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# How to write abstract for a scientific journal article

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#### **ABSTRACT**

Abstract is the 'mini article'. It provides the background, the context, the purpose of the study. Briefly it describes the methods- where, how the participants were recruited, study design, variables studied, analytical methods and ethical issues. The findings are in line with the objectives and methods and its significance to draw the conclusions. The key words are listed at the end, in the journal style. Abstract is indexed and freely available. Thus, the information must confer to text.<sup>1-4</sup>

There is a word limit, usually of 250 words. Thus it requires time and skill to include important information with logical flow to 'capture' the essence of full article. The 'copy-paste' of sections from the main content should not be done because there is word limit. For example, there are only two to three lines of 20-30 words space for the 'background' in the abstract, unlike the 150 to 200 words for introduction section in the main article. Majority of readers, as much as three quarters, read only abstract after scanning for the title, and do not proceed to read full article due to unavailability of free-full-text or simply too many articles available on the net. Thus, abstract should contain as much information as possible in a concise form. Many non-English language journals publish abstract in English, which are indexed on various repository. Thus it is important to give time to write abstract, to 'hook' the readers and peers as well as increase visibility of the article. Even though, abstract appears at the beginning of the manuscript, it should be written when the article writing is completed. This allows elaborating upon key aspects of the paper, yet being concise, to help readers 'want' to read the rest of the paper. 1-4

There is often a question, especially for the beginners, to decide how much information is enough in the abstract. This is not that difficult to comprehend; a simple logic is consider- 'if the abstract is the only part of the paper accessible', it the story complete? As a reader or peer, are you happy with the amount of information, and if the answer is "no" then it has to be revised. The information in the abstract must make sense of the full article.

Abstract is written in different formats and author must comply with specific style of the journal they have chosen. More and more scientific journals use structured abstract, the 'AIMRAD' format i.e. abstract in IMRAD style- the 'Introductions, Methods, Results and Conclusion (instead of discussion section of the main article). Abstract do not have 'discussion' section. In 'unstructured' abstract there is no subheadings, and is written in a paragraph with the same flow as in the structured abstract.<sup>1-4</sup>

### Example of structured abstract<sup>5</sup> Summary

Background: Laparoscopic cholecystectomy uses smaller incision and trocars that lessen the contamination and exposure of wound, resulting in less infection. However, the antibiotic prophylaxis is still widely practiced, like in our institute, a continuation of the era of open surgery. Recent studies reveal no advantage of routine use of antibiotic, and there is growing consensus against it. Besides cost, antibiotic increases emergence of multidrug resistance. Because of the controversies, we conducted this clinical trial.

Methods: This randomized clinical trial, conducted from October 1, 2009 to September 31, 2010 at Patan Hospital, included 154 patients in prophylactic antibiotic group (GrAP) with cefazolin 1 g IV as per existing practice and 156 in no antibiotic group (GrAPn). Symptomatic laparoscopic cholecystectomy patients of American Society of Anesthesiologist (ASA) 1 and 2 (without diabetes) were included. Patients with complicated gall stones (cholangitis, choledocholithiasis, and pancreatitis) and who required conversion were excluded. Wound was observed during follow-up within 1 week. Data on patient characteristics, use of antibiotic, bile spillage, and postoperative wound infection were entered in predesigned proforma. Microsoft Excel was used to analyze the data.

Results: In total, 310 patients were eligible for analysis, 154 in GrAP and 156 in GrAPn. Both groups were comparable in patient demographic and clinical characteristics such as average age (40.3 vs. 41.6 years) and sex (female 77.6% vs. 78.6%). Overall wound infection occurred in 4.8% (15/310). There was no significant difference in wound infections among the two groups (p Z 0.442): GrAP 3.9% and GrAPn 5.8%. There was no mortality in this series.

*Conclusion:* Routine preoperative antibiotic prophylaxis is not necessary in low-risk symptomatic gallstone patients undergoing laparoscopic cholecystectomy.

**KEYWORDS:** antibiotic prophylaxis; laparoscopic cholecystectomy; surgical site infection; wound infection

# Example of unstructured abstract<sup>6</sup> ABSTRACT

In laparoscopic cholecystectomy (LC), cystic duct and artery are normally secured with titanium clips.

Intracorporeal ligation is normally superior to extra corporeal knotting. Most studies report of separate and multiple ligations of cystic duct and artery, which are viewed as technically demanding and time consuming. Similarly the harmonic scalpel and 'LigaSure' are prohibitory expensive for resource limited country like Nepal. After several modifications, we observed the success of intracorporeal "single ligation of cystic artery and duct" with free silk tie. From Jul to Oct 2009, after a pilot study and several modifications of intracorporeal ligation, we successfully used single ligation of cystic artery and duct (SLAD) with free silk 2/0 in symptomatic cholelithiasis patients.80 cases undergoing elective laparoscopic cholecystectomy. There were 80 patients, females 71.0% (n=57). Average age of patients was 39 yr (14-65). We had no bile leak or other complications related to ligature. The time taken for tie varied from 2 to 7 minutes (average 3 min). In 3 cases, a 5th port was made to grasp and ligate the bleeding vessels. There were 19 (25.0%) acute calculus cholecystitis, including mucocele, empyema, gangrenous cholecystitis. Two patients (2.0%) had inflammation of umbilical port which healed spontaneously. This technique of intracorporeal single ligation of cystic artery and duct (SLAD) in LC is simple, safe and economical. SLAD do not increase operative time as only single tie is used. This no clip laparoscopic cholecystectomy (NCLC) eliminates the clip related complications.

**Keywords:** Clips, cystic duct, laparoscopic cholecystectomy, ligation.

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