Surgical practice in symptomatic and asymptomatic gallstone disease

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Aims: To determine the surgical practice in individuals with symptomatic and asymptomatic gallstone disease using a questionnaire survey. Methods: A questionnaire was sent to 724 patients with gallstone disease. Details of symptoms, duration of illness, nature of treatment including surgery, color of gallstones retrieved and postoperative follow-up particulars were obtained. Results: The study group included 225 (54%) men; there was a rising trend of prevalence of gallstones in men with increasing age (p<0.05). A third of the patients (142 [34%]) were symptomatic. The mean duration of symptoms was 12.1 months. One hundred and ninety seven patients (48%), including 90 asymptomatic ones, underwent cholecystectomy. Most patients (92.5% of those symptomatic and 76.6% of those asymptomatic) underwent cholecystectomy within one year of diagnosis. Eight asymptomatic patients underwent surgery 3 years or more after diagnosis. The predominant color of stones retrieved was black or brown (57%) or mixed (39%). Conclusions: A majority of patients with gallstone disease had cholecystectomy within one year of diagnosis. Black or brown pigment stones were the dominant types of gallstones. [Indian J Gastroenterol 2002; 21:142-144]

Key word: Cholecystectomy

The composition of gallstones in India shows regional variation. Cholesterol stones are the dominant type in the northern, eastern and western parts1-4 whereas black-pigment gallstones and mixed gallstones have been reported from southern India.5,9

We undertook a questionnaire survey in southern India to determine the surgical practice in gallstone disease in patients with or without symptoms. Open cholecystectomy was the popular method of surgery during the study period.

Methods

Records of 724 patients with gallstone disease identified between August 1986 and December 1997 at the Gastroenterology Department of our hospital, and residing in Chennai at the time of registration, were retrieved and analyzed.

A survey questionnaire was mailed to them between January 1998 and June 1998. The questionnaire ascertained the date of onset of presenting symptoms (related or unrelated to gallstone disease), description and duration of symptoms, date of diagnosis of gallstone disease, and treatment information including the date and type of surgery (laparoscopy/laparotomy). Among those operated on, the color and nature of the retrieved stones as observed by the patient and/or documented in the hospital case records were obtained. Postoperative follow-up was also obtained. Reminder questionnaires were mailed thrice at intervals of one month each, if no reply was received.

A symptomatic patient was defined as one who reported steady pain localized to the epigastrium or right hypochondrium, lasting for at least an hour and relieved with antispasmodics.10 Asymptomatic patients were those in whom gallstones were detected incidentally during health check-up or while investigating for dyspepsia or other gastrointestinal disorders. These patients were considered as symptomatic if colic occurred subsequently. The onset of illness was defined as the first day on which the patient had definite or vague symptoms that made him seek the advice of a doctor.

Statistical analysis

Comparisons were done using the F test or the Student's t test. All proportions were compared using the χ² test.

Results

Of the 724 patients contacted, 421 (225 men) responded to the questionnaire; one questionnaire was answered incompletely, therefore data of 420 patients were analyzed. The age and gender distribution of the responders and the non-responders was similar. The male-female ratio increased with advancing age (Table) (trend χ² <0.05). The median age of women was 50 years and that of men was 54 years.

One-third of patients (141; 34%) were symptomatic: women were more often symptomatic than men (78/195 [40.3%] versus 63/225 [28%]; p<0.01). The mean duration of non-specific symptoms suffered by asymptomatic patients prior to surgery was 17.4 months compared to 12.1 months by symptomatic patients (F test p<0.001).
Table: Distribution of 420 gallstone patients by age, sex and surgery

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Total</th>
<th>Men Operated (n)</th>
<th>Men %</th>
<th>Total</th>
<th>Women Operated (n)</th>
<th>Women %</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-34</td>
<td>22</td>
<td>14</td>
<td>63.6</td>
<td>37</td>
<td>20</td>
<td>54.1</td>
</tr>
<tr>
<td>35-44</td>
<td>30</td>
<td>12</td>
<td>40</td>
<td>36</td>
<td>24</td>
<td>67.7</td>
</tr>
<tr>
<td>45-54</td>
<td>62</td>
<td>26</td>
<td>41.9</td>
<td>50</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>55-64</td>
<td>66</td>
<td>26</td>
<td>39.4</td>
<td>44</td>
<td>21</td>
<td>47.7</td>
</tr>
<tr>
<td>65+</td>
<td>45</td>
<td>17</td>
<td>37.8</td>
<td>28</td>
<td>9</td>
<td>34.6</td>
</tr>
<tr>
<td>Total</td>
<td>225</td>
<td>95</td>
<td>42.2</td>
<td>195</td>
<td>102</td>
<td>52.3**</td>
</tr>
</tbody>
</table>

*p<0.03, **p<0.04 as compared to men

Of 420 patients, 197 (47%) underwent cholecystectomy. A larger proportion of women underwent cholecystectomy than did men (52.3% versus 42.2%; p=0.04), irrespective of symptoms. Among men, the frequency of surgery decreased with advancing age; the highest cholecystectomy rates were observed among men in the age group 15-34 years and among women in the 35-44 years age group.

The Figure depicts the time interval between diagnosis and surgery in the asymptomatic and symptomatic patients. A large number of patients in both groups underwent cholecystectomy within a month of diagnosis (35.5% asymptomatic vs 48.5% symptomatic). All but one symptomatic patient had cholecystectomy within three years of diagnosis; in the asymptomatic group, surgery was done more than 3 years after diagnosis in 8 patients. Pain persisted after surgery in eight patients (4%).

Most of the stones were located in the gall bladder alone (93%); 14 patients had additional stones in the common bile duct. Black (57%) and brown (39%) stones predominated; a few patients had either a combination type (10%) or white stones (3.5%).

Two patients died in the immediate postoperative period, one each due to septicemia and ischemic heart disease.

Discussion

Many subjects with cholelithiasis never experience symptoms attributable to these.11-15 The risk of occurrence of symptoms in patients with so-called ‘silent’ gallstones is low.15 The factors that determine the development of symptoms remain unclear. A greater propensity for gallstones to be symptomatic among women than among men has been observed previously.16-17 In the present series, 40% of women were symptomatic, versus 28% of men.

In our study, a large proportion of symptomatic patients underwent cholecystectomy (48.5% within one month of diagnosis and 92.5% within one year). However, even among asymptomatic patients, a large number underwent surgery (35.5% and 76.6%, respectively); in these patients, the indications for surgery were not clear. Prognosis of asymptomatic gallstones is quite benign and the high rate of surgery for this condition observed in our study may have been inappropriate. For instance, in the GREPCCO series11 only 23.7% of a cohort of 118 asymptomatic patients followed up for 10 years had one or more episodes of biliary colic. Similarly, Gracie et al12 followed up 123 healthy individuals with silent gallstones identified on cholecystography screening for 20 years, and found that biliary pain developed in only 16 persons. Attili et al12 reported that 51.5% (17 of 33) of their gallstone patients with symptoms at entry experienced no further episodes of biliary colic during follow-up, though three underwent surgery soon after study entry. In the GREPCCO study, only 45.2% of symptomatic patients underwent surgery. Thus, the rate of surgery observed among symptomatic patients observed by us may also have been inappropriately high.

Despite the inherent limitations arising out of its retrospective, questionnaire-based design, our study provides important information on surgical practice in southern India. The reason for the high frequency of surgery observed in both symptomatic and asymptomatic patients in our study is unclear, but may relate to undue concern for complications of gallstone disease. We believe that these high rates for surgery will increase further with the popularization of laparoscopic surgery.

References


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NEWS AND NOTICES
The annual conference of the Indian Chapter of the International Hepato Pancreato Biliary Association will be held in Cochin September 1-3, 2002. For details, contact: Dr H Ramesh, Organizing Secretary, 31/543, Subhash Nagar, Edappally, Cochin 682 024. Phone: (484) 33 8260, Fax: (484) 33 4691. E-mail: hramesh@vsnl.com, ihbpa2002@yahoo.com Website: www.ihbpa2002.org

The 3rd World Chinese Congress of Digestology will be held in China September 23-25, 2002. For details, contact: Lian-Sheng Ma, President of WCCD, P O Box 2345, Beijing 100230, China Fax: 86 65891893 E-mail: wcjcl@public.bta.net.cn

Current Perspectives in Liver Disease – 2002 will be held in Delhi October 5 and 6, 2002. For details, contact: Course Coordinator CPLD – 2002, Room 3065, 3rd floor, Teaching Block, All India Institute of Medical Sciences, New Delhi 110 029. Phone: (11) 659 3627, Fax: (11) 686 2663. E-mail: subratacharya@hotmail.com

The 43rd Annual Conference of the Indian Society of Gastroenterology, along with the Indian Association for Study of the Liver and Society of Gastrointestinal Endoscopy of India, and a satellite symposium and therapeutic endoscopy and Interventional radiology workshop will be held in Cochin November 20-26, 2002. For details, contact: Dr Philip Augustine, Organizing Secretary, Lakeshore Hospital and Research Center, NH 47 Bypass, Maradu, Nettoor PO, Cochin 682 304, Kerala Phone: (484) 70 1032, 70 1033 Fax: (484) 70 1996 E-mail: dwinndia2002@hotmail.com

The VI International Surgical Conference of the Society of Surgeons of Nepal will be held in Kathmandu, Nepal November 21-23, 2002. For details, contact: Dr Manohar Lal Shrestha, Organizing Secretary, Society of Surgeons of Nepal, NMA Building, Exhibition Road, Kathmandu, Nepal Fax: 977 (1) 22 5300. E-mail: snn@healthnet.np

The IXth Surgical Gastroenterology Week will be held in Lucknow February 7-9, 2003. For details, contact: SGE Week, Department of Surgical Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Raebareli Road, Lucknow 226 014 Phone: (522) 44 0700, 44 0800 Ext 2401, 2417 Fax: (522) 44 0017, 44 0073 E-mail: sgewek@sgpgi.ac.in

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