THE ACUTE ABDOMEN: ASSESSMENT & DIAGNOSIS

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I HAVE NOTHING TO DISCLOSE!
WHAT IS SERIOUS AND WHAT IS NOT?
OBJECTIVES

• REVIEW ASSESSMENT STRATEGY FOR THE ACUTE ABDOMEN

• DISCUSS MANAGEMENT STRATEGY FOR COMMON SOURCES OF ABDOMINAL PAIN/ THE SURGICAL ABDOMEN IN BOTH THE OUT PATIENT AND IN PATIENT ENVIRONMENT.
PRESENTING FACTORS

• PAIN
• UPPER GI CONCERNS
• LOWER GI CONCERNS
• NON-SPECIFIC CONCERNS
VISCERAL PAIN

- Typically associated with autonomic system
- Symptoms:
  - Pallor, sweating, N/V, changes in VS's
  - Pain is often dull or aching
- Emotional reaction
  - Anxiety
  - No pain but complaints of ‘discomfort’
- Slow pain
- Organ specific
- Often vague
- Gradual onset
- Poor discrimination
- General versus specific complaints
- Usually lasts longer
- Associated with tissue damage:
  - Stretching/distention
  - Ischemia/chemo receptors
  - Cramping/mechanical or spasm of muscle
  - Chemical/enzyme release
• PROGRESSION OF NERVE SIGNAL THROUGH THE AUTONOMIC BUNDLE OFTEN RESULTS IN REFERRED PAIN
SOMATIC PARIETAL PAIN

• FAST PAIN
• RAPID ONSET
• OFTEN DESCRIBED:
  • EXCRUCIATING
  • SHARP/SEVERE
  • PERITONITIS
• SIGNAL IS SENT DIRECTLY INTO LOCAL SPINAL NERVES
CAUSES OF ABDOMINAL PAIN

• OBSTRUCTIVE
• INFLAMMATION
• PERFORATION
OBSTRUCTIVE PAIN

- VISCERAL
- GRADUAL ONSET
- GROWING OVER TIME
- NAUSEA AND VOMITING

- SBO
- RENAL STONE
- CBD STONE
- USUALLY URGENT, NOT EMERGENT
- MECHANICAL IN NATURE
INFLAMMATION

- VISCERAL EARLY, MAY BECOME SOMATIC
- VAGUE
- INCREASING INTENSITY

- EARLY APPENDICITIS
- GASTRITIS
- PUD (NON-PERFORATED)
- COLITIS
- ISCHEMIA WITHOUT INFARCTION
- USUALLY AN URGENT, NOT EMERGENT PROBLEM
PERFORATION

- SOMATIC-PARIETAL PAIN
- PERITONEAL
- SUDDEN ONSET
- USUALLY AN EMERGENCY
Free air under the diaphragm
CLINICAL EVALUATION

- COMPREHENSIVE EXAM
  - EVALUATE THE CHIEF COMPLAINT IN DETAIL
  - CO MORBID CONDITIONS
  - 10 ESSENTIAL COMPONENTS

- FOCUSED EXAM
  - PERFORMED TO ASSESS THE EFFECTIVENESS OF TX’S
  - ID COMPLICATIONS
  - ILLICIT CHANGING SIGNS & SYMPTOMS
CLINICAL EVALUATION - CONTINUED

• HISTORY
  • DIMENSIONS OF PAIN
    • ONSET, DURATION, FREQUENCY, CHARACTER, LOCATION, RADIATION, INTENSITY
    • PRESENCE OR ABSENCE OF ANY AGGRAVATING OR ALLEVIATING FACTORS & ASSOCIATED SYMPTOMS

• OBTAINING A GOOD HISTORY IS OFTEN THE MOST CRITICAL COMPONENT IN THE DIAGNOSTIC PROCESS FOR ACUTE ABDOMINAL PAIN
CLINICAL EVALUATION-CONTINUED

• PHYSICAL EXAM
  • ORGANIZED AND METHODICAL APPROACH

• GENERAL APPEARANCE
  • DO THEY LOOK SICK?
  • DO THEY APPEAR TO BE IN DISTRESS?

• THE PATIENT SHOULD BE RESTING IN A ‘COMFORTABLE’ SUPINE POSITION
CLINICAL EVALUATION-CONTINUED

- **INSPECTION**
  - ALWAYS LOOK BEFORE YOU TOUCH
    - MAKE NOTE OF – SURGICAL SCARS, HERNIA, DISTENTION, OBVIOUS MASSES, ECCHYMOSIS, VISIBLE PULSATIONS OR PERISTALSIS

- **AUSCULTATION**
  - BOWEL SOUNDS
  - BRUI TS

- **PERCUSSION**
  - TYMPANI

- **PALPATION – MOST HELPFUL!**
CLINICAL EVALUATION-CONTINUED

• PALPATION:
  • USEFUL TO DETERMINE THE EXTENT & SEVERITY OF THE PATIENTS TENDERNESS/PAIN
    • DIFFUSE – GENERALIZED PERITONEAL INFLAMMATION
    • MILD DIFFUSE WITHOUT GUARDING – INFLAMMATORY INTESTINAL PROCESS WITHOUT PERITONEAL INFLAMMATION (GASTROENTERITIS)
    • LOCALIZED TENDERNESS – EARLY STAGE OF A PROCESS

• ADDITIONAL EXAM:
  • PERINEAL EXAM
  • VAGINAL EXAM
FLAWS IN ASSESSMENTS

• LACK OF CLEAR DEFINITIONS OF TERMS:
  • MILD/MODERATE/SEVERE
  • GUARDING
  • DIFFUSE
  • ‘PERITONEAL SIGNS’
ABDOMINAL PAIN

• CHARACTERISTICS:
  • CAN YOU DESCRIBE THE PAIN (SHARP, DULL, SUPERFICIAL, OR DEEP)?
  • IS THE PAIN INTERMITTENT OR CONTINUOUS?
  • WAS THE ONSET SUDDEN OR GRADUAL?
  • CAN YOU POINT TO WHERE THE PAIN IS LOCATED:
  • WHAT MAKES THE PAIN BETTER, WORSE?
• ASSOCIATED FACTORS: ARE THERE OTHER SYMPTOMS ASSOCIATED WITH THE PAIN?
  • FEVER
  • NAUSEA/VOMITING
  • DIARRHEA/CONSTIPATION
  • ANOREXIA/WEIGHT LOSS
  • DYSPEPSIA
ABD PAIN - CONTINUED

• HISTORY - ANY PERSONAL OR FAMILY HISTORY OF:
  • GI CANCERS
  • ULCER DISEASE
  • INFLAMMATORY BOWEL DISEASE
  • PREVIOUS HISTORY OR TUMORS, MALIGNANCY OR ULCERS
INDEX OF SUSPICION

• LEARNED PATTERNS

• KNOWN ENTITIES

• EXPERIENTIAL ADVANTAGE

• **IF YOU DON’T HAVE THIS- YOU NEED TO DEVELOP THIS – AND YOU DEVELOP THIS THROUGH SHARED LEARNING, CLINICAL/SKILL LEVEL EXPERTISE AND A GENUINE CURIOSITY FACTOR!**
CLINICAL REASONING

• PROCESS OF COLLECTING DATA
• COMING TO SOME CONCLUSIONS
• WHAT IS WRONG WITH THE PATIENT?
• AT THIS POINT, IT IS MUCH EASIER TO BE ACUTE CARE VERSUS PRIMARY CARE!
WHAT TO DO NEXT?

• IF YOUR INDEX OF SUSPICION IS LOW:
  • NO FEVER
  • DIFFUSE PAIN
  • NO PROGRESSION OVER A COUPLE OF DAYS
  • ASSOCIATED N/V DIARRHEA
  • NO CONFOUNDING VARIABLES THAT PUTS THE PATIENT AT RISK
  • RELIABLE PATIENT

• SEND PATIENT OUT WITH CLEAR INSTRUCTIONS
WHAT ABOUT THIS....

- DIFFUSE ABDOMINAL PAIN
- GRADUAL TO SUDDEN ONSET
- MILD ANOREXIA
- ONE EPISODE OF DIARRHEA
- LOW GRADE FEVER
- POSSIBLY LOCALIZING

- PE
  - VAGINAL & RECTAL
- LAB WORK
  - WBC
  - H/H
  - U/A
  - PREGNANCY TEST
- OTHER STUDIES?
  - SPIRAL CT HAS A SENSITIVITY OF 90-100%, A SPECIFICITY OF 91-99%, A POSITIVE PREDICTIVE VALUE OF 95-97%, AND AN ACCURACY OF 94-100%.
  - US
  - PLAIN FILM OF THE ABDOMEN
- Differential Dx’s
WHAT ABOUT THIS....

- EPIGASTRIC PAIN
- OFTEN EXCRUCIATING
- POST PRANDIAL

- PE – INCLUDING RECTAL
- LAB WORK
  - WBC
  - U/A
  - LIVER ENZYMES
- OTHER STUDIES?
  - U/S
  - CT
- DIFFERENTIAL DX’S
CHOLECYSTITIS

- ↑ WBC
- ↑ TEMP
- REFERRED PAIN
- N/V
- ↑ LIVER ENZYMES
- POSITIVE MURPHY’S SIGN
• NO FEVER
• NORMAL LIVER FUNCTION
• NORMAL WBC
• REFERRED PAIN
• NEGATIVE MURPHY'S SIGN
• BILIARY COLIC
GALL STONES IN THE COMMON BILE DUCT

- NO FEVER
- ~WBC
- ↑ SERUM BILIRUBINS
- ↑ LIVER ENZYMES
- ? JAUNDICE
- CHOLELITHIASIS
- ROLE OF ERCP
WHAT ABOUT THIS....

- Gradual onset LLQ pain
- Decreasing appetite
- Fever
- Altered bowel habit
- Bloating

- PE- rectal exam
- Labs
  - WBC
  - U/A
- Other studies
  - CT
  - U/S
  - Plain film
- Differential dx’s
WHAT DO YOU THINK?
DIVERTICULITIS WITH ABSCESS
ILEUS

• INHIBITION OF THE INTESTINAL MUSCLE FUNCTION
  • DIMINISHED OR ABSENT MOTILITY

• THIS CAN BE REPRESENTATIVE OF A POST OPERATIVE PROBLEM OR A SYMPTOM OF AN INFLAMMATORY PROCESS, OR IN RESPONSE TO PARTIAL OR COMPLETE OBSTRUCTION
ILEUS

• DIAGNOSTIC WORK UP
  • CHEST/ABDOMINAL X-RAY (FLAT & UPRIGHT)
  • ? WBC – IF PATIENT ‘SICK’ WITH THIS; FEBRILE, TACHYCARDIC

• WITH PERSISTENT ILEUS
  • ABDOMINAL CT IS OFTEN NECESSARY TO ASSESS FOR:
    • OBSTRUCTION
    • COLLECTIONS
GALL STONE ILEUS
BOWEL OBSTRUCTION

- MOST COMMON SURGICAL EMERGENCIES
- \( \frac{3}{4} \) OF EVENTS OCCUR IN THE SMALL BOWEL
- MECHANICAL BLOCKAGE
  - PARTIAL OR COMPLETE
  - RESULTS FROM INTRA-LUMINAL OBSTRUCTION
    - TUMOR
    - GALL STONE
  - RESULTS FROM EXTRA-LUMINAL OBSTRUCTION
    - ADHESIONS
    - TUMOR
BOWEL OBSTRUCTION

• DIAGNOSTIC WORK UP
  • LABS
  • ABD FLAT PLATE AND UPRIGHT
  • CT
  • COLONOSCOPY

• ROLE OF GASTROGRAFIN
GAS PATTERN CONSISTENT WITH SBO
Non-specific gas pattern
Abscess/Collection
WHAT ABOUT THIS?

• ACUTE PANCREATITIS WITH NORMAL LIPASE.
• EXCRUCIATING PAIN
• EPIGASTRIC REGION
• REFERRED PAIN TO THE BACK
• DEGREE OF SICKNESS VARIES
• RECOVERY CAN BE PROLONGED
• CAUSE - VARIES
• GALL STONE PANCREATITIS
• ACUTE PANCREATITIS
WHAT ABOUT SPECIAL POPULATIONS?
MANAGEMENT STRATEGIES

- INDEX OF SUSPICION
- AWARENESS OF DIAGNOSTIC TEST RESULTS
- INTEGRATION OF TEST RESULTS
- AWARENESS OF CLINICIANS CONCERNS
- CONSISTENCY WITH REASSESSMENT
SUMMARY

• EXCELLENT SKILLS WITH:
  • H & P
  • ESTABLISHING A CLEAR PICTURE / TIMELINE OF S & S
  • LINKING DIFFERENTIAL DX’S WITH DIAGNOSTIC WORK-UP
• INDEX OF SUSPICION