POLYP DETECTION RATE OF CT COLONOGRAPHY, HOW DOES THIS COMPARE TO CONVENTIONAL COLONOSCOPY?

A M Verma, R Verma, D P Bridge, S Roche, R J Robinson. Gastroenterology, University Hospitals Leicester, Leicester, UK; Department of Radiology, University Hospitals Leicester, Leicester, UK; University of Leicester, Leicester, UK

Introduction

The national bowel cancer screening programme in the UK advocates colonoscopy to screen individuals with positive faecal occult blood tests. Alternative modalities include CT colonography (CTC).

CTC has become the non-invasive investigation of choice to assess the colon. It has superseded Barium enema and has the added benefit of detecting extra-colonic pathology. However its role in detecting polyps less than 1cm in size is limited. There is limited literature comparing polyp detection of CT colonography with colonoscopy in clinical practice.

Methods

Reports for CTCs undertaken at University Hospitals Leicester in the last quarter of 2008 have been analysed and polyp detection rate has been calculated. This was compared to data for every colonoscopy undertaken in the same period.

Results

CTCs also revealed 15 cases of colonic tumours. Significant extra-colonic pathology was discovered in 20 cases.

Conclusion

Polyp detection is a key component of colonoscopy and is used as a quality indicator. Analysis of CTCs shows a polyp detection rate of 10.32%. For colonoscopy, polyp detection rate was 20.45%, indicating a higher quality examination.

The two groups analysed differ, the colonoscopy group is larger (n = 714) and comprises of mainly middle aged patients (mean/median age = 55.75/58). CTC group is smaller (n = 281) with mainly elderly patients (mean age = 72.02, median = 76). However, as the incidence of colonic polyps increases with age, the difference in groups would tend to exaggerate the polyp detection of CTC and understate the polyp detection of colonoscopy when compared head to head.

In summary CT colonography is significantly not as good for diagnosing colonic polyps when compared to colonoscopy.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Age, mean/median</th>
<th>Male/female</th>
<th>Cases with polyp(s)</th>
<th>Polyp detection rate</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTC</td>
<td>281 72.02/76</td>
<td>118/163</td>
<td>29</td>
<td>10.32%</td>
<td>7.16% to 14.3%</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>714 55.75/58</td>
<td>347/367</td>
<td>146</td>
<td>20.45%</td>
<td>17.61% to 23.53%</td>
</tr>
</tbody>
</table>

It is an excellent investigation for elderly patients for whom the presence of small polyps is less relevant and the incidence of other significant pathology (including extra-colonic) is higher.

Competing interests None.

Keywords colonoscopy, CT colonogram, polyp detection rate.