Guideline: Pediatric Pancreatitis, Inpatient
Updated: February 2, 2021

Clinical algorithm:

Patient meets 2 of 3 criteria:
1) acute epigastric abdominal pain
2) amylase or lipase ≥3 times the upper limit of normal
3) imaging showing acute pancreatitis, e.g., pancreatic edema, pancreatic or peripancreatic necrosis, peripancreatic inflammation, acute fluid collections, hemorrhage, pancreatic abscess, pseudocyst

Evidence of SIRS, organ failure, infection or pancreatic complication (hemorrhage, necrosis) indicative of severe pancreatitis?

Yes: Consider admission to PICU
No: Admit to general pediatrics

If first episode of pancreatitis:
- Collect CBC, CMP, GGT, triglycerides, UA
  - If hypocalcemic, check Mg and iCa and supplement if low
- Check RFP Q8-12H during initial 48H for marker of appropriate fluid management
- Order RUQ Abdominal US to r/o obstructive process and trauma
- Stop offending agents (valproic acid, 6MP, mesalamine, azathioprine, prednisone, L-asparaginase)
- Bolus with 10-20 mL/kg LR until normal BP, HR and adequate UOP (unless hypercalcemic, then NS)
- ≥1.5-2 x maintenance D5LR or D5NS for first 24 hours to keep UOP>1 mL/kg/hr (or >0.5 mL/kg/hr for adolescents)
  - Give colloid if hematocrit <25% or albumin is <2 g/dL
- Age appropriate diet, antiemetics
- Complete VTE Assessment in EPIC, order appropriate prophylaxis, reassess when a patient’s level of care has changed or every 48 hours
- Analgesics, consider PCA (use fentanyl if renal insufficiency)
- No antibiotics unless concerned for infected necrosis or acute cholangitis (consult pediatric surgery to discuss)

If acute recurrent pancreatitis (ARP), family history of acute or chronic pancreatitis, or <3 yo and above work-up negative:
- Management as above
- Consult pediatric GI
- Collect sweat chloride, IgG4, ANA, fecal calprotectin, celiac testing. Consider metabolic genetics consult and/or collect serum amino acids and urine organic acids. Consider MRCP
- Collect genetic panel including PRSS1, SPINK1, CFTR, CTRC and CPA1

Consult vs admit to pediatric surgery. Acute cholangitis present?

Yes
- ERCP ideally <24 hours
- Common bile duct obstruction?
  - Yes: ERCP ideally within 72 hours
  - No: Cholecystectomy this admission

No: MRCP or endoscopic ultrasound if ARP or <3 yo with negative work-up only

Gallstones present?

Yes: MRCP or endoscopic ultrasound if ARP or <3 yo with negative work-up only
No: Admit to general pediatrics
Clinical guideline summary

CLINICAL GUIDELINE NAME: Pediatric Pancreatitis

PATIENT POPULATION AND DIAGNOSIS: 3 days to 18 years old who present to the ED or our inpatient pediatrics floors with a diagnosis of pancreatitis

APPLICABLE TO: All Spectrum Health Sites

BRIEF DESCRIPTION: This clinical practice guideline covers the diagnosis, work-up and management of pediatric pancreatitis.

OVERSIGHT TEAM LEADER(S): Allison Long, MD; Deborah Cloney, MD; Katherine Boss, RD; Marc Schlatter, MD; Ashleigh Nurski, MSN, RN, ACCNS-P, CPN

OWNING EXPERT IMPROVEMENT TEAM (EIT): n/a

MANAGING CLINICAL PRACTICE COUNCIL (CPC): The Pediatric CPC

CPC APPROVAL DATE: 1/28/2021

OTHER TEAM(S) IMPACTED (FOR EXAMPLE: CPCs, ANESTHESIA, NURSING, RADIOLOGY): Nursing

IMPLEMENTATION DATE: 10/19/20

LAST REVISED: 2/2/2021

FOR MORE INFORMATION, CONTACT: Allison Long, MD
Clinical pathways clinical approach

TREATMENT AND MANAGEMENT:

Inpatient Status

Can slow IVF to maintenance rate

Yes

No

After 24 hours, is UOP adequate

Yes

Continue IVF rehydration at ≥1.5-2 X maintenance rate

No

Are pain and nausea improved?

Yes

Can patient take PO?

No

Trial low fat diet with IVF for additional 24 hours (max 48 hours) and reevaluate current management

No

Place NG and start continuous Pediasure if <13 yo or Osmolite if ≥13 yo at 1/8-1/4 total caloric needs. Tolerated?

Yes

Continue Pediatric diet or previous diet.

No

Continue advancing to goal.

Change to Pediasure Peptide if <13 yo or Vital if ≥13 yo OR advance NG to NJ. Tolerated?

Yes

Do pain and nausea recur?

No

Observe for 12-24 hours and discharge home.

Yes

Additional help:

- If concerned for acute necrotizing pancreatitis/failure to respond to therapy/uncertain about diagnosis, obtain CT abdomen and pelvis OR MRI abdomen with contrast after 72-96 hours of symptoms.
- If >30% of pancreas necrotizing, start meropenem for 7-10 days.
- No need to check daily lipase. Progress through flowchart based on symptoms. Recheck if questioning diagnosis.
- Indication for TPN: ileus, abdominal compartment syndrome, complex fistulae; probably pancreatic laceration/fracture/duct disruption. Enteral nutrition preferable even in presence of fistulas, ascites and pseudocysts.
- ERCP can also be considered for pancreatic ductal stones, strictures, pseudocyst drainage, pancreatic duct leaks or ductal lacerations.
- If severe fluid overload with >10% weight gain from baseline, consult nephrology and transfer to PICU for CRRT.
References:


