



Title FDG-PET to Assess Infections: A Review of the Evidence
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Aim

To research and appraise recent evidence on the effectiveness, cost effectiveness, clinical impact, and safety of fludeoxyglucose positron emission tomography (FDG-PET) compared to other imaging methods in diagnosing and managing infection, with the objective of informing guidance and policy on using FDG-PET for this indication.

Conclusions and results

Despite the wide range of potential indications for FDG-PET in infection, and many possible comparators, very few studies were retrieved within the parameters set for this review. We found no evidence on the safety of FDG-PET and little evidence on this technology's ability to affect treatment and outcome in patients with infections. Despite the relative cost of FDG-PET and its potential patient base, economic data were lacking. The results of this review suggest that FDG-PET may be more effective in diagnosing certain types of infection relative to other imaging techniques, but more research is needed.

Recommendations

Not applicable.

Methods

A comprehensive literature search identified systematic reviews and health technology assessments published between 2003 and March 2008, and randomized controlled trials, observational studies, and economic evaluations published between 2005 and March 2008. Two independent reviewers screened the English language studies meeting the inclusion criteria. The Centre for Evidence-Based Medicine (CEBM) tools for critical appraisal of systematic reviews and diagnostic studies were used to evaluate the studies in this review.

Further research/reviews required

More intensive studies or systematic reviews and analyses of specific indications regarding the effectiveness

of FDG-PET across indications and within a range of comparators are needed, as is evidence for this technology's potential to alter patient treatment and outcomes. Assessments of cost effectiveness and the possible impact on resource allocation and wait times are also required.