Complete Summary

GUIDELINE TITLE

Practice management guidelines for nonoperative management of penetrating abdominal trauma.

BIBLIOGRAPHIC SOURCE(S)

Como JJ, Bokhari F, Chiu WC, Duane TM, Holevar MR, Tandoh MA. Practice management guidelines for nonoperative management of penetrating abdominal trauma. Chicago (IL): Eastern Association for the Surgery of Trauma (EAST); 2007. 49 p.

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Penetrating abdominal trauma

GUIDELINE CATEGORY

Management
Treatment

CLINICAL SPECIALTY

Critical Care
Emergency Medicine

Family Practice
Gastroenterology
Internal Medicine
Surgery

INTENDED USERS

Advanced Practice Nurses
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To provide practice management guidelines for nonoperative management of penetrating abdominal trauma

TARGET POPULATION

Patients with penetrating abdominal trauma

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Assessment

1. Physical examination
2. Assessment of indications for laparotomy
3. Triple-contrast (oral, intravenous, and rectal contrast) abdominopelvic computed tomography (CT)
4. Angiography

Treatment

1. Observation
2. Laparotomy

MAJOR OUTCOMES CONSIDERED

- Mortality and morbidity
- Length of hospital stay
- Sensitivity and specificity of clinical examination and imaging methods

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A computerized search of the National Library of Medicine and the National Institutes of Health MEDLINE database was undertaken using the Entrez PubMed (www.pubmed.com) interface. The primary search strategy was developed to retrieve English language articles focusing on nonoperative management of penetrating abdominal trauma starting in 1990 and continuing through 2005; review articles, letters to the editor, editorials, other items of general commentary, and case reports were excluded from the search. These articles were then reviewed for relevance by the committee chair, and the final reference list of 51 citations was distributed to the remainder of the study group for review.

NUMBER OF SOURCE DOCUMENTS

51

The 51 references included 1 Class I, 26 Class II, and 24 Class III (see "Rating Scheme for the Strength of the Evidence").

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Class I: Prospective, randomized clinical trials

Class II: Clinical studies in which data was collected prospectively or retrospective analyses based on clearly reliable data

Class III: Studies based on retrospectively collected data

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Level 1: The recommendation is convincingly justifiable based on the available scientific information alone. This recommendation is usually based on Class I data; however, strong Class II evidence may form the basis for a level 1 recommendation, especially if the issue does not lend itself to testing in a randomized format. Conversely, low quality or contradictory Class I data may not be able to support a level 1 recommendation.

Level 2: The recommendation is reasonably justifiable by available scientific evidence and strongly supported by expert opinion. This recommendation is usually supported by Class II data or a preponderance of Class III evidence.

Level 3: The recommendation is supported by available data but adequate scientific evidence is lacking. This recommendation is generally supported by Class III data. This type of recommendation is useful for educational purposes and in guiding future clinical research.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The levels of recommendation (1-3) and classes of evidence (I-III) are defined at the end of the "Major Recommendations" field.

Level 1

There is insufficient data to support a Level 1 recommendation on this topic.

Level 2

1. Patients who are hemodynamically unstable or who have diffuse abdominal tenderness after penetrating abdominal trauma should be taken emergently for laparotomy.
2. Patients with an unreliable clinical examination (i.e., severe head injury, spinal cord injury, severe intoxication, or need for sedation or intubation) should be explored or further investigation done to determine if there is intraperitoneal injury.
3. Others may be selected for initial observation. In these patients:

a. Triple-contrast (oral, intravenous, and rectal contrast) abdominopelvic computed tomography (CT) should be strongly considered as a diagnostic tool to facilitate initial management decisions as this test can accurately predict the need for laparotomy.
b. Serial examinations should be performed, as physical examination is reliable in detecting significant injuries after penetrating trauma to the abdomen. Patients requiring delayed laparotomy will develop abdominal signs.
c. If signs of peritonitis develop, laparotomy should be performed.
d. If there is an unexplained drop in blood pressure or hematocrit, further investigation is warranted.

Level 3

1. The vast majority of patients with penetrating abdominal trauma managed nonoperatively may be discharged after twenty-four hours of observation in the presence of a reliable abdominal examination and minimal to no abdominal tenderness.
2. Patients with penetrating injury to the right upper quadrant of the abdomen with injury to the right lung, right diaphragm, and liver may be safely observed in the presence of stable vital signs, reliable examination and minimal to no abdominal tenderness.
3. Angiography and investigation for and treatment of diaphragm injury may be necessary as adjuncts to initial nonoperative management of penetrating abdominal trauma.
4. Mandatory exploration for all penetrating renal trauma is not necessary.

Definitions:

Classes of Evidence

Class I: Prospective, randomized clinical trials

Class II: Clinical studies in which data was collected prospectively or retrospective analyses based on clearly reliable data

Class III: Studies based on retrospectively collected data

Levels of Recommendation

Level 1: The recommendation is convincingly justifiable based on the available scientific information alone. This recommendation is usually based on Class I data; however, strong Class II evidence may form the basis for a level 1 recommendation, especially if the issue does not lend itself to testing in a randomized format. Conversely, low quality or contradictory Class I data may not be able to support a level 1 recommendation.

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Level 3: The recommendation is supported by available data but adequate scientific evidence is lacking. This recommendation is generally supported by Class III data. This type of recommendation is useful for educational purposes and in guiding future clinical research.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate management and treatment of patients with penetrating abdominal trauma

POTENTIAL HARMS

Complications related to management/treatment

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- The Eastern Association for the Surgery of Trauma (EAST) is a multi-disciplinary professional society committed to improving the care of injured patients. The Ad hoc Committee for Practice Management Guideline Development of EAST develops and disseminates evidence-based information to increase the scientific knowledge needed to enhance patient and clinical decision-making, improve health care quality, and promote efficiency in the organization of public and private systems of health care delivery. Unless specifically stated otherwise, the opinions expressed and statements made in this publication reflect the authors' personal observations and do not imply endorsement by nor official policy of the Eastern Association for the Surgery of Trauma.
- "Clinical practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances."* These guidelines are not fixed protocols that must be followed, but are intended for health care professionals and providers to consider. While they identify and describe generally recommended courses of intervention, they are not presented as a substitute for the advice of a physician or other knowledgeable health care professional or provider. Individual patients may require different treatments from those specified in a

given guideline. Guidelines are not entirely inclusive or exclusive of all methods of reasonable care that can obtain/produce the same results. While guidelines can be written that take into account variations in clinical settings, resources, or common patient characteristics, they cannot address the unique needs of each patient nor the combination of resources available to a particular community or health care professional or provider. Deviations from clinical practice guidelines may be justified by individual circumstances. Thus, guidelines must be applied based on individual patient needs using professional judgment.

* Institute of Medicine. Clinical practice guidelines: directions for a new program. MJ Field and KN Lohr (eds) Washington, DC: National Academy Press. 1990: pg 39.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2007

GUIDELINE DEVELOPER(S)

Eastern Association for the Surgery of Trauma - Professional Association

SOURCE(S) OF FUNDING

Eastern Association for the Surgery of Trauma (EAST)

GUIDELINE COMMITTEE

EAST Practice Management Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Committee Members: John J. Como, MD (*Chairman*) MetroHealth Medical Center, Case School of Medicine; Faran Bokhari, MD (*Vice-Chairman*) Stroger Hospital of Cook County, Rush Medical College; William C. Chiu, MD, R Adams Cowley Shock Trauma Center, University of Maryland School of Medicine; Therese M. Duane, MD, Virginia Commonwealth University Medical Center, Medical College of Virginia; Michele R. Holevar, MD, Mount Sinai Hospital, Chicago Medical School; Margaret A. Tandoh, MD, Upstate Medical Center, SUNY Upstate Medical University

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Eastern Association for the Surgery of Trauma (EAST) Web site.

Print copies: Available from the Eastern Association for the Surgery of Trauma Guidelines, c/o William J. Bromberg, MD, FACS, Memorial Health University Medical Center, Savannah Surgical Group, Inc., 4700 Waters Avenue, Savannah, GA 31404; Phone: (912) 350-7412; Email: guidelines@east.org

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Utilizing evidence based outcome measures to develop practice management guidelines: a primer. 18 p. 2000. Available in Portable Document Format (PDF) from the Eastern Association for the Surgery of Trauma (EAST) Web site.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on September 12, 2008.

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