



Evaluation & Management of a Patient with RLQ Pain and Appendicitis

Description of the Activity	Right lower quadrant pain is one of the most common conditions managed by general surgeons. All general surgeons must be able to evaluate and manage appendicitis as well as a variety of other conditions with similar presentations regardless of clinical setting, patient age, or resource availability.
Functions	<ul style="list-style-type: none">❖ Nonoperative/Preoperative<ul style="list-style-type: none">➤ Synthesize essential information from records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis.➤ Establish the differential diagnosis based on the patient's age, sex, and medical history.➤ Determine whether surgery is indicated.➤ Select a safe anesthetic and surgical approach consistent with the patient's diagnosis and comorbidities.➤ Triage the patient for resuscitation, evaluation, and management based on acuity.➤ For patients diagnosed with appendicitis, customize treatment options such as resuscitation, medical management, and operative intervention based on presentation, including:<ul style="list-style-type: none">▪ Appendiceal phlegmon▪ Appendicitis in the pregnant patient▪ Diagnostic uncertainty▪ Perforated appendicitis▪ Retrocecal appendicitis▪ Uncomplicated appendicitis➤ Obtain informed consent with cultural humility.<ul style="list-style-type: none">▪ Describe the indications, risks, benefits, alternative therapies, and potential complications of the planned procedure, and incorporate a discussion of the goals of care.▪ Ensure patient/caregiver comprehension using applicable language services and audio/visual aids.▪ Ensure that the patient/caregiver(s) can ask questions, and address any expressed concerns, taking patient/caregiver preferences into account.▪ Document the consent discussion.➤ Communicate patient-specific needs to the health care team.❖ Intraoperative<ul style="list-style-type: none">➤ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions.➤ Manage the operative therapy of appendicitis.<ul style="list-style-type: none">▪ Perform both a laparoscopic and an open appendectomy.<ul style="list-style-type: none">• Position the patient, and ensure the availability of relevant equipment.• Ask for correct instruments and sutures.• See tissue planes, and identify and dissect relevant normal and abnormal anatomy.



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	<ul style="list-style-type: none">• Perform operative steps efficiently.▪ Manage operative complications and unexpected findings, including intraoperative consultation from other specialists when necessary, for conditions including:<ul style="list-style-type: none">• Appendiceal mass• Gynecologic pathology• Inflammatory bowel disease➤ Communicate patient-specific needs to the health care team. <p>❖ Postoperative</p> <ul style="list-style-type: none">➤ Provide routine postoperative care immediately and in follow-up as needed.➤ Recognize and manage complications related to appendicitis.➤ Communicate clinical developments to the patient/caregiver(s), including treatment options, postprocedure developments, and discharge conditions.➤ Communicate patient-specific needs to the health care team.
Scope	<p>❖ In scope</p> <ul style="list-style-type: none">➤ Pediatric and adult patients➤ Diagnosis and initial management of pathology other than appendicitis (eg, cancer, gynecologic pathology, inflammatory bowel disease) <p>❖ Out of scope</p> <ul style="list-style-type: none">➤ Comprehensive management of pathology other than appendicitis (eg, cancer, gynecologic pathology, inflammatory bowel disease)



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<p style="text-align: center;">1</p> <p><u>Limited Participation</u></p> <p>Demonstrates understanding of information and has very basic skills</p> <p><u>Framework:</u> What a learner directly out of medical school should know</p> <p>The attending can show and tell.</p>	<ul style="list-style-type: none"> Obtains an H&P with cultural humility and develops a differential for a patient with RLQ pain Demonstrates understanding of basic pathophysiology of the appendix and other RLQ organs and uses this knowledge to consider other causes of RLQ pain, including some of the most common disorders Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion Accesses evidence about treatment options to manage appendicitis but requires guidance to select an approach 	<ul style="list-style-type: none"> Describes the key steps of an appendectomy and how to locate the appendix in the normal position Identifies the layers of the abdominal wall at the midline and RLQ Demonstrates understanding of the principles of maneuvering and focusing the angled laparoscope; centers the operative field with frequent adjustments Places subsequent laparoscopic trocars after initial entry; requires guidance to prevent iatrogenic injury and target the area of dissection Closes wounds with input from a supervisor while demonstrating sharps safety, surgical energy use, and surgical field sterility Displays coordinated hand movements for simple maneuvers, though inefficiently and under direct instruction Requires active instruction to move the operation forward 	<ul style="list-style-type: none"> Evaluates general variances in the standard immediate postop course, such as fever, hypotension, or urinary retention, requiring supervision to manage them Alerts supervisors about postop complications and initiates management with supervision Initiates postop pathways, including multimodal pain management and discharge Communicates basic aspects of the operative procedure to a patient/caregiver(s) but needs prompting to clarify expected outcomes and the anticipated treatment course Describes different models of health care coverage in the U.S. and basic components of documentation required for billing and coding for appendicitis patients
<p style="text-align: center;">2</p> <p><u>Direct Supervision</u></p> <p>Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case</p>	<ul style="list-style-type: none"> Evaluates a patient with appendicitis, determines when imaging is indicated, and interprets lab values and studies Applies knowledge of the anatomy and physiology of the RLQ when evaluating RLQ pain (eg, psoas sign, rectal or pelvic exam) Develops a broad differential when evaluating RLQ pain, including conditions that can masquerade as appendicitis (eg, Crohn's, typhlitis, lymphoma in HIV) Develops a plan for managing a patient with uncomplicated appendicitis 	<ul style="list-style-type: none"> Locates the appendix despite anatomic variants (ie, retrocecal) Smoothly performs basic maneuvers such as suturing and knot tying Identifies common positioning options but cannot name factors to select one over another; recognizes the importance of protecting against nerve and pressure injuries but cannot describe the resulting morbidity Anticipates some next steps in the operation and necessary instruments 	<ul style="list-style-type: none"> Develops a discharge plan that includes pain management and is based on the hospital course and the patient's disease Identifies when a patient deviates from a normal postop recovery pattern but omits some elements from the differential Manages a simple postop problem independently (eg, fever, tachycardia) Communicates details of the operative procedure to a patient/caregiver(s) but omits some elements when discussing



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<p>Framework: The learner can use the tools but may not know exactly what, where, or how to do it.</p> <p>The attending gives active help throughout the case to maintain forward progression.</p>	<ul style="list-style-type: none"> Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s); customizes communication to overcome barriers (eg, literacy, language, and cultural differences); uses applicable language services and audio/visual aids to elicit preferences Communicates the elements of an informed consent discussion for a straightforward appendectomy in an uncomplicated patient and completely documents the discussion Incorporates published guidelines and scoring systems regarding the workup and management of appendicitis and applies them with guidance 	<ul style="list-style-type: none"> Places subsequent laparoscopic trocars after initial entry, uses surgical energy safely, and closes skin independently Demonstrates understanding of port site triangulation and safe entry into the abdomen, requiring guidance for each Usually demonstrates careful tissue handling and uses both hands in a coordinated manner Moves the operation forward, usually proceeding to the next step of the procedure, though sometimes requires direction Provides a basic description of the operative plan but omits some steps; maintains the plane of dissection if identified but struggles to independently enter, and often deviates from, the correct plane Requires assistance to enter the abdomen or control bleeding 	<p>expected outcomes and the overall anticipated treatment course</p> <ul style="list-style-type: none"> Recognizes the influence of health care system financing structures on the postop care of a patient with appendicitis (eg, global period, care of patient requiring initial percutaneous drainage)
<p>3</p> <p>Indirect Supervision</p> <p>Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case</p> <p>Framework: The learner can perform the operation</p>	<ul style="list-style-type: none"> Synthesizes knowledge of patient factors, comorbidities, anatomy, and physiology when developing a differential and treatment plan Develops a plan for managing a straightforward patient with complicated appendicitis Communicates a patient's medical condition across cultural differences in a respectful way to elicit a personalized care plan in a shared decision-making process for a straightforward presentation Conducts an informed consent discussion for straightforward appendectomy with cultural humility, individualizing risks, 	<ul style="list-style-type: none"> Describes a systematic approach to exploring alternate pathology when the appendix appears normal Locates the appendix, even with inflammation or scarring Performs a straightforward laparoscopic appendectomy, including port site selection, entry to the abdomen, exposure, and resection of the appendix Smoothly maneuvers the laparoscope and instruments most of the time, exhibiting hand coordination Consistently demonstrates careful tissue handling; identifies the plane of dissection accurately in a routine case 	<ul style="list-style-type: none"> Interprets and communicates straightforward pathology accurately Recognizes all postop complications, such as sepsis or deep or superficial wound infection, and completes the necessary workup for these problems independently in an uncomplicated patient Evaluates postop problems in a patient with a complex medical condition, requiring supervision to manage them Prepares and customizes a discharge plan for a patient with a complicated course Communicates unexpected findings or changes to the intended plan to a



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<p>in straightforward circumstances.</p> <p>The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.</p>	<p>benefits, and alternatives to the patient; completely documents the discussion</p> <ul style="list-style-type: none"> Applies published guidelines regarding the workup and management of a complex presentation of appendicitis; incorporates patient preferences into the plan 	<ul style="list-style-type: none"> Identifies tissue planes that have not been previously dissected but needs assistance to identify or manage variable anatomy or tissue planes in a reoperative field Maneuvers normal tissue, including the small bowel, colon, and omentum, to make sufficient progress without using excessive force Moves fluidly through the operation, anticipating next steps and logistical needs and clearly communicating these needs to the OR team 	<p>patient/caregiver(s) with cultural humility</p> <ul style="list-style-type: none"> Analyzes how different treatment strategies (operative vs nonoperative management) impact outcomes and costs of care
<p>4</p> <p><u>Practice Ready</u></p> <p>Can manage more complex patient presentations and operations and take care of most cases</p> <p><u>Framework:</u> The learner can treat all straightforward appendicitis cases and has a strong understanding of surgical options and techniques for less common scenarios.</p> <p>The attending is available at the request</p>	<ul style="list-style-type: none"> Initiates a cost-effective workup; uses available technologies when a diagnosis is in doubt Manages a complicated presentation, considering operative and nonoperative management strategies such as IR drainage of perforation and abscess or nonoperative management for a high-risk patient with uncomplicated appendicitis Manages a patient with a complex medical condition (eg, pregnancy, IBD, anticoagulation requiring reversal) Customizes communication based on individual patient characteristics and preferences across barriers and cultural differences in a complex or life-threatening situation; manages and de-escalates conflict with a difficult or hostile patient/caregiver Conducts an informed consent discussion for a complex or emergent appendectomy with cultural humility; elicits patient preferences; documents risks and benefits individualized to the patient 	<ul style="list-style-type: none"> Implements a systematic approach to exploring alternate pathology (eg, alternative trocar and patient positions) when the appendix is normal Accesses the abdomen safely in a patient with prior abdominal operations or during pregnancy Performs an appendectomy in a patient with significant inflammation or adhesions from prior operations Manages variable anatomy in a reoperative field Demonstrates careful tissue handling and plane development in both normal and abnormal tissue, including the cecum and appendix; adapts technique and instruments as necessary Devises and implements a plan when deviation from the initial operative plan is required (eg, conversion to open procedure) Analyzes how the choice of instrumentation will affect the overall cost of the procedure 	<ul style="list-style-type: none"> Elucidates initial therapy for pathology other than appendicitis Identifies, evaluates, and independently manages complex immediate and delayed postop complications such as fistulas and dehiscence Directs interdisciplinary care to manage a patient experiencing complications Manages conflict between a patient, caregiver(s), and the health care team Customizes emotionally difficult news (eg, changes to the operative plan, adverse outcome, end-of-life discussion) to a patient/caregiver(s) in a culturally dexterous and caring manner Selects a method of postop follow-up, considering case complexity, health care system cost, and patient wishes and resources (telehealth, transportation challenges)



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of the learner but is not routinely needed for common presentations, though input may be needed for more complex presentations.	<ul style="list-style-type: none">Applies current published guidelines and scoring systems regarding the workup and management of appendicitis, considering nuances and exceptions in a complex situation		