

CLINIAL CHOLELITHIOLOGY

临床胆石病学

吴阶平题



吴金术 / 主编

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CLINICAL CHOLELITHIOLOGY

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黄 序

临床胆石病学

胆石病是世界性的高发性疾病，对人类健康的危害极大。随着世界性人口老龄化的趋势，胆石病发病率不断升高，我国自然亦不例外。其悠久的历史渊源已被湖南长沙马王堆西汉（公元前 167 年）古墓中的女尸胆囊内所含胆固醇结石及胆色素性结石所证明。

胆石病的临床诊断与治疗是当前临床上多学科工作的重要内容。我国的胆石病与西方国家中所见的有明显差别，主要是我国胆管疾病和原发于胆管系统的结石更为常见，其相对发病率达到胆石病患者的半数。原发于胆管的结石病有其错综复杂的原因，并非一般外国学者认为的那样，仅仅与中华分枝睾吸虫的感染有关。虽然，近 20 年来我国胆石病的相对发病率已呈明显改变的倾向，即在一些大城市中，胆囊结石的相对发病率已上升到接近发达国家的水平。但从全国范围来看，在诸多内地省份和广大的农村人口中，胆管结石病相对发病率仍然占有相当的比例。

原发于胆管（含肝内胆管）系统的结石，以多发于中青年，并发症发生率高、复发率高、病死率高为特点，一直被称为“难治病”，或称为“东方的”疾病。其病情复

杂而又没有西方国家的治疗经验可依循，半个世纪以来，所获得的进展，完全依靠我国外科医务工作者不懈的努力和创造性的工作。

湖南是胆管结石病的高发区，给当地人民的健康造成严重威胁。吴金术主任医师在 10 多年的外科临床工作中，以坚韧不拔的精神，长期不懈地为胆石病特别是胆管结石及肝内胆管结石病的外科治疗做了大量创造性工作，挽救了许多重危病人的生命，并为 1000 多例肝胆管结石病人做了“盆式内引流”手术。特别令我感动的是他以一丝不苟的精神从事工作，积累了极丰富的原始资料。由于临床外科学仍然是一门经验积累的科学，原始的实践经验记录最能给后来者启发和借鉴。

《临床胆石病学》是一本概括胆石病各方面内容的多学科性著作。该书以外科治疗为重点，从临床实际出发，围绕着实践中遇到的问题，详加论述，故对广大临床外科医师将有很大的帮助。

黄志强

1997 年 8 月于北京
解放军总医院

Huang Prelude

Clinial Cholelithiology

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Cholelithiasis is a worldwide disease with a high incidence and does harm to human health. With the aging of population throughout the world, cholelithiasis is becoming more common. The same is true for China. Cholesterol stones and bilirubinate stones have a long history in our country. They were discovered in the gallbladder of the famous female corpse of Xi Han Age (167 B.C.) in Hunan, China.

The treatment of cholelithiasis is an important task involving multiple clinical departments. Cholelithiasis in China is significantly different from that in western countries. Biliary ductal diseases and calculosis originating in biliary system are more common in our country; their relative incidences amount to half of the cholelithiasis cases. The cause of calculosis originating in biliary system is very complex and the disease is not a result of clonochis sinensis infection as is considered by oversea scholars. In recent 20 years, the relative incidence of cholelithiasis in our country appears to have

changed remarkably; the relative incidence of gallbladder stone in some big cities has gone up and is nearly as high as that in developed countries. But biliary ductal stone is not disappearing in our country. Its relative incidence still predominates in many mainland provinces and among rural population.

The calculi originating in biliary system (including intrahepatic biliary ducts) is characterized by a higher incidence in young and middle-aged people, high complication rate, and high recurrence and mortality. Idiopathic biliary ductal stone and intrahepatic stone are usually known as "intractable" and "eastern" diseases. Their treatments have been improved to some degree in the past 50 years fully owing to our surgical workers' unremitting efforts and creative work despite their complexity and the lack of western experience to follow.

The incidence of biliary ductal stone is very high in Hunan, China and seriously influences people's health in this region. Wu Jingshu, attending doctor and vice director

of Hunan Provincial People's Hospital, has done much creative work indomitably and persistently for the treatment of cholelithiasis, mainly of biliary ductal stone and intra-hepatic stone, and rescued many critical patients. He has done hepatoenterostomy with a base-typed plasty on more than 1000 patients. He is scrupulous with every detail in his work and has accumulated plentiful original materials, by which I am particularly moved. Clinical surgery still needs accumulation of experience, which will present the best reference and enlightenment to followers.

Clinical Cholelithiology is a great book covering various aspects of cholelithiasis and concerning multiple clinical departments. It serves clinical needs, lays emphasis on surgical treatment of cholelithiasis and discusses in detail the problems in practice. It is therefore very helpful to broad masses of surgeons.

Huang Zhiqiang
PLA General Hospital
Beijing
August, 1997

夏 序

临床胆石病学

胆石病是常见病，但却是外科治疗中的难题。长期以来，手术效果远不能令人满意，特别是肝胆管结石病。早在1989年，我在《实用外科杂志》发表的“努力提高肝内胆管结石症的诊治水平”一文中，引用当时的统计数据，指出手术后残留结石率少者为36.8%，一般高达60%~80%，再次手术率占再诊病人的半数以上。至90年代，随着医学的进步，现代影像学诊断的运用，手术技术水平的提高，肝胆管结石手术治疗的疗效如何呢？1996年9月出版的《肝胆胰脾外科杂志》上刊登的两篇文章中指出：经全国性调查，手术后残留结石率约有30%（黄志强），再手术率仍高达33.14%~74.4%（陈希纲、刘家奇），由此可以说，进展不大。而另一方面却传来喜讯，湖南省人民医院报告指出近13年来，收治1010例肝胆管结石症，应用该院创制的盆式引流术，残石率仅为17%，再手术率仅为1.7%。上述三个疗效数字的纵向、横向对比差别如此明显，这不是引人深思和富有启发性的吗？

我曾在上文中提到，在肝胆管结石治疗中，要确认攻克胆管狭窄是手术的关键。认为应开展新的经肝进路，以便在直视下直接到达Ⅱ、Ⅲ级狭窄胆管，从而为广泛切开术

创造条件，做到“狭窄到哪里，切开到哪里”。指出扩大高位V型切开与肝门胆管盆式切开术远较老的术式为彻底。文中所推荐的术式，就是湖南省人民医院创制的肝胆盆式内引流术，十分明显，这个新术式是获得优良疗效的根本原因。

吴金术教授及其单位中的外科医师们，在围绕发展肝胆管盆式内引流术的过程中，积累了丰富的经验，提出了“12字技术”原则，论述了“1~3级肝胆管切开”，入肝的“8条途径”等关键环节，其中“12字技术”原则所概括的“边缝、边扎、边牵、边切、穿刺、引流”操作程序，无疑是肝胆管结石手术的最根本的技术途径。与此同时，还发明了“牛角式灌洗器”、“囊式吸引器”、“胆管气囊导管”等7项获得国家专利的术式方法和手术器械，开展了一整套常用术式，如围手术期防治并发症的处理等，这对我国胆道外科和胆石病外科的理论和实践是一个新的创造、完善和提高。

十分值得高兴的是，吴金术教授以上述内容为核心，精心编撰了这本《临床胆石病学》大型专著，从胆石病的发展沿革、解剖、生理、结石成因、病理学、流行病学，到现代化的各种诊断和鉴别诊断技术，系统地作了阐述。不仅对重点术式——盆式内引

流术进行了详尽论述，同时也介绍了其他术式与再次手术，辅以非手术治疗和内窥镜监护，术后并发症的防治等，赋予全书技术内容在理论和实践上的全面性、系统性、创新性、科学性、学术性和实用性。书中 1000 余幅插图和相片，都选自作者临床实践，真实而切情，弥足珍贵。全书结构严谨，层次分明，文笔流畅，图文并茂，堪称我国胆道外科和胆石病外科的一代巨著。

我有幸先睹为快，捧读爱不释手，不觉

之中已夜深月沉，仍饱览不倦，深感本书内容丰富，术式描述详尽实在，富有真实感，可直接应用于实践之中，实为广大普外科与胆道外科医师必备的蓝本，因此郑重推荐，我深信本书定将受到普遍欢迎。

夏穗生

1997 年 4 月于湖北武汉
同济医科大学

Xia Prelude

Clinial Cholelithiology

Cholelithiasis is a common disease, but it presents difficulty in surgical treatment. For a long time, the operation outcome has been far from satisfactory, especially for hepatobiliary stone. As early as in 1989, in my paper *Making Efforts to Improve Diagnosis and Treatment of Intrahepatic Stone in Hepatobiliarypancreatosplenic Journal of Surgery*, I cited the statistical data available and pointed out that the postoperative remaining stone rate was 36.8 percent in hospitals experienced in the operation, but usually it was up to 60 ~ 80 percent; reoperative rate reached as high as half of the re-diagnosed patients or over. With the progress in modern image diagnosis and improvement of operation techniques, what is the efficacy of hepatobiliary stone? According to two papers in *Journal of Hepatobiliary Surgery* (June, 1996), the concerned national survey showed that the postoperative remaining stone rate was about 30 percent (Huang Zhiqiang); reoperative rate was still as high as 33.14 ~ 74.4 percent (Chen Xi

gang, Liu Jiaqi), from which no obvious improvements could be defined. Meanwhile good news from Hunan Provincial People's Hospital was going around: in recent 13 years, postoperative remaining stone rate was only 7 percent, and reoperative rate 1.7 percent for 1010 cases of hepatobiliary ductal stone treated by Internal Drainage with Hepatobiliary Basin created in this hospital. The longitudinal and horizontal comparison of the three efficacy data was obviously significant, which is inspiring and worth thinking over.

I wrote in my paper of 1989 mentioned above that for the treatment of hepatobiliary ductal stone, it should be recognized that the key to operation is removal of stricture by new approaches into the liver, reaching directly 2nd~3rd narrow biliary ducts under visualization, and preparing for an extensive incision. That means the incision should reach where the stricture is. A highly extensive position and V-mode incision and hilar biliary basin is far more complete than the old

method. The operation mode I would like to recommend is Internal Drainage with Hepatobiliary Basin, which is obviously the determinant of good operation outcome.

During the development of Internal Drainage with Hepatobiliary Basin, Professor Wu and his colleagues accumulated a wealth of experience and developed the "12-word technique", 1st~3rd order hepatobiliary duct incision, and 8 approaches into the liver, which are key steps of the operation mode. The "12-word technique" means conducting ligation while performing suture, incision while traction and drainage while puncture, which is the essential technique of operation for hepatobiliary ductal stone. They also developed 7 national patents for Ox Born Irrigation Instrument, Cyst Suction Instrument, Biliary tract Balloon Catheter, etc. The whole set of common operation modes developed by them includes treatment and prevention of perioperative complications, which present creation, completion and improvement in biliary surgery and cholelithiology.

We are very happy that Professor Wu meticulously compiled the great book *Clinical Cholelithiology*. It centers on the above-mentioned contents and systematically elucidates the development, anatomy, physiology, etiology, pathology, epidemiology of cholelithiasis and various modern techniques

of diagnosis and differentiations, not only including the important operation mode —— Internal Drainage with Hepatobiliary Basin —— but also other modes and reoperation, adjuvant conservative treatments, endoscopic monitoring and prevention and treatment of postoperative complications, making the theories and techniques in the book comprehensive, systematical, creative, scientific, academical and practicable. More than 1000 diagrams and photographs were selected from the authors' clinical practice. They are truly practicable, rare and worth reading.

I am very pleased to be the first reader of the book, often fondling it with admiration, failing to realize that it is already the dead of night, and being absorbed in it untired. I think that the book covers substantial contents, and its description of operation modes is real and detailed. The book can be used directly in clinical practice and is therefore an necessary reference for all general and biliary surgeons, to whom I recommend it in earnest, and I fully believe that the book will be welcome universally.

Xia Suisheng
Tongji Medical University
Wuhan, Hubei
April, 1997

刘 序

临床胆石病学

胆石病是胆道外科的最常见疾病,根据我国自然人群的普查报告,其平均发病率为5%~6%,在我国南方和沿海地区原发胆管结石占胆石病的50%~70%。胆管结石是急性梗阻性化脓性胆管炎的主要病因,急性梗阻性化脓性胆管炎是普通外科良性病中死亡率最高的病种。由胆结石引起的胆绞痛、急性胆囊炎、急性梗阻性化脓性胆管炎严重地影响着病人的生活与生命。因此,如何有效地治疗胆石病是国内外胆道外科医师共同关心和探讨的课题。

近20年来,胆石病的诊断与治疗水平有了显著提高,其首要原因是胆道系统的影像检查,如B型超声断层、经皮经肝胆道造影(PTC)、内镜镜胰胆管造影(ERCP)和X线电子计算机断层(CT)等的广泛应用,使得胆道外科医师在手术前对胆结石存在的部位、数量、大小、形态以及胆结石引起的肝脏和胆道的病理改变有较清楚的了解,能够制订一个比较科学而完善的手术方案。其次是胆道外科医师在科学诊断的基础上努力改善和改进了手术方式和手术方法。介入超声、介入放射、内镜外科的发展又为胆结石的治疗增添了辅助措施,从而使胆结石的治疗效果有了明显提高。

吴金术大夫及其同事们从事胆石病,特

别是肝胆管结石的临床研究已有10多年,经治了大量结石病人,积累了丰富的临床经验,改进了手术方法,创造了1~3级肝胆管显露、切开的“12字技术”规程,摸索出入肝的“8条途径”,完善了肝胆管盆式胆肠内引流术,获得了优良的治疗效果,使病人在保存病肝的同时获得康复,为胆石病的治疗做出了贡献。

对解剖和病理改变的深刻了解,以及相应器械的发明是改进手术方式的基础。吴大夫通过长期临床实践,对肝内胆管的解剖和胆石引起的病理改变进行了深入的研究,获得了宝贵的资料,在此基础上的手术方式改进是科学的。与此同时,又设计制作了与此手术配套的灌洗器、吸引器和造影用的胆道气囊导管,使得改进后的手术方式更加完善、实用。

吴大夫及其同事们在胆石病治疗方面所取得的成果已引起国内同道的重视,并且在国内相当多的医院得到推广,这次又经过10年的努力,把他们积累起来的经验和教训编著成集,对广大胆道外科工作者系统学习他们的方法具有深远的意义。我有幸先读此书,深感获益匪浅。此书在基础理论和临床实践两方面均做了较详细的介绍,特别对肝胆管结石的手术治疗做了较详细的阐述,

不但介绍了一般手术原则，更指出了手术中的注意事项和手术中容易发生的错误，至于手术中失败的教训更是可贵。大量的图片和病例介绍体现了作者的丰富经验，同时也有助于对此书的理解。此书不但介绍了胆石病的治疗经验，而且也介绍了胆石引起的其他器官疾病的诊治方法，不愧为一本胆石病的

专著。我相信此书将在指导胆道外科医师治疗胆石病的临床实践中发挥重大作用。

刘 国 礼

1997年8月2日于北京

医科大学第一医院

Liu Prelude

Clinial Cholelithiology

Cholelithiasis is the most common disease in biliary surgery. Its average incidence is 5~6 percent according to a survey on Chinese natural population. Idiopathic biliary ductal stone accounts for 50~70 percent of cholelithiasis cases in southern and coastal regions of our country. This disease is the main cause of acute suppurative obstructive cholangitis with the highest mortality of benign diseases in general surgery. Biliary colic caused by gall stone, acute cholecystitis and acute suppurative obstructive cholangitis affect severely the life and health of human beings. Therefore, biliary surgeons all over the world should pay attention to cholelithiasis and try to work out an effective treatment.

In recent 20 years, obvious improvements have been made in the treatment and diagnosis of cholelithiasis mainly owing to extensive application of image examination, such as B-mode ultrasound tomography (B-UT), percutaneous transhepatic cholangiography (PTC), endoscopic retrograde

cholangiopancreatography (ERCP), and computerized tomography (CT). The use of these techniques and apparatuses helps delineate the position, number, size and shape of the gall stone and provide surgeons with pathological features of the whole biliary tree before operation, assisting them to make a more scientific and perfect operation plan. Based on this scientific diagnosis, the operation modes and methods are improved by biliary surgeons. Furthermore, the development of interventional ultrasonography, interventional radiology and endoscopic surgery also presents adjuvant measurements and contributes to the big enhancement of therapeutic efficiency of gall stone diseases.

Doctor Wu Jinshu and his colleagues have been conducting clinical researches for 10 years on cholelithiasis, laying emphasis on intrahepatic stones. They have accumulated plentiful clinical experience, improved the operation modes, created the exposure of 1st ~ 3rd order hepatobiliary ducts and "12-word technique", developed "8 ap-

proaches" into the liver, perfected cholecystoenterostomy with a hepatobiliary basin, and achieved excellent therapeutic results, so their patients may get recovered with their ill liver remaining in the body. What they have done makes great contributions to the treatment of cholelithiasis.

Thorough understanding of the anatomy and pathology of gall stone and the development of appropriate instruments laid foundations for the improvement of operation modes. Doctor Wu Jinshu went deep into the study of anatomy and pathology of intrahepatic biliary ducts through clinical practice and obtained precious materials, which made the operation modes improved scientifically. In the meantime, he devised irrigation and suction instruments and biliary duct balloon catheter for radiography and made the operation modes more effective and practical.

The achievements in the treatment of cholelithiasis by Doctor Wu and his colleagues have attracted attention from hepatobiliary surgeons and been adopted by many hospitals all over the country. I think, the book *Clinical Cholelithiology*, based on their experience and lessons, is profoundly signifi-

cant for all biliary surgeons to learn systematically. I am lucky to be the first reader of this book and have certainly learned much from it. The book introduces in detail both basic theories and clinical practice, and describes operative treatments of intrahepatic cholelithiasis including general principles, matters needing attention and possible mistakes throughout operation. The lessons from their operation is very precious. A lot of pictures and case presentations in the book indicate that Doctor Wu is very experienced and they will help readers to understand this book. I think that it is a great book on cholelithiology for it introduces not only the experience in treatment of cholelithiasis but also the diagnosis and treatment of other organ diseases caused by gall stone.

I believe that the book will play an important role in guiding biliary surgeons in the clinical treatment of cholelithiasis.

Liu Guoli
the First Hospital of Beijing Medical University
Beijing
April, 1997

前言

临床胆石病学

胆石病患者约占人群的10%。它的并发症及合并症多,是一种全身性疾病,遍布全球,跨越各个年龄段,严重影响、危害人们的健康。

在学习、继承前人经验的基础上,凭借迅速发展的影像技术,我们设计了主要用于治疗肝胆管结石的肝胆管盆式内引流术。1983年6月22日,首次对一位残余肝内胆管结石、多次胆道手术失败的病例施行肝胆管盆式内引流术,获得了成功。13年间,我们先后给1010例肝胆管结石患者施行这一手术,随访3个月~13年,手术效果优良率达90%,残石率为17%,再次手术率为1.7%。

在施行肝胆管盆式内引流术的过程中,创造了1~3级肝管显露、切开的“12字技术”原则,入肝的“8条途径”,并获得“牛角式灌洗器”、“囊式吸引器”、“胆道气囊导管”等7项国家发明专利。“12字技术”规程已广泛应用于其他肝胆管手术,起到简化手术、清洁术野、安全方便的作用。

为推广这一成果,先后举办了15期全国范围的肝胆管结石学习班,接待了1000余家医院的参观,并应邀到全国15个省、287家各类医院会诊、讲学、施术。肝胆管

盆式内引流术已达1000余例,均获良好效果,深得同道们的关注和厚爱。

为了很好地总结、保存在这块热土上成长的这份知识瑰宝,我们撰写了《临床胆石病学》,以总结我们对所遇到的各种胆石病的处理手段、经验和教训,奉献给我的祖国,乃至世界人民。

全书分上、中、下三篇,二十九章,共150余万字,线条图及相片1000余幅。都是从手头珍藏的6000多幅照片中筛选出来的,有些极为珍贵、十分难得。本书注重临床实用,深入浅出,叙述精当,一目了然,可供肝胆专科、普外科及基层外科医师使用。

本书写作历时10年,曾得到北京医科大学黄翠庭教授、湖南医科大学英语培训中心孙晓林副教授等的指导、鼓励,特别是承蒙黄志强、夏穗生、刘国礼诸教授亲笔作序,郑重推介,在此一一深致谢忱!

由于本人水平所限,时间仓促,错误和不足之处在所难免,恳请同道们指正!

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1997年3月于长沙

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Preface

Clinial Cholelithology

Cholelithiasis affects about 10 percent of the population at all ages over the world. It is a general disease with many complications and commitant diseases and harms people's health severely.

With the development of image techniques, we designed Interl Drainage with Hepatobiliary Basin mainly for hepatobiliary stone based on previous experience. It was performed with successful outcome on June 22, 1983 on a patient with retained intrahepatic stone who failed in a few earlier operations. In the following 13 years, 1010 patients with intrahepatic stone underwent this operation mode, A follow-up of 3 months to 13 years showed excellent outcome of 90 percent; the retained stone rate was 17 percent; reoperative rate 1.7 percent.

We created the methods labelled 1st-3rd order hepatobiliary duct exposure, "12-word technique" and "8 approaches" into the liver and developed 7 national patents for Ox Horn Irrigation Instrument, Cyst Suction Instrument, Biliary Ductal Catheter, ect. The

"12-word technique" has been used extensively in other operation modes for hepatobiliary ducts. It plays a role in simplifying operation, and cleaning operation areas with safety and convenience.

In order to spread the achievements, we held 15 national seminars on intrahepatic stone diseases, received visitors from 1000 hospitals and were invited to do consultation, give lectures and perform operations in 15 provinces and 287 hospitals of different grades. Hepatojejunostomy with Hepatobiliary Basin has been performed on more than 10000 patients with good outcome and won attention and preference from surgeons.

For the purpose of well summarizing and preserving the knowledge gem of our motherland, I wrote the book Clinical Cholelithology, describing a variety of cholelithiasis, and the treatments, experience and lessons in our clinical practice, which I would like to devote to my motherland and even to people all over the world.

The book is divided into 3 sections and