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Title **Non-Occupational Post-Exposure Prophylaxis for HIV: A Systematic Review**

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Aim

To review the evidence on the clinical effectiveness and cost effectiveness of nonoccupational postexposure prophylaxis (PEP) for HIV.

Conclusions and results

The limited evidence available does not enable conclusions about the clinical effectiveness of nonoccupational PEP for HIV. A review of cost effectiveness suggests that nonoccupational PEP may be cost effective, especially in certain population subgroups, but shortcomings in the cost-effectiveness studies mean that their results should be used with caution. One clinical effectiveness study meeting the inclusion criteria was identified (a cohort study of PEP in a high-risk HIV-negative homosexual male cohort in Brazil), but its quality was generally weak. Seroincidence in the cohort as a whole (2.9 per 100 person-years) was similar to that expected in this population (3.1 per 100 person-years, p>0.97), despite the seroconversion to HIV being 1/68 in the PEP group and 10/132 in the group not receiving PEP. High-risk sexual activities declined over time for both PEP and non-PEP users. Four economic evaluations met the inclusion criteria of the review, but their methodological quality was mixed. The studies are constrained by a lack of published data on the clinical effectiveness of PEP after nonoccupational exposure, with effectiveness data derived from one study of occupational PEP. Their generalizability to the UK is unclear. Results suggest that PEP following nonoccupational exposure to HIV was cost saving for men who have unprotected receptive anal intercourse with men, whether the source partner is known to be HIV positive or not; heterosexuals after unprotected receptive anal intercourse; and intravenous drug users, sharing needles with a known HIV-positive person. PEP following nonoccupational exposure to HIV was cost effective for all male-male intercourse and was possibly cost effective for intravenous drug users and high-risk women. Four additional studies yielded further information about adverse events associated with PEP after nonoccupational exposure to HIV. Most participants experienced adverse events, mainly nausea and fatigue. Rates were generally higher in participants receiving triple therapy than in participants receiving dual therapy. Completion of PEP therapy ranged from 24% to 78% of participants depending on therapy type. Toxicity was the main reason for discontinuing treatment.

Recommendations

It is not possible to draw conclusions on the clinical effectiveness of nonoccupational PEP for HIV because of the limited evidence in terms of quantity and quality of studies. One cohort study was identified that met the inclusion criteria for the systematic review. Four economic evaluations assessed cost effectiveness using evidence on the effectiveness of using PEP in an occupational setting. Results are consistent across studies and suggest that nonoccupational PEP may be cost-effective, especially in certain population subgroups.

Methods

See link www.hta.ac.uk/project/1716.asp.

Further research/reviews required

The most important research need is to establish the clinical effectiveness of nonoccupational PEP in the UK. Ongoing research in the NONOPEP project, an MRC-funded surveillance program of PEP for nonoccupational exposure to HIV, will address aspects of clinical effectiveness (seroconversion rates in people who take PEP compared with those who do not) and evaluate problems associated with taking antiretroviral medications. Data generated from this study can be assessed and used to inform future economic modeling of the cost effectiveness of nonoccupational PEP in the UK.

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