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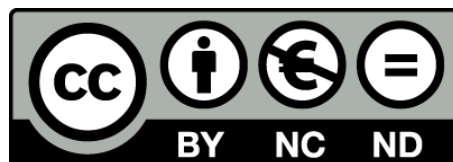
This is the **Accepted Version** of a paper published in the
journal ANZ Journal of Surgery

Hanney, Richard M., Bond, Geoff, and de Costa, Alan (1997) *Laparoscopic
cholecystectomy: the missed diagnosis*. ANZ Journal of Surgery, 67 (4). pp.
166-167.

[http://dx.doi.org/ 10.1111/j.1445-2197.1997.tb01932.x](http://dx.doi.org/10.1111/j.1445-2197.1997.tb01932.x)

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LAPAROSCOPIC CHOLECYSTECTOMY - The missed diagnosis

(LAP CHOLECYSTECTOMY - The missed diagnosis)

Richard M Hanney, Geoff Bond and Alan de Costa

Mount Druitt Hospital, New South Wales, Australia

Correspondence to:
Richard M Hanney
Clinical Superintendent in Surgery
Department of Surgery
Westmead Hospital
Westmead NSW
2145

ph (02) 98455555

SUMMARY

Background: All 534 laparoscopic cholecystectomies performed by 5 surgeons at a single institution over a three year period were reviewed as part of a quality assurance process. The aim of the review, which has previously been published in this journal, was to identify and quantify complications of the procedure. Five cases in this series were recognised where major intra-abdominal pathology not identified at the time of laparoscopic cholecystectomy required laparotomy shortly thereafter. These five cases are reported here as there has been little discussion in the literature of this problem associated with laparoscopic cholecystectomy.

Methods: The records of all 534 patients having a laparoscopic cholecystectomy between October 1990 and September 1993 were reviewed and entered into a computer database (Microsoft Access) This data collection and recording has subsequently become an ongoing process of quality assurance.

Results: Five of 534 patients treated by laparoscopic cholecystectomy failed to have resolution of their symptoms post-operatively. A laparotomy was subsequently required within 3-12 months and demonstrated causative pathology present, but not detected at, time of laparoscopic cholecystectomy. Where possible, treatment of these laparotomy findings resolved the initial presenting symptoms of colicky epigastric pain.

Conclusions: The rate of “missed diagnosis” is found to be < 1%. Laparoscopic cholecystectomy is a therapeutic, rather than diagnostic procedure, and pre-operative discussion should include the possibility of further procedures being required subsequently, particularly when symptoms and signs are atypical.

KEY WORDS: Crohn’s disease, Inflammatory bowel disease, Laparoscopic cholecystectomy, Misdiagnosis.

INTRODUCTION

Laparoscopic cholecystectomy (LC) is established as the treatment of choice for patients with symptomatic cholelithiasis^{1,2}. Comparisons made with the open procedure have focussed largely on relative morbidity and mortality in assessing risks and benefits. Laparoscopy has additionally been advocated as an investigative tool for diagnosis and staging of intra-abdominal disease³. In five instances of patients undergoing laparoscopic cholecystectomy at a single institution, an ensuing laparotomy was required within 3-12 months for separate abdominal pathology present as the principal diagnosis, but not detected, at the time of LC.

METHODS

Mount Druitt Hospital is a 200 bed community hospital in Sydney's western suburbs.

Data from all 534 consecutive laparoscopic cholecystectomies performed there by five surgeons between October 1990 and September 1993 were reviewed from their medical records and entered into a computer database (Microsoft Access). All patients had cholelithiasis demonstrated on pre-operative ultrasound. All complications were recorded and an analysis has previously been published⁴.

RESULTS

In the five cases tabled (Table 1), listed diagnoses made in months subsequent to laparoscopic cholecystectomy performance were found to have caused symptoms initially attributed to ultrasound-demonstrated cholelithiasis. The subsequent diagnoses were made following further investigations of pre-operative symptoms not relieved by cholecystectomy. In each case the major presenting symptom was colicky epigastric pain. In cases 1, 3, 4 and 5, treatment of subsequent laparotomy

findings resolved the presenting symptoms. Case 2 was recognised at laparotomy to be an inoperable pancreatic carcinoma, with infracolic metastases present.

Crohn's disease was present in two other patients involved in this review. One had previously undergone small bowel resections in whom LC was completed without difficulty. The other had symptomatic cholelithiasis but additional symptoms suggestive of Crohn's disease and the diagnosis was made at laparoscopy.

Patient 1 had also had a barium meal in the twelve months preceding LC that had not detected a large gastric tumour.

DISCUSSION

Upper gastrointestinal symptoms associated with cholelithiasis are predictably cured by cholecystectomy with unsatisfactory results in < 5% of cases⁵. Sources of patient dissatisfaction range from non-resolution of symptoms through a spectrum of recognised complications to symptoms not present pre-operatively. Although major gastrointestinal pathology may mimic the symptoms of gallbladder disease, there have been few previous reports of such pathology not detected at LC⁶.

Diagnostic laparoscopy has of itself been advocated as a tool for the diagnosis, staging and exclusion of intra-abdominal malignancy³. The performance of a therapeutic laparoscopy such as a routine laparoscopic cholecystectomy, however, is clearly a different procedure. With the focus of attention directed to the right upper quadrant and a restricted field of view there is limited opportunity for inspection of the intra-abdominal contents. The port placement is largely standardised and not ideal for general abdominal inspection. This placement in a diagnostic procedure is instead dictated by the symptoms being investigated and progressive findings.

Patient positioning and time constraints imposed in a routine therapeutic

laparoscopy are not amenable to the positional changes and time required for a diagnostic procedure. The opportunity for routine visceral palpation in the recently bygone era of routine open cholecystectomy has been lost.

With increasing emphasis being placed on minimally invasive procedures, there is a reduced opportunity for visceral palpation at the time of cholecystectomy. The incidentally discovered, asymptomatic gallstones in the presence of alternative symptomatic pathology⁷ are thus a stumbling block to remain borne in mind

The prevention of the "missed diagnosis" at LC is a difficult problem. A thorough clinical history and physical examination will leave some atypical presentations and still others with unsuspected pathology. In this series there was a combined incidence of <1%.

Pre-operative upper GI endoscopy has been recommended as a routine for those patients admitted to undergo LC in an attempt to minimise unsatisfactory results⁸. A large scale prospective trial of this approach found it to be "of no clinical benefit". Co-existing upper gastrointestinal tract abnormalities were found with no greater prevalence in patients with symptomatic cholelithiasis than in symptom-free, normal, individuals⁹. Similar findings had earlier been reported in relation to open cholecystectomy¹⁰.

Pre-operative investigations including ERCP, colonoscopy and small bowel enema may prevent procedures unsatisfactory to patient and surgeon alike in a limited number of cases as suggested by clinical findings and suspicion.

It can be expected that a surgeon performing sufficient numbers of laparoscopic cholecystectomies will experience cases where a subsequently established significant diagnosis, not detected at the time of LC, will become apparent. Further recruitment of cases in a prospective fashion may indicate whether or not this

incidence is likely to diminish with experience as has been found with bile duct injuries^{7,11}. Patients should be made aware pre-operatively that further investigation and treatment may still be required.

ACKNOWLEDGEMENTS

The authors would like to thank Drs G Ctercteko, A de Costa, D Hughes, R Wilkinson and JM Wyllie for their help and participation in this study; also Ms Judith Hooper, Medical Records Department, Mount Druitt Hospital for her assistance.

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