Surveillance of cirrhosis for hepatocellular carcinoma: systematic review and economic analysis


Record Status
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Citation

Authors' objectives
"The objective of this report was to evaluate the effectiveness, cost-effectiveness and cost;utility of surveillance of patients with cirrhosis [alcoholic liver disease (ALD)-, HBV- and HCV-related], using periodic serum AFP testing and/or liver ultrasound examination, to detect HCC, followed by treatment with liver transplantation or resection, where appropriate."
(from executive summary)

Authors' conclusions
In a mixed aetiology cohort, the most effective surveillance strategy is to screen each patient with AFP assay and ultrasound imaging on a 6-monthly basis. However, when costs are taken into account it is doubtful whether ultrasound should be routinely offered to those with blood AFP of less than 20 ng/ml, unless policy makers are prepared to pay a very high price (over 60,000 per QALY) for the extra benefits achieved. Furthermore, the cost-effectiveness of surveillance for HCC varies considerably depending on the aetiology of cirrhosis; it is much more likely to be cost-effective in those with HBV-related cirrhosis, and much less likely to be cost-effective in those with ALD-related cirrhosis. This may be largely due to the younger age at diagnosis of cirrhosis in patients with HBV. This raises the possibility that there may be further subgroups of patients with ALD and HCV, diagnosed with cirrhosis at a younger age, in whom more intensive surveillance might provide value for money.

Implications for policy
The results show that surveillance strategies for HCC are effective, and can often be considered cost-effective in patients with cirrhosis. We believe that the implementation of formal surveillance programmes should be considered where they do not currently exist.

The results also suggest that different surveillance strategies in patient groups with different underlying causes of cirrhosis may provide the best value for money, if appropriate recall systems could be implemented, and also if this was judged to be ethically acceptable.

A surveillance strategy in which AFP testing is used as a triage step probably represents the best value for money.

These results also suggest a possible shift in the clinical settings where cirrhosis surveillance is conducted; as AFP triage appears to be a highly cost-effective strategy, either annually or 6-monthly, it may be more appropriate to perform the initial screening test in the primary care setting. If effective surveillance programmes were to become widespread across the UK against a background of limited organ supply, the waiting list for liver transplants would undoubtedly increase. Detailed exploration of this was beyond the scope of this project, but preliminary findings suggest that this might be an important issue.

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