Body Packing

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Patient J.P.

- 28 y.o. Spanish-speaking man presents to ED
- CC: anxiety and mild abd pain
- HPI:
  - Recently arrived on international flight
  - Anxious “due to stuff in Colombia”
  - Vague abd pain, constipation
  - No N/V, no F/C
Pt J.P. (cont)

- **SH:** Farmer in Colombia; visiting relatives in US (unable to provide contact info)
- **PMH/PSH/All/Meds:** None

**Relevant PE:**
- **T 99.0  P 86  BP 120/84  RR 20  O2 100%RA**
- **PERRL, nl size**
- **Mild diffuse abd pain to palpation; no masses**
- **Rectal exam:** Hard, impacted stools in vault
J.P.’s Abd Plain Radiograph:

Multiple radiodensities w/ appearance of foreign bodies throughout transverse, descending, and sigmoid colon

Upon further questioning:

- Pt admits to swallowing 76 packets of cocaine in Colombia to smuggle to US
- Promised $2000 upon US delivery
- Pt missed drug contact in US; now nervous about failure to pass packets
Body Packing

- Internal transport of illegal drugs
- “Body Packer” = “Mule” = “Swallower”
- Cocaine, heroin; (also amphetamines, marijuana)
- Compensation: $$ or safe passage
- Pt often unable/unwilling to give accurate hx, therefore radiology is crucial in diagnosis
Demographics

• Traditionally young males… BUT…
• Now body packers cross all demographics
• Reported in children and pregnant women
• Every major US city
• Increasing # reports in recent years
“Packing”

• Swallowing of packets **most common**
• Insertion into rectum, vagina, even ears (!) has been reported
• Transit time ~ days to weeks
• Constipating agents (e.g. loperamide) often used
“Unpacking”

- Laxatives, cathartics, enemas often employed

Rectally passed drug packets

Anatomy of Drug Packet


Drug Packet Details

- Each packet ~ 8-10 g of very pure drug
- Typical body packer carries 50-100 packets
- Total: 500 g to 1 kg (!)
- Each packet = life-threatening dose
Typical Medical Presentations:

1. Drug toxicity
2. Failure to pass packets, bowel obstruction
3. Medical assessment after arrest/detention
4. Missed meeting with contact, leading to anxiety from failure to pass packets
Diagnostic Evaluation

• Hx often unreliable

• PE often unremarkable
  Still should look for:
  – Signs of toxicity = packet leak
  – Abdominal distension and palpable masses
  – Foreign objects on gentle rectal/pelvic exam

• Urine tox screen: poor sensitivity

• Therefore radiology is crucial for diagnosis
Radiographic Evaluation

• Should attempt radiographic evaluation of all suspected body packers

• Initial studies:
  – Plain radiograph
  – Ultrasound

• Advanced studies:
  – CT
  – Plain radiograph with oral contrast

• Pt has legal right to refuse radiologicographic eval
Radiographic Evaluation

• Initial studies:
  – Plain radiograph
  – Ultrasound

• Advanced studies:
  – CT
  – Plain radiograph with oral contrast
Plain Radiography

- Most common initial study
- Used as screening tool or for rapid confirmation of diagnosis when pre-test suspicion is high
- Sensitivity 85-90% (several large studies)
- Several specific signs for body packing
Plain Radiograph Signs:

1. Multiple radiolucencies w/ appearance of foreign bodies

Plain Radiograph Signs:

2. “Double condom” sign

- Linear radiolucencies
- Air trapped between layers of latex (often condoms)

Plain Radiograph

**False Positives**
- Constipation
- Bladder stones
- Intrabdominal calcifications

Reports of pts detained/ arrested due to false positive tests

**False Negatives**
- Reasons for false -’s poorly established
- Poor technical quality?
- Reader inexperience?

Reports of pts passing >150 drug packets after false negative tests
Body Packing or Constipation?

VS.

Constipation, mis-dx’ed as body packing

Body packing!

Radiographic Evaluation

• Initial studies:
  – Plain radiograph
  – Ultrasound

• Advanced studies:
  – CT
  – Plain radiograph with oral contrast
Ultrasound

- Potentially very useful as screening test
- Speed and safety are major benefits
- Sensitivity not well studied
- Operator-dependent

Drug packet appearance:
Curvilinear hyperechoic rim w/ acoustic shadowing

Alzen et al. “Sonographische Nachweisbarkeit von Betaubungsmitt elbehaltnissen im gastrointestinaltrkt”
Radiographic Evaluation

• Initial studies:
  – Plain radiograph
  – Ultrasound

• Advanced studies:
  – CT
    – Plain radiograph with oral contrast
CT

- Used if initial screening test (plain radiograph, U/S) is equivocal
- Used to document clearing of GI tract
- More sensitive than plain radiography, although no hard numbers
CT

- No oral contrast needed for CT

Radiographic Evaluation

• Initial studies:
  – Plain radiograph
  – Ultrasound

• Advanced studies:
  – CT
  – Plain radiograph with oral contrast
Plain Radiography with Oral Contrast

- Can be used if initial screening test (plain radiography w/o contrast, U/S) is equivocal
- Can be used to document clearing of GI tract
- More sensitive than plain film w/o contrast
- Comparative sensitivity to CT (w/o oral contrast) not determined
Plain Radiography with Oral Contrast

Radiolucencies outlined by oral contrast in left colon and rectum

Look for complications:

Plain Radiograph

- Perforation (Free air)

Plain Radiograph w/Oral Contrast

- Gastric Outlet Obstruction


Treatment

- Medical vs. surgical options
- Complicated treatment algorithm based on:
  - Evidence of toxicity
  - Type of drug
  - Obstruction/Perforation
  - Legal issues
- Prompt and accurate radiographic diagnosis can be difference between life and death!
Treatment Algorithm

Check patient’s airway, breathing, and circulation and manage as necessary; consider consultation with a regional poison-control center

Evidence of drug-induced toxic effects

No symptoms

Gastrointestinal perforation or mechanical obstruction

Gastrointestinal decontamination
Activated charcoal, 50 g orally every 4–6 hr for several doses
Whole-bowel irrigation, 2 l/hr orally or by nasogastric tube

Cocaine

Heroin

Treat symptoms
Agitation and seizures
Benzodiazepines
Diazepam, 5–10 mg IV; repeat as necessary
Loxapine, 1–2 mg IV; repeat as necessary
Hyperthermia
Benzodiazepines
Diazepam, 5–10 mg IV; repeat as necessary
Loxapine, 1–2 mg IV; repeat as necessary
Acute cooling
Immersion in ice
Raising or cooling
Neuromuscular blockade
Thiopental, 25 mg IV
Hypertension
Benzodiazepines
Diazepam, 5–10 mg IV; repeat as necessary
Loxapine, 1–2 mg IV; repeat as necessary
Other agents
Phentolamine, 0.05–0.1 mg/kg IV
Nitroglycerin, 0.3–1.0 μg/kg/min IV
Nitric oxide, 0.25–0.5 mg/kg/min IV

Treat symptoms
Respiratory depression
Naloxone IV bolus of 2–5 mg; repeated until clinical response occurs
“Naloxone dose”; then hourly intravenous infusion at response dose
Acute lung injury
Supplemental oxygen
Endotracheal intubation, if necessary

Pass packets per rectum until all packets thought to have been evacuated

Contrast-enhanced abdominal CT, contrast-enhanced plain radiography, or both

Remaining packets
Negative study

Medically clear patient

Surgical intervention

References

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