Herpes simplex virus type 2 serological testing and psychosocial harm: a systematic review
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CRD summary
The review concluded that HSV-2 diagnosis by type-specific serological testing did not result in long-term psychosocial harm in most people without an identified history of genital herpes. The review was generally well conducted and the authors' conclusions are likely to be reliable.

Authors' objectives
To assess the psychological effects of herpes simplex virus type 2 (HSV-2) serological testing in people without a history of genital herpes.

Searching
PubMed, PsycINFO, Web of Science, EMBASE, CINAHL Plus and The Cochrane Library were searched from inception to March 2010; search terms were reported. NRR, ClinicalTrials.gov, abstracts from relevant conferences and reference lists of retrieved studies were searched. Authors of the included studies were contacted to identify any further unpublished studies.

Study selection
Studies where participants underwent a HSV-2 serological test and that included at least one psychosocial assessment were eligible for inclusion in the review. Case studies, reviews and studies that tested only symptomatic or previously diagnosed participants were excluded.

In the included studies, participants were recruited from primary care clinics, specialty clinics, hospitals, a health maintenance organisation and college campuses. Participant ages ranged from 16 to 67 years. Around half of the participants were men. Forty four per cent of participants were HSV-2 positive and approximately half of these had no recognised previous history of genital herpes. Seven studies compared baseline and follow-up measurements of psychosocial scores in participants, six studies compared participants who tested HSV-2 positive with participants who tested HSV-2 negative and three studies compared responses in HSV-2 positive participants with and without a history of genital herpes. Most studies used validated scales and questionnaires to measure outcomes; one study used a semi-structured interview to determine sexual desire and reactions to diagnosis and another asked participants if they regretted having the test. Studies were undertaken in USA, UK and Australia.

Two reviewers independently selected studies for the review.

Assessment of study quality
Studies were assessed for quality using the Newcastle Ottawa quality assessment scale; criteria included selection of comparison groups, study comparability and outcome assessment and follow-up.

Study quality was assessed by one reviewer and verified for accuracy and completeness by a second reviewer.

Data extraction
Data were extracted on psychosocial outcomes according to how these were analysed in the individual studies. Scales that measured psychosocial outcomes were grouped into categories that included mental health, coping and counselling, sexual satisfaction, herpes-related quality of life, perceived severity of HSV-2 and sexually transmitted disease stigma and acceptance and acceptability of testing.

One reviewer extracted data which were verified for accuracy and completeness by a second reviewer.

Methods of synthesis
Results from individual studies were included in a table and were synthesised in narrative format.

Results of the review
Nine studies (1,355 participants) were included in the review. Eight were prospective cohort studies and one was a qualitative study. Follow-up ranged from immediately post test to 12 months after testing. The quality of the studies was moderate to high, with a median score of 7 out of 9 stars and a range of 5 to 8 stars.

**Qualitative study:**

Almost half of the participants felt sexually undesirable one year after undergoing testing.

**Cohort studies:**

Four of six studies of mental health found no evidence of a mental health impact from HSV serological testing. One study found significantly higher levels of distress in participants who tested HSV-2 positive when compared to those who tested negative, but no differences in depression. Another study found higher levels of mood disturbance after testing compared to baseline.

Six studies investigated coping and counselling. Two out of three studies found no differences in coping and relationship quality in newly diagnosed participants compared with negative or previously diagnosed participants. Three out of three studies found that some participants required additional counselling after receiving a HSV-2 diagnosis, although in two of these studies the proportions were very small.

Five studies of sexual satisfaction found no evidence of a difference in sexual health and attitudes in HSV-2 positive participants when compared with baseline or seronegative participants.

Two out of three studies of herpes-related quality of life found no differences in quality of life scores in HSV-2 positive participants when compared with baseline or previously diagnosed participants.

Two out of four studies of HSV-2 perception and stigma found that a HSV-2 diagnosis was traumatic but two other studies found no differences in perception of stigma in HSV-2 positive participants when compared with baseline or HSV-2 negative persons.

There was no evidence of differences in acceptability of testing (three studies).

**Authors' conclusions**

HSV-2 diagnosis by type-specific serological testing did not result in long-term psychosocial harm in most people without an identified history of genital herpes.

**CRD commentary**

The review addressed a clear research question supported by appropriate inclusion criteria. Various relevant sources were searched to identify studies and there were specific attempts to find unpublished studies, which minimised the chances that studies were missed. Appropriate methods were used for study selection, study quality assessment and data extraction so the risks of reviewer error and bias were minimised. A valid tool was used for quality assessment. Studies were generally of moderate to high quality.

The control groups used in the comparisons varied, which increased the risk of bias and limited the applicability of the results. Outcomes were measured with various different tools and this precluded meta-analyses. The subjectivity of the self-reported outcomes meant that it is not possible to rule out bias in outcome measurement. The authors acknowledged that pre- and post-test HSV counselling might have confounded results.

The review was generally well conducted and the authors’ conclusions are likely to be reliable.

**Implications of the review for practice and research**

**Practice:** The authors stated that the review findings should be considered when developing future recommendations for HSV-2 serological testing. They suggested that broader testing would allow HSV-2 positive people to receive appropriate treatment for undiagnosed HSV-2 related symptoms and would allow both HSV-2 seropositive and seronegative persons to receive herpes counselling and education.
Research: The authors stated that future studies should address whether higher rates of HSV-2 diagnosis led to a reduction in transmission through partner notification, antiviral suppressive medication and condom use.

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