

CONCLUSIONS

From the current study, it can be concluded that:

- 1) Both ERCP and percutaneous approach provide a useful mean of treatment of distal CBD strictures
- 2) Endoscopic intervention that includes stricture dilatation and stenting is an acceptable approach for patients with distal strictures either benign or malignant as it improves a range of symptoms and enhances quality of life
- 3) Percutaneous stenting of the biliary tree is a safe and minimally invasive procedure as it provides equally adequate palliation in patients with distal strictures, the technical and therapeutic success rate are satisfactory as compared to endoscopic approach however cost effectiveness as prolonged hospital stay should be taken in considerations against percutaneous approach
- 4) ERCP and PTBD can be used as complementary rather than competing techniques in management of distal CBD strictures however further studies are needed to decide which technique to be started with

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STUDY OF THE ROLE OF ENDOSCOPIC RETROGRADE
CHOLANGIOPANCREATOGRAPHY VERSUS PERCUTANEOUS
TRANSHEPATIC APPROACH FOR MANAGEMENT OF DISTAL
COMMON BILE DUCT STRICTURES

دراسة دور منظار القنوات المرارية بالمقارنة بدور الأشعة التداخلية في علاج انسدادات القناة

المرارية العاصرة الطرفية

Protocol of a thesis submitted
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University of Alexandria
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By

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خطة بحث مقدمة
لكلية الطب
جامعة الإسكندرية
إيفاء جزئياً
لمشروط الحصول على درجة
الماجستير في الأمراض الباطنة

من

محمد احمد عبد العزيز
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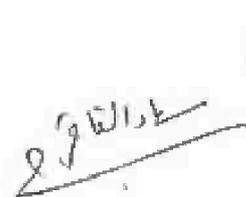
INTRODUCTION

Biliary tract obstruction is a common problem with an increasing incidence nowadays.⁽¹⁾ There are many causes of biliary tract obstruction that can be classified into benign or malignant causes. The common benign causes include biliary stones, primary sclerosing cholangitis (PSC), ischemic causes, chemicals, traumatic causes and radiation while common malignant causes include cholangiocarcinoma, gallbladder cancer invading the liver and/or hepatoduodenal ligament and non biliary carcinoma like ampullary tumors, pancreatic malignancy, advanced gastric cancer and periportal adenopathy involving hepatoduodenal ligament and hepatocellular carcinoma.⁽²⁻⁶⁾

According to the level of biliary obstruction, it is classified into proximal and distal obstruction with respect to the cystic duct. The most common site is being at the distal portion of common bile duct (CBD). Also, biliary tract obstruction can be classified into many types: Type I with obstruction below the confluence, Type II with obstruction confined to confluence, Type IIIa with obstruction with an extension into right hepatic duct, Type IIIb with obstruction with an extension into left hepatic duct and Type IV with multicentric tumors or tumors that involve the secondary confluence on the right or/and left as suggested by Bismuth and Corlette.

Prolonged biliary tract obstruction usually results in malabsorption with subsequent progressive malnutrition, pruritus, attacks of cholangitis, hepatic and renal dysfunction resulting in an immediate limitation to patient survival, in addition to causing significant loss to his/her quality of life. Therefore, patients with biliary obstruction should be diagnosed and managed rapidly.⁽⁷⁾

The diagnosis is based on history taking from the patient, clinical examination, and laboratory investigations including (liver function tests, total and direct serum bilirubin levels, serum alkaline phosphatase level and gamma glutamyle





transpeptidase) besides ultrasonography (US), which is the essential first-line investigation that differentiates between obstructive and non obstructive jaundice.

Magnetic resonance cholangiopancreatography (MRCP) and computed tomography (CT) are utilized to further characterize the underlying cause.^(8,9) Endoscopic retrograde cholangiopancreatography (ERCP) is no longer routinely used in a diagnostic setting.⁽¹⁰⁾ Careful evaluation by combined cross-sectional imaging, including CT and MRCP, is also important in locating the position of the stricture.

In case of benign CBD strictures, biliary drainage can be performed via percutaneous trans-hepatic biliary drainage either internal or external drainage or via endoscopic management by ERCP. Percutaneous trans- hepatic biliary drainage and ERCP provide adequate biliary drainage, decompress obstructed biliary tree, divert bile flow, place stent in bile duct defect, remove bile duct stones, stent malignant lesions, brachytherapy/phototherapy and end luminal tissue sample or foreign body retrieval. But every one of them has its complications and contraindications.

Malignant causes of biliary stricture can be relieved by surgery and by stent insertion (percutaneous or endoscopic). Surgical palliation is, for the most part, employed for patients who are undergoing laparotomy for anticipated resectable disease and found to be unresectable at the time of surgery. Surgical treatment for malignant biliary obstruction includes a curative resection or palliative procedure. Patients with type I and type II biliary tract obstruction are candidates for curative surgery. Surgery of type III lesions often requires major resection which includes for example: choledochoduodenostomy, choledochojejunostomy or hepaticojejunostomy. Among these patients, some will survive only a few weeks, most will die within six months, but some may survive in a fairly good condition for one or even several years.⁽¹¹⁾ Reported median survival is 3–10 months.^(3, 12)

External biliary drainage was the first non-surgical technique described for malignant obstructive jaundice. Early reports consisted predominantly of internal-external drainage catheters passing through the strictured bile duct and into the duodenum. These early radiological drainage procedures were invaluable for patients

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who were too frail for definitive surgery and had some role in prolonging survival. Disadvantages of exteriorization of bile include pain, dislodgment of drainage catheters and bile and ascitic fluid leakages from around the puncture sites with associated volume depletion from this high-output drainage.

The development of long-lasting internal end prostheses greatly improved quality of life and patient mobility following decompression. Although external drainage is still used as a temporary measure in patients suffering sepsis from cholangitis. The establishment of a more permanent internal stent is now the goal of treatment. Procedure-related complications, from the method of stent placement, include sepsis, bile leakage, biliary peritonitis, intra-abdominal collections, fistula formation, pain, and duodenal perforation.^(5-6,14)

Endoscopic cannulation of the ampulla of Vater was first described in 1968, and, since that time, ERCP has become rapidly established as a valuable diagnostic and therapeutic technique.⁽¹⁵⁾ It is now widely used in the management of biliary tract obstruction. Complications from ERCP include cholangitis, perforation, bleeding, fistulae, and acute pancreatitis.⁽¹⁶⁻²⁰⁾

Dr. [Signature] [Signature]

AIM OF THE WORK

The aim of the study is to compare the role of the ERCP versus percutaneous approach in the management of distal CBD stricture.

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MATERIAL

Patients:

This study will include forty patients with established diagnosis of distal CBD stricture either benign or malignant. They will be recruited at Gastroenterology unit, Internal Medicine Department and Interventional Radiology section of radiology department of The Main University Hospital of Alexandria. They will be classified into 2 groups:

Group I: 20 patients with distal CBD stricture who will be managed by ERCP.

Group II: 20 patients with distal CBD stricture who will be managed by trans hepatic approach.

The two groups will be matched according to age ,sex and etiology either benign or malignant

Inclusion criteria:

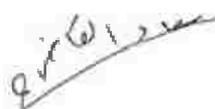
- The target study population consisted of patients with biliary obstruction due to distal CBD stricture either benign or malignant.
- Cross over between both methods is allowed

Exclusion criteria:

Patients with the following will be excluded from the study:

- Massive tumoral hepatic infiltration (multiple nodules in both lobes or diffuse infiltration).
- Had previous biliary drainage.
- Patients with proximal CBD stricture.
- Had refused study participation

An informed consent will be obtained from every patient included in the study.







METHODS

The patients will be subjected to the following:

- History taking
- Complete physical examination.
- Laboratory investigations:

Whole blood sample will be collected from patients for:

1. complete blood count (CBC).⁽²¹⁾
2. Renal profile (serum creatinine level, blood urea level).⁽²²⁾
3. Liver profile (Serum aspartate and alanine aminotransferases (AST and ALT), serum albumin, serum bilirubin(total and direct), serum gamma glutamyl transpeptidase ,alkaline phosphatase⁽²³⁾ and prothrombin time.⁽²¹⁾

Group I patients with distal CBD stricture with endoscopic management.

Group II patients with distal CBD stricture with transhepatic management.

Will be followed up for 30 days for:

- Technical success rate
- Therapeutic success rate
- Major complication rate
- Type of complications:
 - Bacterial infection
 - Acute pancreatitis
 - Bile-leak peritonitis
 - Hemorrhage
- 30-day mortality rate
- Causes of death:
 - Bacterial infection

Signature  *Chit*

- Multiorganic failure
- Hemorrhage
- Tumor progression
- Mean duration of hospital stay after procedure

Handwritten notes in Arabic script, including the word "معالجات" (Treatments) and the number "157".

RESULTS

The results obtained will be statistically analyzed, presented in figures and tabulated forms. Parameters previously mentioned in the methods will be determined and correlated with each other.

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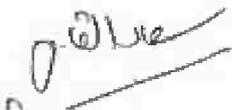
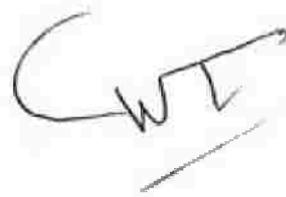
DISCUSSION

The results obtained in this study are to be discussed in the view of achievement of the aims and compared to the other related studies published in the literature.

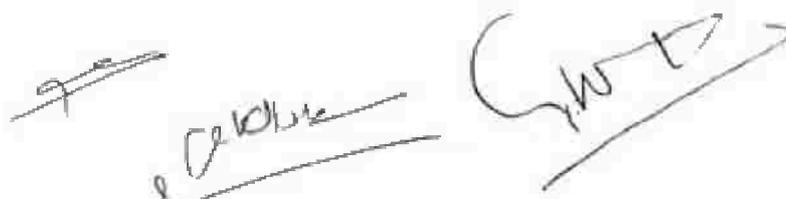
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 The bottom of the page contains three handwritten signatures or initials. From left to right: a signature that appears to be 'ga', a signature that appears to be 'P. DeBorja', and a signature that appears to be 'S.W.T.' with a large arrow pointing to the right.

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ETHICS OF RESEARCH

Research on human or human products:

- Prospective study: Informed consent will be taken from patients. In case of incompetent patients the informed consent will be taken from the guardians.
- Retrospective study: Confidentiality of records will be considered
- DNA / genomic material: Informed consent for DNA / genomic test and for research will be taken from patients. No further tests will be carried out except with further approval of committee and patients. If the samples will travel outside Egypt the researcher will be responsible for transportation and security approval.
- All drugs used in the research are approved by the Egyptian Ministry of Health

Research on animal:

- The animal species are appropriate for the test.
- After test, if the animal will suffer, it will be euthanized and properly disposed.
- After operation, it will have a proper postoperative care.

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جامعة الإسكندرية

كلية الدراسات العليا

كليه : (رقم كودي :

٢٠٢٤

استمارة تسجيل نقطة البحث الرسالة
(ماجستير / دكتوراه)

بيانات الطالب

اسم الطالب / محمد احمد عبد الرحمن

الجنسية / مصري

تاريخ الميلاد / ١٩٨٦ / ٧ / ٢٠

عنوان و محل الإقامة / مستشفى الزمكي بجوار كلية الهندسة

جهة العمل / كلية طب جامعة الاسكندرية

آخر الدرجات العلمية الحاصل عليها

الدولة / مصر

محل الميلاد / الاسكندرية

رقم التليفون /

الوظيفة الحالية / طبيب مقيم

مستشفيات قيامه بها /

بيانات تسجيل الطالب:

الفصل الدراسي: الخريف

اسم الطالب: محمد احمد عبد الرحمن

رقم بطاقة التسجيل:

البرنامج الدراسي:

التخصص: الجراحة العامة

التخصص: الجراحة العامة

المتوسط التراكمي (GPA):

عنوان نقط البحث الرسالة

باللغة العربية: دور منظار القنوات المرية في معالجة سرطان البنكرياس

باللغة الانجليزية: Role of Endoscopic Retrograde Cholangiopancreatography

Versus percutaneous Transhepatic approach in the

Management of Distal Common Bile duct Stricture

١. مواد سابقة

٢. دراسات سابقة

٣. نتائج

المشرف العلمي الرئيسي

توقيع الطالب محمد احمد عبد الرحمن

وافق مجلس القسم بتاريخ / / ٢٠٠٠ على تسجيل الطالب لفنقله للبحث الرسالة المذكورة اعلى

رئيس مجلس القسم

الملخص العربي

ان تضيق القناة الصفراوية هي حالة تتطلب اتباع نهج منسق متعدد التخصصات و الذي يشمل الجهاز الهضمي، الأشعة التشخيصية و الجراحه و يمكن تصنيفها وفقا لمستوى الانسداد الي القاصي والداني فيما يتعلق بالقناة المرارية؛ كما يمكن تصنيفها الي اسباب حميده و اسباب خبيثه.

ان اسباب تضيقات القنوات الصفراوية الحميدة هي مجموعة غير متجانسة من الاسباب التي لا تشكل سوى جزء صغير من كل القيود، و أهم الاسباب هي كما يلي:

١. القيود الصفراوية علاجية المنشأ أثناء الجراحات مثل استئصال المرارة أو قد تحدث في موقع مفاغرة صفراوية، بعد استئصال الكبد أو زرع الكبد .
٢. التهاب البنكرياس المزمن هو مرض التهابي و قد يؤدي الي انسدادات بالقناة الصفراوية في ٦-٢٣٪ من المرضى وتمثل حوالي ١٠٪ من جميع القيود الصفراوية الحميدة.
٣. التهاب القنوات الصفراوية المصلب الابتدائي : ويتميز بانه مرض التهابي مزمن للقنوات الصفراوية و ما يؤدي الي تضيقات و توسيعات بالقنوات الصفراوية التي توجد بداخل الكبد و خارجه.
٤. فيروس نقص المناعة البشريه المؤثر علي القنوات الصفراوية: ان المرضي الذين يعانون من فيروس نقص المناعة البشريه يعانون عادة من تضيق حليمي او تصلب القنوات الصفراوية او كلاهما و التضيقات الطويله للقنوات الصفراوية التي توجد بخارج الكبد.
٥. متلازمه ميريزي:و قد لوحظت في حوالي ١٪ من المرضي بعد عمليه استئصال المراره و هي تحدث نتيجة ضغط خارجي علي القناة الكبدية المشتركة بسبب حصوه عالقه في جيب هارتمان او القناة الكيسيه مما يؤدي الي اليرقان و التهاب القنوات الصفراوية.
٦. تكيس القناة الصفراوية: و هي حالات شاذه غير مألوفه للنظام الصفراوي و التي تتميز بتكيس القنوات الصفراوية التي توجد بداخل الكبد او خارجه
٧. التهاب الأقنية الصفراوية القيحي المتكرر: و العلامه المميزه لهذه الحاله هي وجود الالتهابات و الحصوات في ان واحد في القنوات الصفراوية التي توجد بداخل الكبد و خارجه و عادة ما ياتي المريض مصاب باعراض التهاب القنوات الصفراوية الحاد و التي يمكن ان تكون متكرره.

اما اسباب انسداد القنوات الصفراوية الخبيثه فهي تشمل سرطان البنكرياس و سرطان امبوله فاتر و سرطان المراره و سرطان القنوات الصفراوية القاصي كما هو موضح:

١. سرطان البنكرياس: ان اورام البنكرياس التي قد تؤدي الي انسداد القناة الصفراوية القاصي و التي تشمل راس البنكرياس يمكن تشخيصها بمجموعه من فحوصات الاشعه و منها الموجات الصوتيه علي البطن و الاشعه المقطعيه و الرنين المغناطيسي علي القنوات المراريه و منظار القنوات المراريه و منظار الموجات الصوتيه و التي تساعد ايضا في تحديد مرحله المرض و امكانيه استئصاله.
٢. سرطان امبوله فاتر: و الذي غالبا ما ياتي المريض مصابا باليرقان الانسدادي و في هذه الحاله قد لا تستطيع الموجات الصوتيه تشخيص الحاله بصوره مباشره و لكن توضيح تأثيره بوجود اتساع في القنوات المراريه و قد تساعد اشعه الرنين المغناطيسي علي القنوات المراريه و الاشعه المقطعيه في تشخيص المرض بسهوله و بصوره اكثر دقه.
٣. سرطان القنوات الصفراوية: و ينشأ هذا الورم من خلايا المبطنه للقنوات الصفراوية و الذي غالبا ما يكون مصاحبا و مرتبطا بحالات تكيس القناة الصفراوية و و التهاب الاقنيه الصفراوية القيحي المتكرر و كذلك التهاب القولون القرصي المزمن و لقد تم تقسيم سرطان القنوات المراريه تشريحيا الي قسمين و هما سرطان بداخل الكبد و خارجه و حيث يتم تقسيم الجزء الذي يقع خارج الكبد الي قاصي و داني و في عام ١٩٨٢ قام العالم بزموث بوضع تقسيم تشريحي لسرطان القنوات المراريه حسب موقعه الي ٥ اقسام.
٤. سرطان المراره: و في هذه الحاله ان امتداد الورم ممكن ان يؤدي الي انسداد القنوات المراريه و هي تعتبر علامه سيئه لطبيعته المرض.
٥. سرطان خلايا الكبد: و هو يعتبر من اكثر الاورام الاولييه التي تصيب الكبد شيوعا و يعتبر السبب الرابع للوفاه نتيجة الاورام في العالم و السبب الثالث للوفاه في الرجال.

الصورة الاكلينيكية

و في هذه الحالات قد تظهر الصورة الاكلينيكية لليرقان الانسدادي تدريجيا او بسرعه اعتمادا علي السبب الرئيسي متمثلا في صوره اصفرار لون العين و تغير اللون البول و البراز و نقصان الوزن و مظاهر نقص الفيتامينات و الكالسيوم و خاصه الفيتامينات القابله للذوبان في الدهون ما يعانيه المريض من فقدان الشهيه و القيء و الهزال مما يرجح في وجود هذه الاعراض الاسباب الخبيثه.

و يمكن تشخيص اسباب انسداد القنوات الصفراويه عن طريق الفحوصات المعملية التي تشمل انزيم الفوسفاتيز القلوي في الدم وناقلة الببتيد جاما-غلوتاميل كما يوجد ايضا عده دلالات اورام قد تساعد في تشخيص الاورام الخبيثه للقنوات الصفراويه مثل CA19 و CEA-9 و كما تساعد ايضا الفحوصات الاشعاعيه مثل الموجات الصوتيه و الاشعه المقطعيه و الرنين المغناطيسي علي القنوات المراريه و منظار القنوات المراريه و منظار الموجات الصوتيه في التشخيص المبكر كما ذكر سالفا.

العلاج: و يشمل العلاج الطبي الذي يتضمن علاج المضاعفات لانسداد القنوات الصفراويه حتي يتم بدايه العلاج النهائي و معظم المرضى المصابين بالتهاب القنوات الصفراويه الحاد يستجيبوا للمضادات الحيويه و العلاج التحفظي المساعد اما المرضى كبار السن و من تظهر عليه اعراض انخفاض الدوره الدمويه و اضطراب الوعي يجب ان يتم علاجهم بوحدات العناية المركزه اما المرضى الذي لم يستطع العلاج الطبي تحسين حاله العامه فيتطلب الامر تدخل سريع لصراف هذا الانسداد و في هذه حاله يكون التدخل الجراحي للمرضي الذي فشل معهم الطرق الاخرى مثل المنظار و خلافه امر لا بد منه .

سبل العلاج

١. منظار القنوات المراريه : و هو وسيله لدخول القنوات الصفراويه باستخدام منظار الاثني عشر لحقن الصبغه بالقناه الصفراويه من اجل تحديد سبب الانسداد و كذلك لاجراء التداخلات العلاجيه مثل توسيع الضيق المختلفه و تركيب الدعامات البلاستيكيه او المعدنيه و من اشهر الاعراض الجانبيه لاستخدام منظار القنوات المراريه هي التهاب البنكرياس و النزيف و الالتهاب الحاد للقنوات الصفراويه واختراق جدار الاثني عشر و التي قد تحدث بنسبه من ٧% الي ١٠%.

٢. الاشعه التداخلية: و هي تعتبر تقنيه مختلفه بهدف تصوير القنوات الصفراويه و التي تتم من خلال ابره عن طريق الجدار الي القناه الصفراويه المتوسعه بهدف حقن صبغه و تتميز هذه التقنيه بدرجة عاليه من الدقه و الحساسيه تكاد تصل الي ١٠٠% في توضيح اسباب انسداد القنوات الصفراويه كما يمكن ايضا اجراء التداخلات العلاجيه من خلالها مثل تركيب الدرائق الداخليه و الخارجييه و التي يعقبها تركيب الدعامات المعدنيه او البلاستيكيه.

ان هدف هذه الدراسه الحاليه هو تقييم دور منظار القنوات المراريه بالمقارنه بدور الاشعه التداخلية لعلاج ضيق القنوات المراريه القاصي .

و لقد تمت هذه الدراسه علي اربعين مريضا حيث تم تجميعهم بوحده الجهاز الهضمي قسم الامراض الباطنه المستشفى الرئيسي الجامعي و تم توزيعهم عشوائيا الي مجموعتين:
المجموعه الاولى: عشرون مريضا بانسداد القناه الصفراويه تمت معالجتهم بالمنظار.
المجموعه الثانيه: عشرون مريضا بانسداد القناه الصفراويه تمت معالجتهم بالاشعه التداخلية.

و سوف تتعرض المجموعتين الي الاتي:

١. الفحص الاكلينيكي الشامل و اخذ جميع البيانات و التاريخ المرضي.
٢. الفحوصات المعملية و التي تشمل:
 - أ- صوره دم كامله
 - ب- وظائف الكلي و التي تشمل(نسبه البولينا بالدم و الكرياتين)
 ٣. وظائف الكبد و التي تشمل(انزيمات الكبد و نسبه الالبومين بالدم و نسبه الصفرا المباشره و الكليه) و نشاط البروثرومين و كذلك نسبه انزيم الفوسفاتاز القلوي و الجاما جي جي تي.
 ٤. الاشعه التشخيصيه و التي تشمل:
 - أ- الموجات الصوتيه
 - ب- الاشعه المقطعيه
 - ت- الرنين المغناطيسي علي القنوات المراريه

و في هذه الدراسة لم يكن هناك اي فروق واضحه بين المجموعتين فيما يخص البيانات الديموغرافيه.
معدل النجاح التكنيكي: كان معدل نجاح التكنيك اعلي في مجموعه المنظار من المجموعه الاخرى و لكنه لم يكن مؤثر احصائيا.

معدل النجاح العلاجي: و الذي تم تعريفه بهبوط نسبه الصفرا المباشره بالدم بنسبه اكثر من ٢٠ % بعد الاجراء التداخلي بالمقارنه بالنسبه قبله و الذي كان واضحا انه اعلي في مجموعه المنظار و لكنه لم يشكل فارقا احصائيا.

معدل المضاعفات و التي شملت التهاب القنوات الصفراويه و التهاب البنكرياس و النزيف الحاد و اختراق جدار الامعاء و الذي كان اعلي في مجموعه الاشعه التداخليه و لكنه لم يشكل فارقا احصائيا يعتد به.

معدل الوفيات بعد ثلاثين يوما من الاجراء التداخلي كان اعلي في مجموعه الاشعه التداخليه و لكنه ايضا لم يشكل فارقا احصائيا و قد اشتملت اسباب الوفاه علي الاتي: الفشل الحاد باعضاء الجسم المختلفه و الالتهاب الشديد بالقنوات الصفراويه و تطور المرض الاصلي.

و لقد كان هناك فرقا احصائيا مؤثرا فيما يخص الاقامه بالمستشفى بعد الاجراء التداخلي و الذي كان ظاهرا بصوره ملحوظه انه اقل بكثير في مجموعه المنظار.

و في النهايه ان نتائج الدراسه الحاليه وضحت ان التداخلات بالمنظار و التي تشمل توسيع اى تضيقات القنوات الصفراويه و تركيب الدعامات هي طريق مقبوله للمرضي الذين يعانون من انسدادات القناه الصفراويه باسبابها المختلفه حيث انه يحسن مجموعه كبيره من الاعراض و لقد تبين ان معدل النجاح التكنيكي و العلاجي هو الي حد ما متقارب في المجموعتين و لكن تبقي التكلفة الماديه و التي تتمثل في الاقامه الطويله بالمثفي هو عامل حقيقي و يجب ان يوضع في الحسبان ضد الاشعه التداخليه كوسيله لعلاج هذه الحالات .

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دراسة دور منظار القنوات المرارية بالمقارنة بدور الاشعة التداخلية في علاج انسدادات القناة
المرارية العامة الطرفية

مقدمة من

محمد احمد عبد العزيز حسين

بكالوريوس الطب والجراحة - جامعة الإسكندرية، ٢٠٠٩

للحصول على درجة

الماجستير

في

الأمراض الباطنة العامة

موافقون

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لجنة المناقشة والحكم على الرسالة

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دراسة دور منظار القنوات المرارية بالمقارنه بدور الاشعه التداخليه في علاج
انسدادات الفتاة المراريه العامه الطرفية

رسالة علمية

مقدمة إلى كلية الطب- جامعة الإسكندرية
إستيفاء للدراسات المقررة للحصول على درجة

الماجستير

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