


Qualitative analysis of theses on laparoscopic cholecystectomy

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ABSTRACT

Objectives: The purpose of this study was to examine bibliographically the theses on laparoscopic cholecystectomy in our country and to provide the researchers with a perspective on the elimination of the deficiencies in this field.

Materials and methods: Content analysis and descriptive analysis methods, which are among qualitative research methods, were used in the study. The study group conducted research in the field of general surgery in Turkey until December 31, 2020, with the keyword “laparoscopic cholecystectomy” indexed in the National Thesis Center database of the Council of Higher Education (CoHE). A thesis review form was created to analyze theses with digital copies that can be accessed after a list of theses was created. The thesis supervisor, institution, research method, data analysis techniques, advisor titles, working group, and research subjects, as well as the year the theses were published, were all examined.

Results: The research included 45 theses. It was determined that most theses were recorded between 1995 and 2000. Thirty-two of them (71.1%) were made in universities. The institution with the most theses on this subject was GATA/Haydarpaşa Training Hospital. There were 32 prospective and 39 clinical trials. Only two of the studies were randomized, while the other two were experimental.

Conclusion: It was determined that the majority of the theses were about clinical research and operation results, but there were very few experimental and randomized controlled studies, and no animal experiments were found. It can be concluded that studies on this subject, which is one of the most common general surgery operations, are needed.

Keywords: General surgery, laparoscopic cholecystectomy, thesis.

The gallbladder is surgically removed in a procedure known as cholecystectomy. Laparoscopic cholecystectomy (LC) can be performed using a video camera via laparoscopy or open surgical techniques.^[1] Laparoscopic cholecystectomy is considered the gold standard in gallbladder surgeries and is one of the most common surgeries performed in general surgery due to its low morbidity and mortality rates.^[2] Laparoscopic cholecystectomy has been extensively discussed in previous years in terms of both open cholecystectomy superiority and indications, and it has been the preferred method in recent years.^[3] In our country, LC is accepted as a technique that can be used

safely and with high patient satisfaction rates in selected cases.^[4]

Aside from training specialists in one field, the most important task of graduate education institutions is to train future academicians. The theses prepared in this context are made in different departments. To evaluate these theses from an integrated viewpoint, a bibliometric method is needed.^[5-8]

The objective of this study was to examine bibliographically the theses on LC in our country and to provide the researchers with a perspective on the elimination of deficiencies in this field.

MATERIALS AND METHODS

Workgroup

The study group consisted of 45 theses conducted in the field of general surgery in Turkey until December 31, 2020, with the keyword “laparoscopic cholecystectomy” and indexed in the Council of Higher Education (CoHE) National

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Thesis Center database. After the preparation of a list of theses that can be accessed in the CoHE National Thesis Center database, the theses that have a digital copy were recorded and analyzed on the computer by creating the thesis review form. The forms previously used in similar studies were analyzed when creating the thesis review form, and a draft form was created.^[5-8]

In this study, content analysis and descriptive analysis methods from qualitative research methods, which are commonly used in social sciences, were used. This is a common method for analyzing academic studies from various perspectives with historical change. It is commonly used to determine the present situations and trends by analyzing publications.^[5-8] The thesis supervisor, institution, research method, data analysis techniques, advisor titles, working group, and research subjects, as well as the year the theses were published, were all examined.

Since this study was conducted using a data analysis technique from the Council of Higher Education's open access system, no ethics committee permission is required. The study was conducted in accordance with the principles of the Declaration of Helsinki.

Data analysis

In the study, the bibliometric method was examined using content analysis and descriptive analysis (frequency analysis). Diodato^[9] defines bibliometry as the method used in the examination of scientific information-sharing tools such as published journals, books, and so on applying mathematical and statistical techniques.

While the content analysis was carried out in our study, descriptive analysis was carried out on the graduate theses themes and codes. The research method was evaluated using sample group frequency analyses, data collection techniques, and data analysis methods.

RESULTS

Descriptive analysis

The study included 45 theses. The contents of the parameters evaluated in the analysis are shown below.

1. *The year of publication of the theses:* When the distribution by year was examined, it was found that the majority of theses were done between 1995 and 2000 (Table 1).
2. *Levels of theses:* There were the most medical specialties (86.6%) and the second-most master's level (8.8%) determined (Table 1).

Sample groups and thematic analyses

1. *The institution and permission status of the theses' publication:* Thirty-two (71.1%) of the theses were written in universities, seven (15.6%) in the Republic of Turkey Ministry of Health Hospitals, and six (13.3%) in Gülhane Military Medical Academy (GMMA) Haydarpaşa Training Hospital. The institution with the most theses on this topic was GMMA/Haydarpaşa Training Hospital. There were four theses from Trakya University, three from Istanbul University-Cerrahpaşa Faculty of Medicine and Afyon Kocatepe University, and two from Ankara University. Two of them were also from a private university hospital. Thirty studies were allowed access. The 21/22 thesis was accessible after 2006.
2. *Thesis advisor:* When the distribution of thesis advisors was analyzed, it was noticed that 23 (51.1%) were Professor Doctors, 11 (24.4%) were Associate Professors, and six (13.3%) were Assistant Professors. In the review of five thesis, this information was not found.

Table 1. The category of theses and their distribution by year

The category of theses	1995 before	1995-2000	2001-2005	2006-2010	2011-2015	2016-2020	Total
Master theses	0	0	1	0	3	0	4
Doctoral dissertation	0	0	0	0	0	2	2
Medical specialty	4	11	6	5	5	8	39

3. *Sample size/sample types*: When looking at the sample size, it was found that it varied from 13 to 1,641. In terms of sample types, 44 were patients and one involved surgeons.
4. *Control group*: There was a control group in only eight of the studies. The patients in the study group of 18 were compared to each other. Eighteen of them did not have a control group, and one did not have access or had no summary.
5. *Study type/data analysis*: There were 32 prospective studies and 11 retrospective studies. There were 39 clinical studies.

Table 2. Thematic analysis of sampling

Sampling	n	Subject	n
General surgeons	1	Scale development	1
Patients	44	Operational results	13
		Postoperative pain	5
		Effect on laboratory parameters	3
		Effect on gastrointestinal functions	3
		Hemodynamic effects	3
		Surgical timing	2
		Radiological parameter	2
		Determining the operational indication	2
		Preoperative endoscopic retrograde cholangio pancreatography indication	1
		Surgical technique	1
		Determination of the relationship between education and anxiety in patients	1
		Examination of patients' compliance with postoperative service	1
		Determining the outpatient's compliance criteria for the analysis protocol	1
		Determining the rate of bile duct injury and treatment methods	1
		Score improvement	1
		Effect on respiratory functions	1
		Determining the preferred anesthetic method	1
		Comparison of preoperative radiological findings with postoperative histopathology results	1
		Effect on immune response	1
		Postoperative dressing	1
New operation method	2		

Table 3. Study type

Sampling	Frequency (n)
Survey study	2
Clinical trial	39
Unknown	2
Randomized study	2
Experimental study	2
Three-blind experimental study with randomized placebo control	1

Only two of the studies were randomized, and the other two were experimental (Table 2, 3).

DISCUSSION

According to the Council of Higher Education National Thesis Center, there are 3,528 theses in the field of general surgery, and 45 (1.27%) of them were on LC as a result of our study. In this case, it may be stated that more research into LC, which is one of the most common general surgical procedures, is needed. When taken with the other findings of our study, this may be useful information for consultants considering a thesis topic in this field.

When reviewing at the international literature, it is apparent that publications on LC have remained steady, especially after 1990. Our study was interpreted as having the highest number of theses between 1995 and 2000, then decreasing slightly in the following years before resuming but not at the desired level after 2016.

When the controversy regarding LC initially emerged in the field of surgery, it was seen to be revolutionary. In light of recent technical advancements, robotic cholecystectomy has been regarded by certain studies as a safe alternative to traditional LC.^[10] Although this surgical method is used in some hospitals in our country, no theses have been written in this field.

Ferhatolu et al.^[11] conducted a similar study, analyzing general surgery theses from Turkey between 1998 and 2018. The publishing rates of the theses examined in this research were found to be low when compared to other branches of medicine. This descriptive study may provide insight into general surgery theses' low scientific publication rates. This was interpreted as indicating that more research was needed to determine the underlying reasons of lack of performance. The number of randomized controlled trials regarded to be of scientific quality in our study supports up this claim. This field, in particular, has an obvious need to increase the quality of well-designed theses. According to the same study,^[11] theses on peritoneal/omentum diseases and skin/wound healing had greater publishing rates, and the

lack of significant publications in international journals from the theses on the subject of our study highlights the need to revisit this issue. In addition to the traditional surgical approach, it was determined that in recent years, publications at the master's and doctoral level have arisen, and that these studies have been well-constructed in the form of randomized controlled or even three controlled studies. This could lead to researches interested in working in this field. The vast majority of the theses^[12-55] in the field of LC were done in our country between 1995 and 2000, and it was determined that they were written at a high level of medical specialties. However, it was determined that the few theses existed in the field of master's and doctorate. There were theses on the majority of clinical research and operation results, but there were very few experimental and randomized controlled trials, and no animal experiments. By broadening the scope of the research, more detailed information can be obtained. This type of comparative research can provide researchers who will be studying in this field with a perspective on progress in the area.

There were two limitations to the study. One of these limitations was that it was restricted to theses written in our country. The second was the publication rates of theses, such as those analyzed by Ferhatolu et al.,^[11] were not examined.

In conclusion, it was determined that the majority of the theses were about clinical research and operation results, but there were very few experimental and randomized controlled studies, and no animal experiments were found. It can be concluded that studies on this subject, which is one of the most common general surgery operations, are needed.

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