80(4): 381-386

PubMedID

19751861

DOI

10.1016/j.contraception.2009.04.007

Original Paper URL

http://www.contraceptionjournal.org/article/S0010-7824(09)00122-X/abstract

Indexing Status

Subject indexing assigned by NLM
MeSH
Contraceptives, Oral, Combined /adverse effects; Disease Progression; Female; Hepatitis, Viral, Human; Humans; Liver Cirrhosis; Risk; Risk Factors

AccessionNumber
12009109388

Date bibliographic record published
10/02/2010

Date abstract record published
21/04/2010

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.