What is the cost of delayed diagnosis of bile acid malabsorption?

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Aims

To evaluate the cost of delayed diagnosis of bile acid malabsorption (BAM).

Methods

The notes of all patients undergoing selenium-75 taurocholic acid (SeHCAT) scanning in our trust over a 1-year period were reviewed retrospectively. The number of abnormal scans and patient response to treatment were recorded. Costs of additional clinics/tests/procedures performed before the diagnosis of BAM were calculated using National Institute for Health and Care Excellence (NICE) costing templates.

Results

1.5% of 3,860 new patients seen in our gastroenterology clinics between June 2016 and May 2017, 19 men and 37 women, median age 58 years (range 19–83 years), were referred for SeHCAT scanning. Of these, 64% were abnormal: 13 demonstrated severe (<5% 7-day SeHCAT retention), 13 moderate (5–10%), five mild (10–15%) and five borderline (15–20%) BAM. Underlying causes for BAM included cholecystectomy (n=13), chronic unexplained symptoms (n=12), inflammatory bowel disease (n=4), irritable bowel syndrome (n=4), right hemicolectomy for bowel cancer (n=1), diabetes mellitus (n=1) and multiple possible causes (n=1).

If SeHCAT scanning was ordered at first consultation (n=11), patients reported 24 months (median) of symptoms (range 6–360 months) and the mean diagnostic package of care cost was £910.75. If the SeHCAT scan was booked as second-line treatment or later (n=25), patients reported symptoms for a median of 30 months (range 0.5–360 months) and the mean diagnostic package of care cost was £1,481.73. However, in these patients nine instances of additional abnormalities were found: vitamin D deficiency (n=3), diverticulosis (n=2), folate deficiency (n=1), oesophageal dysmotility (n=1), renal cell carcinoma requiring nephrectomy (n=1) and *Helicobacter pylori* gastritis (n=1). Following diagnosis, treatment led to reported symptom improvement (n=24), no change/deterioration (n=3), not reported (n=9).

Conclusions

BAM is accurately diagnosed using a SeHCAT scan, which also defines treatments patients require. BAM causes chronic, often debilitating symptoms including loose stool, faecal incontinence and abdominal pain. Primary BAM affects 1% of Britons, yet is frequently misdiagnosed as irritable bowel syndrome. A further 1% have BAM secondary to other conditions. The 2012 NICE DG7 review of SeHCAT included a cost-effectiveness evaluation based on assumptions without supporting evidence.

In our trust, SeHCAT scanning is enormously underused. Late diagnosis of BAM is associated with markedly increased costs, unnecessary demands for other services and treatment delay for patients. National data on SeHCAT usage suggest that our findings will apply to most other trusts. More emphasis to ensure early diagnosis of BAM, a common, unpleasant and treatable condition, would bring the unusual but highly desirable result of significant health benefits while substantially reducing healthcare costs. ∎

Conflict of interest statement

Dr Andreyev has received free SeHCAT capsules for use in a clinical study for which he was chief investigator between 2014 and 2017. He has also received honoraria for speaking at meetings organised by GE Healthcare, manufacturers of SeHCAT.

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