



Evaluation and Management of a Patient with an Inguinal Hernia

Description of the Activity	<p>General surgeons are often called to evaluate patients with a groin mass, pain, or other symptoms of an inguinal hernia. The general surgeon must be able to evaluate and manage patients in the outpatient or elective setting as well as those who present in the emergency department with urgent or emergent conditions.</p>
Functions	<ul style="list-style-type: none">❖ Nonoperative/Preoperative<ul style="list-style-type: none">➤ Synthesize essential information from a patient's referring providers, medical records, history, physical examination, and diagnostic evaluations to develop a differential diagnosis.➤ Determine whether surgery is indicated.➤ Recognize complications of inguinal hernia that require an emergency operation.➤ Select a safe anesthetic and surgical approach that is consistent with the patient's diagnosis and comorbidities.➤ Synthesize an operative plan that demonstrates understanding of the operative anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of:<ul style="list-style-type: none">▪ Femoral hernia repair▪ Inguinal hernia repair with and without mesh▪ Open and minimally invasive herniorrhaphy➤ 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.❖ 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.➤ Perform the procedures required to manage an inguinal hernia.<ul style="list-style-type: none">▪ Position the patient, and ensure the availability of relevant equipment, including mesh if used.▪ Ask for the correct instruments and sutures.▪ Visualize tissue planes, and identify and dissect relevant normal and abnormal anatomy.▪ Perform operative steps efficiently.➤ Integrate new information discovered intraoperatively to modify the surgical plan or technique as necessary in patients with:<ul style="list-style-type: none">▪ Aberrant anatomy▪ Adenopathy but no hernia identified▪ Femoral venous bleeding▪ Hernia containing nonviable bowel▪ Indications and contraindications for use of mesh



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	<ul style="list-style-type: none">▪ Need for laparotomy▪ Sliding hernia➤ Work with the anesthesia and nursing teams as well as other perioperative health care professionals to create and maintain an intraoperative environment that promotes patient-centered care.❖ Postoperative<ul style="list-style-type: none">➤ Initiate and oversee postoperative care, including postoperative disposition.➤ Communicate with the patient/caregiver(s) and members of the health care team (primary care provider, nursing staff, other care providers) to ensure an understanding of postprocedure instructions so the patient can carry out the resultant plan within the context of their lives (eg, transportation, living situation, insurance, access to a pharmacy).➤ Recognize and manage the most common complications following inguinal hernia repair:<ul style="list-style-type: none">▪ Chronic pain or nerve injury▪ Hematoma▪ Infected seroma▪ Recurrence▪ Testicular ischemia▪ Urinary retention
Scope	<ul style="list-style-type: none">❖ In scope<ul style="list-style-type: none">➤ Adult patients❖ Out of scope<ul style="list-style-type: none">➤ Pediatric patients, recognizing the limitations of the surgeon or facility and the subsequent need for a referral to a subspecialty pediatric surgeon at the surgeon's discretion



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<p style="text-align: center;">1</p> <p style="text-align: center;"><u>Limited Participation</u></p> <p>Demonstrates understanding of information and has very basic skills</p> <p style="text-align: center;"><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 presenting with signs and symptoms of an inguinal hernia 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 Requires oversight to initiate a cost-effective workup Accesses evidence and considers patient preference regarding the management of inguinal hernia with respect to open and MIS approaches 	<ul style="list-style-type: none"> Describes the anatomic structures and relationships of the inguinal canal (inguinal ring, vas deferens, ilioinguinal nerve, inguinal floor, femoral vein) Describes major steps of inguinal hernia repair and some critical structures at risk Demonstrates inefficient suturing and knot tying Requires prompting to identify correct tissue planes Demonstrates understanding of sharps safety, safe surgical energy use, and surgical field sterility Requires active instruction to move the operation forward Displays coordinated hand movements for simple maneuvers, though inefficiently and under direct instruction 	<ul style="list-style-type: none"> Uses multimodal pain management strategies Recognizes and informs supervisor of general variances in the standard immediate postop course (eg, hematoma, hypotension, urinary retention) Communicates basic aspects of the operative procedure and standard postop instructions to a patient/caregiver(s) but needs prompting to clarify expected outcomes and the anticipated treatment course Identifies literature regarding pain management strategies for postop inguinal hernia patients
<p style="text-align: center;">2</p> <p style="text-align: center;"><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> <p style="text-align: center;"><u>Framework:</u> The learner can use the tools but may not know exactly what, where, or how to do it.</p>	<ul style="list-style-type: none"> Evaluates a patient with an inguinal hernia, discerns incarcerated and reducible hernias, and makes recommendations for management Determines when imaging is indicated for an inguinal hernia and interprets results Determines an operative plan for a straightforward presentation, including differentiating between open and MIS approaches Reduces a straightforward hernia Respectfully communicates basic facts of a plan for a straightforward inguinal hernia to a patient/caregiver(s); uses applicable language services and audio/visual aids Communicates the elements of an informed consent discussion for a 	<ul style="list-style-type: none"> Identifies the anatomic boundaries of the inguinal canal and direct and indirect inguinal and femoral hernias Identifies critical structures during dissection such as the ilioinguinal nerve and vas deferens Performs incision and exposure of the inguinal canal and layered closure of the operative site Requires guidance to place mesh in straightforward inguinal hernia repair Demonstrates awkward instrument handling in small spaces, with inefficient suturing technique during mesh placement Identifies common positioning options but cannot name factors to select one 	<ul style="list-style-type: none"> Uses multimodal pain management with a focus on opioid-sparing strategies and adjusts the regimen for symptoms such as postop neuropathy Recognizes and manages a common immediate or delayed postop complication (eg, hematoma, hypotension, urinary retention, hernia recurrence, pain syndromes, wound infection) Recognizes but requires assistance to synthesize a complete management plan for a complication specific to inguinal



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<p>The attending gives active help throughout the case to maintain forward progression.</p>	<p>straightforward elective inguinal hernia repair, answers questions related to hernia management, and completely documents the discussion</p> <ul style="list-style-type: none"> • Initiates a cost-effective workup for a straightforward presentation independently, requiring oversight for an advanced or unusual presentation • Considers patient preference for straightforward open versus MIS inguinal hernia repair 	<p>over another; recognizes the importance of protecting against nerve and pressure injuries but cannot describe the resulting morbidity</p> <ul style="list-style-type: none"> • 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 • Usually proceeds to the next step of the procedure, though sometimes requires direction • Controls bleeding only with direction 	<p>hernia or severe postop complications (eg, severe scrotal hematoma, chronic groin pain, mesh infection, sepsis)</p> <ul style="list-style-type: none"> • Communicates details of the operative procedure and postop instructions to a patient/caregiver(s) but misses some elements when discussing expected outcomes and the overall anticipated treatment course • Partners with the patient on selection of a postop pain regimen
<p style="text-align: center;">3</p> <p style="text-align: center;"><u>Indirect Supervision</u></p> <p>Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case</p> <p style="text-align: center;"><u>Framework:</u></p> <p>The learner can perform the operation in straightforward circumstances.</p> <p>The attending gives passive help. This help may be given while scrubbed for more complex cases or during a</p>	<ul style="list-style-type: none"> • Develops a nonoperative or operative management plan for a patient with an inguinal hernia • Forms a complete differential for a patient presenting with signs and symptoms of an inguinal hernia, without errors of omission or commission • Reduces a hernia requiring multiple different approaches • Recognizes the need for a chaperone when conducting a physical examination of a sensitive body region • Respectfully communicates the medical condition of a complex patient or a patient with a complicated presentation across barriers and cultural differences to elicit a personalized care plan in a shared decision-making process • Conducts an informed consent discussion for a straightforward, elective inguinal hernia repair with cultural humility, 	<ul style="list-style-type: none"> • Identifies all pertinent inguinal anatomy (eg, cord structures, nerves, musculofascial layers) in a patient with a straightforward (eg, elective) inguinal or femoral hernia with minimal supervision • Identifies the need for modifications in operative technique for femoral or incarcerated/strangulated hernia contents and explains steps needed to address these variants • Performs straightforward inguinal hernia repair (eg, elective repair of a small or moderately sized hernia) • Identifies and protects critical structures during dissection, including nerves and the vas deferens, and adjusts tissue handling based on tissue quality • Recognizes tissue planes that have not been previously dissected but may need assistance in identifying/managing variable anatomy or tissue planes in a 	<ul style="list-style-type: none"> • Recognizes and manages a common immediate postop complication (e.g., hematoma or urinary retention) or a delayed complication specific to inguinal hernia repair (e.g., testicular ischemia, pain syndromes, hernia recurrence, wound infections) • Recognizes and initiates the workup of a severe immediate or delayed postop complication (e.g., hemorrhage; large, severe scrotal hematoma/seroma; chronic pain; mesh infection; sepsis) • Communicates customized postop instructions and pertinent updates to a patient/caregiver(s) using a variety of methods to ensure understanding and



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check-in for more routine cases.	<p>individualizing risks, benefits, and alternatives to the patient; completely documents the discussion</p> <ul style="list-style-type: none"> Applies evidence to manage complex situations (eg, infected mesh, hernia with large scrotal component) 	<p>reoperative field to prevent iatrogenic injuries</p>	<p>discusses unexpected findings or changes to the intended plan</p> <ul style="list-style-type: none"> Uses multimodal, opioid-sparing pain management strategies consistent with evidence-based prescribing guidelines
<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></p> <p>The learner can treat all straightforward hernias and has a strong understanding of surgical options and techniques for less common scenarios.</p> <p>The attending is available at the request of the learner but is not routinely needed for common presentations, though input may be needed for more complex presentations.</p>	<ul style="list-style-type: none"> Manages a patient with a complex presentation of an inguinal hernia or with significant comorbidities (eg, strangulated hernia, infected mesh, sepsis, anticoagulation, cardiopulmonary issues); anticipates logistical problems when optimizing a patient for surgery Customizes communication based on individual patient characteristics and preferences across barriers (eg, literacy, language, and cultural differences) in a critical or life-threatening situation Conducts an informed consent discussion for a complex or emergent inguinal hernia repair with cultural humility, eliciting patient preferences and documenting risks and benefits individualized to the patient Determines the best therapy for a patient by applying best available evidence, reconciling conflicting evidence, and integrating patient preferences 	<ul style="list-style-type: none"> Identifies all pertinent inguinal structures in a complex operative situation (eg, large hernia, recurrent hernia, strangulation with perforation) and adapts the operative plan as needed Performs inguinal hernia repair in a patient with a recurrent, strangulated, or large and complex hernia with minimal or no guidance Adapts planned repair based on unexpected findings (eg, incarcerated bowel, enterotomy, iatrogenic injury) Identifies tissue planes in an inflamed condition and adapts the dissection technique in a patient with a large, incarcerated, or recurrent inguinal hernia 	<ul style="list-style-type: none"> Anticipates and develops a plan to mitigate potential postop complications Manages a severe immediate or delayed postop complication (eg, hemorrhage; large, severe scrotal hematoma/seroma; chronic pain; mesh infection) 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 Manages a complex patient with chronic pain syndrome using best evidence for postop pain management