Management of Cholangitis (Initial Episode) in Adult Patients with Pancreatobiliary Tumor

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PATIENT PRESENTATION

Patient presentation suspicious of cholangitis:
- Abdominal pain 1 (right upper quadrant)
- Fever (temperature greater than 38°C)
- Jaundice
- History of pancreatobiliary tumor
- History of previous biliary stent(s) or drain(s)

EMPIRIC THERAPY

FOR INITIAL EPISODE

Start empiric IV antibiotics:
- No penicillin allergy:
  - Piperacillin/tazobactam
- Penicillin allergy 1 and no quinolone exposure within 90 days and no history of quinolone resistant pathogens in previous year:
  - Levofoxacin and vancomycin and metronidazole
- Penicillin allergy 1 and quinolone exposure within 90 days or quinolone resistance in previous year:
  - Aztreonam and vancomycin and metronidazole

Does patient exhibit criteria for ICU admission? 2

If patient is admitted to the ICU, place STAT emergent GI consult

Start empiric IV antibiotics:
- No penicillin allergy or quinolone resistant pathogens in past year:
  - Levofoxacin and metronidazole (if no quinolone exposure within 90 days) or
  - Ceftriaxone and metronidazole or
  - Ampicillin/subactam and levofloxacin
- Penicillin allergy 1 and no quinolone exposure within 90 days and no history of quinolone resistant pathogens in previous year:
  - Levofoxacin and metronidazole
- Penicillin allergy 1 and quinolone exposure within 90 days or quinolone resistance in previous year:
  - Aztreonam and vancomycin and metronidazole

NPO = nothing by mouth

1 Abdominal pain alone (without the other signs/symptoms above) is not specific for the diagnosis of cholangitis
2 Criteria for ICU admission or dependent on clinician discretion
3 Consider meropenem if patient has any of the following:
   - Non-IgE-mediated allergy to alternative beta-lactam agents
   - Recent treatment (of at least 3 days duration) with cefepime or piperacillin/tazobactam within past 30 days
   - Infection with ESBL organism or any history of ESBL in culture
   - Infection with organism only susceptible to carbapenem
4 IgE-mediated allergy to penicillin
5 If patient is admitted to the ICU, place STAT emergent GI consult
Cholangitis confirmed based on the following criteria:

- Abnormal WBC (less than 4 or greater than 10 K/microliter) and
- Labs indicative of cholestasis, such as elevated total bilirubin and/or elevated alkaline phosphatase (greater than institutional upper limits of normal) or
- Evidence on imaging (i.e., biliary dilatation, stricture or stone)

Order pertinent labs in addition to:
- CBC with differential
- Bilirubin (total), direct and indirect bilirubin
- Alkaline phosphatase
- C-reactive protein (CRP) and procalcitonin
- Blood and relevant cultures (culturing of preexisting biliary drains is not recommended due to colonization)

Obtain if patient able to tolerate:
- CT abdomen with contrast if not done within past 48 hours
- If patient has renal dysfunction, consider MRCP or MRI abdomen
- Consider abdominal ultrasound only for suspicion of cholecystitis

Cholangitis confirmed based on the following criteria:
- Abnormal WBC (less than 4 or greater than 10 K/microliter) and
- Labs indicative of cholestasis, such as elevated total bilirubin and/or elevated alkaline phosphatase (greater than institutional upper limits of normal) or
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Order labs if not already done within the last 24 hours
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ACUTE CARE FLOOR MANAGEMENT

EVALUATION

1. Order1 pertinent labs in addition to:
   - CBC with differential
   - Bilirubin (total), direct and indirect bilirubin
   - Alkaline phosphatase
   - C-reactive protein (CRP) and procalcitonin
   - Blood and relevant cultures (culturing of preexisting biliary drains is not recommended due to colonization)

Obtain:
- CT abdomen with contrast if not done within past 48 hours
- If patient has renal dysfunction, consider MRCP or MRI abdomen
- Consider abdominal ultrasound only for suspicion of cholecystitis

Consult2 Gastroenterology
- Additionally, consult Interventional Radiology if external biliary drains are present

FINDINGS

Cholangitis confirmed based on the following criteria:
- Abnormal WBC (less than 4 or greater than 10 K/microliter) and
- Labs indicative of cholestasis, such as elevated total bilirubin and/or elevated alkaline phosphatase (greater than institutional upper limits of normal) or
- Evidence on imaging (i.e., biliary dilatation, stricture or stone)

1 Order labs if not already done within the last 24 hours
2 Place routine GI consult

See Page 4

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Cultures¹ may be collected for all invasive biliary procedures (i.e., ERCP, newly placed biliary drain)

TREATMENT

Yes
Consult Infectious Diseases for treatment recommendations

No
Adjust antibiotics based on organism(s) isolated from invasive biliary specimens

Patient improved²

Yes
Complete 5 days of antimicrobial therapy post drainage/obstruction relief

No
Reassess conditions³ daily until improved
• If no improvement within 48 hours from obstruction, consult Infectious Diseases for further recommendations

FOLLOW-UP

• Ensure Gastroenterology follow-up scheduled for biliary stent exchange prior to discharge as clinically indicated
• Ensure Interventional Radiology follow-up is scheduled for biliary drain management prior to discharge as clinically indicated
• Infectious Disease follow-up is recommended for patients with MDRO pathogens, bacteremia, or liver abscess
• Primary team follow-up is essential and recommended

¹Providers should place a comment in the consult order and communicate directly with Gastroenterology on whether cultures are to be collected during ERCP
²MDROs include:
   • Enterococcus resistant to vancomycin
   • S. aureus resistant to methicillin (oxacillin)
   • S. pneumoniae resistant to penicillin and streptococci resistant to ceftriaxone
   • Stenotrophomonas maltophilia
   • Any extended spectrum beta-lactamase (ESBL)-producing gram negative bacilli
   • Any carbapenem resistant gram negative bacilli
   • All other gram negative bacilli that are resistant to usual recommended first-line agents
³Improved conditions include:
   • Clinical improvement (resolution of fever, hemodynamically stable, improving and/or normalized WBC)
   • Drainage/obstruction relief obtained

ERCP = endoscopic retrograde cholangiopancreatography
MDRO = multi-drug resistant organism

Department of Clinical Effectiveness V.1
Approved by the Executive Committee of the Medical Staff on 06/25/2019

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SUGGESTED READINGS


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DEVELOPMENT CREDITS

This practice consensus statement is based on majority opinion of the Cholangitis Management Workgroup at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

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