Large bowel obstruction

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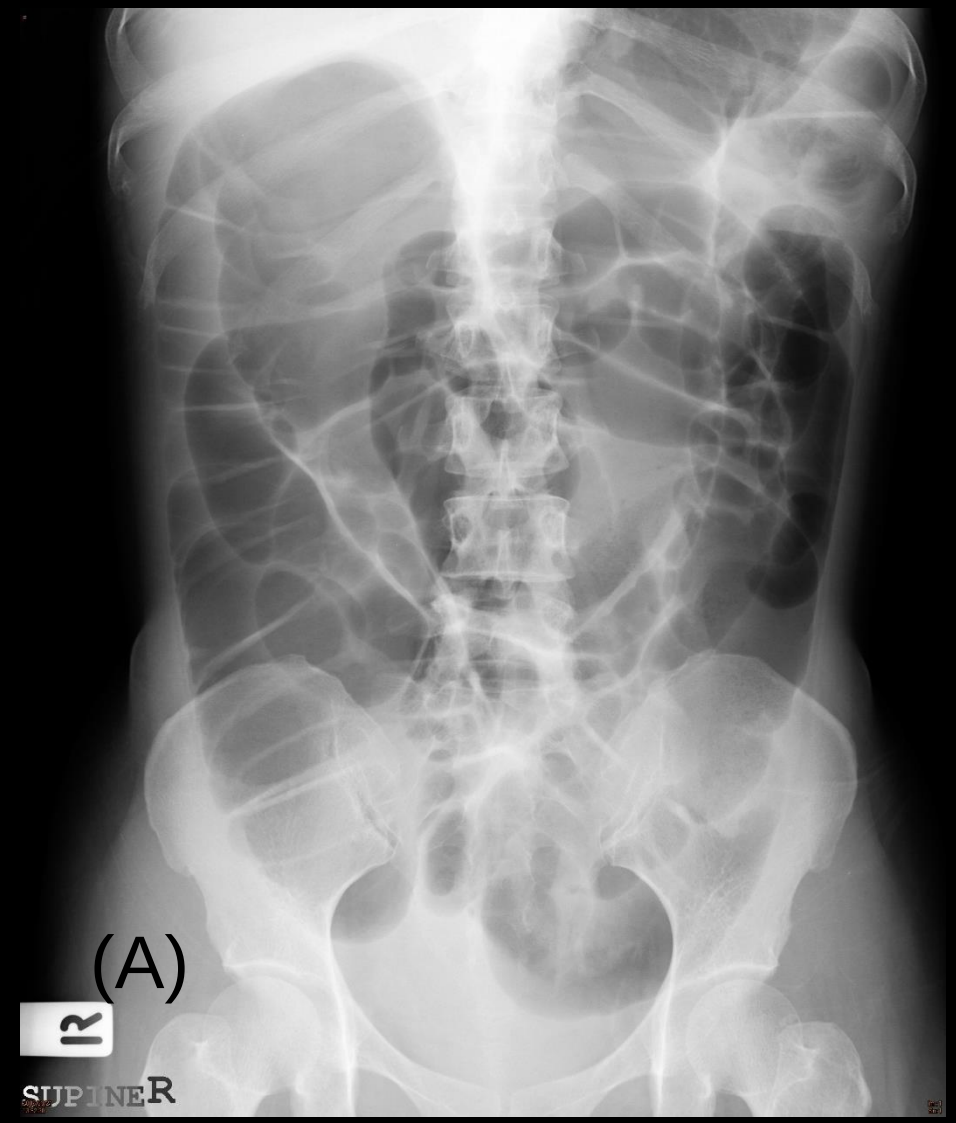
History

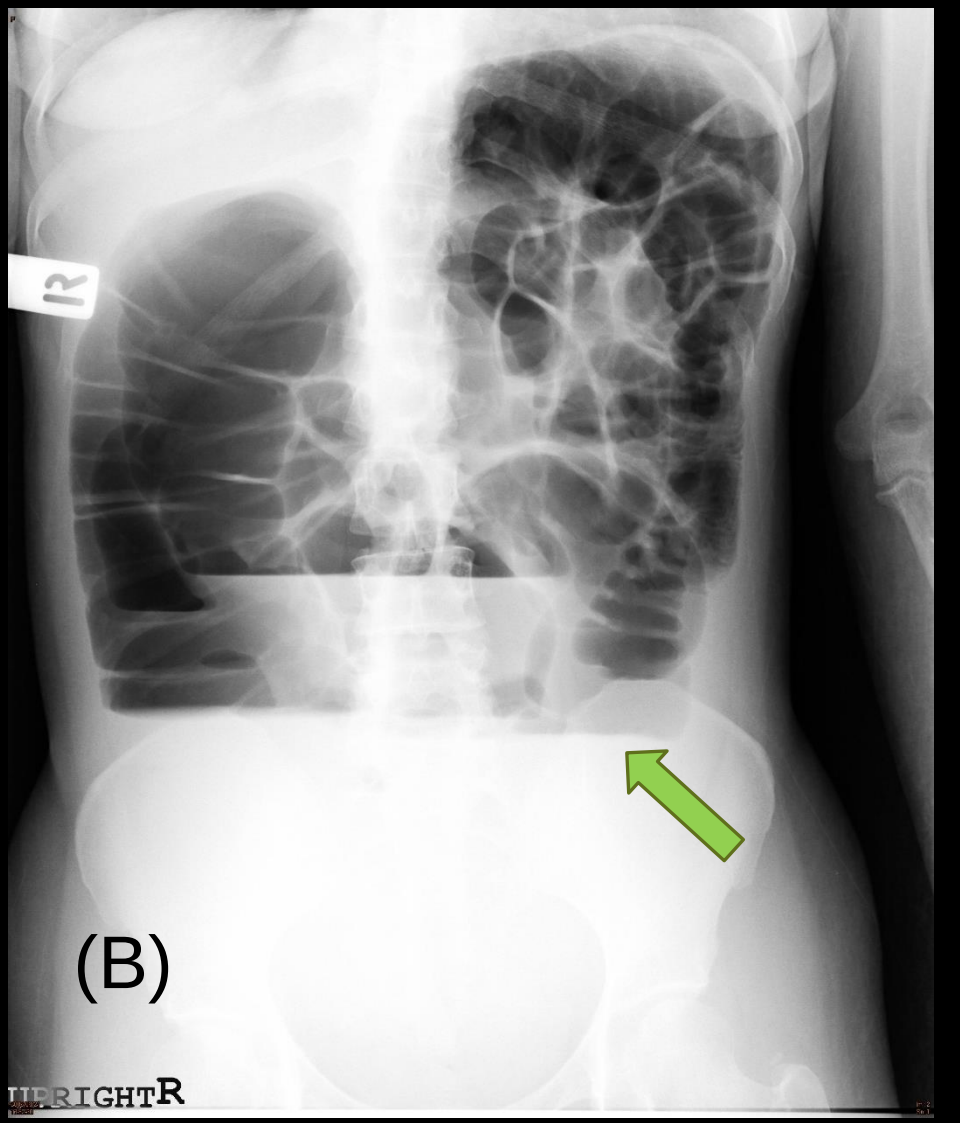
- ผู้ป่วยชาย อายุ 56 ปี, no underlying disease
- ปวดทั่วท้อง 1 วัน ก่อนมา รพ. ไม่ถ่าย ไม่ผายลมมา 3 วัน ไม่มีคลื่นไส้อาเจียน ไม่มีไข้ กินได้น้อยลง ปัสสาวะออกปกติ

Physical examination

- Abdomen: distension, soft, no guarding, generalized tenderness, no rebound tenderness

Plain film abdomen supine and upright





- Large bowel obstruction; Plain film abdomen supine (A) and upright (B);
- (A) Small bowel and large bowel dilatation, no air in rectum
- (B) Air-fluid levels in the colon (green arrow), no sign of pneumoperitoneum

Impression

- Complete large bowel obstruction

Operative note

- Finding:
  - Generalized small bowel and large bowel dilatation
  - Mass at rectosigmoid colon causing complete colonic obstruction

Etiology

Causes of LBO

Cause	Specific Signs
Common (>95%)	Neoplasm (primary colon carcinoma) (60%–80%)
	Volvulus (11%–15%)
	Sigmoid
	Cecum
	Transverse colon
	Diverticulitis (4%–10%)

Causes of LBO

Cause	Specific Signs
Uncommon (<5%)	Intussusception
	Hernia
	Inflammatory bowel disease
	Extrinsic compression from abscess or other masses
	Fecal impaction
	Intraluminal foreign body

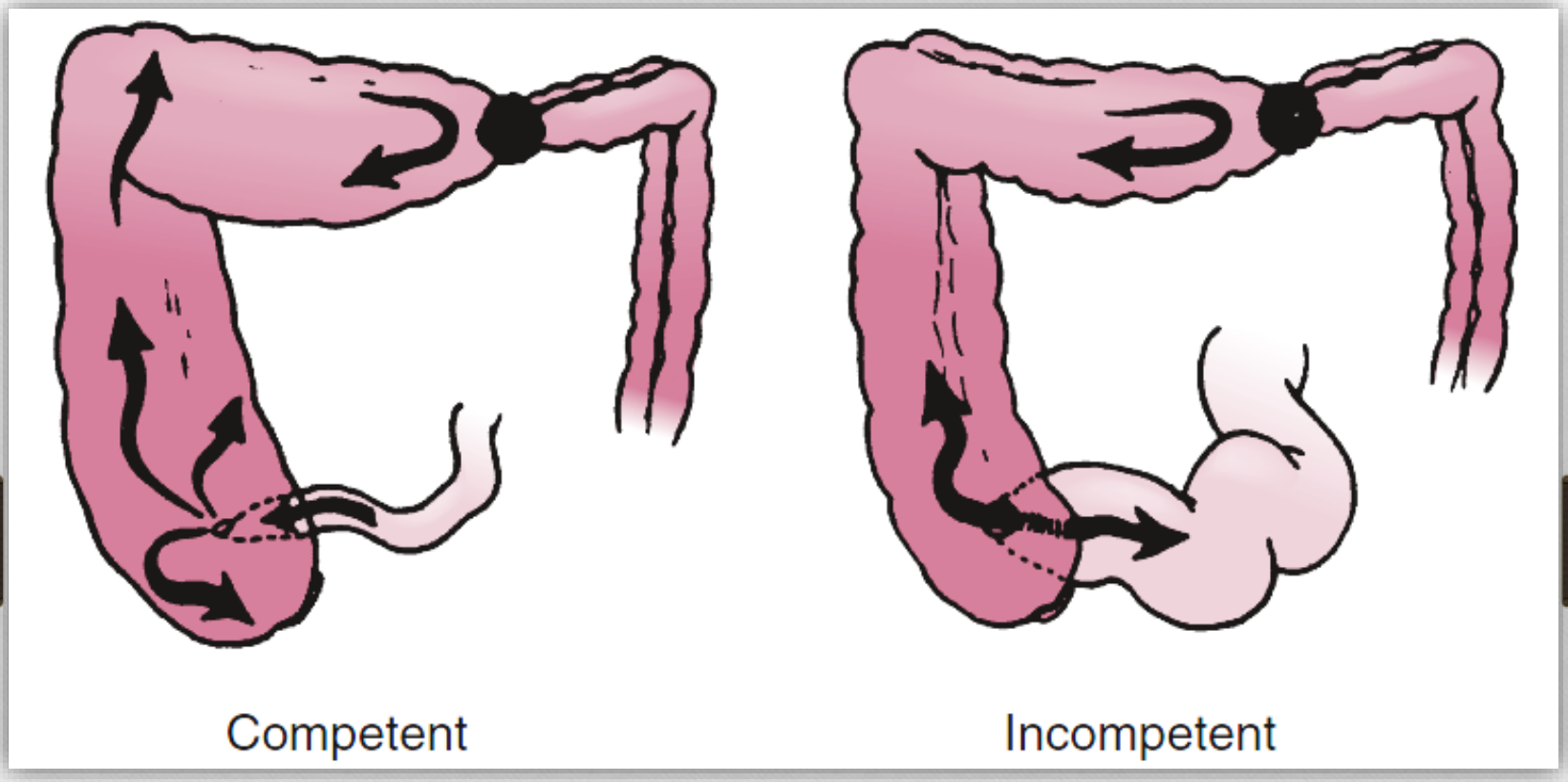
•From: Large-Bowel Obstruction in the Adult, Radiology, 2015

Pathophysiology

- Usually subacute or chronic symptom
- Swallowed air proximal to the obstruction causes dilatation
- In competency ileocecal valve → no small bowel dilatation → closed-loop obstruction
- Incompetent ileocecal valve → small bowel serves to decompress the colon → small bowel and large bowel dilatation

Pathophysiology

- Dissection of air into the wall results in pneumatosis intestinalis, which may precede frank perforation
- Cecum reaches a diameter of 9 to 12 cm → risk for perforate



- **The importance of the ileocecal valve in large bowel obstruction**
- Ileocecal valve competent (*left*), pronounced cecal dilatation can occur
- An incompetent valve (*right*) allows retrograde decompression into the small bowel

From: Gore; Textbook of gastrointestinal radiology; 3rd edition, 2008

Clinical findings

- Often present with abdominal pain, a palpable mass, and anemia (relate with cancer)
- Left-sided lesions cause progressive constipation and, ultimately, obstipation with abdominal distention and pain
- Ileocecal valve incompetent
  - Gradual onset distention (retrograde decompression)
  - Feculent vomiting

Clinical findings

- Physical examination
  - Abdominal mass (e.g., advanced right-sided colon cancer)
  - Distention may be most marked in one region (e.g., the left upper quadrant in cecal volvulus)
  - Often hyperactive bowel sound
  - Marked tenderness or rebound suggests perforation or strangulation

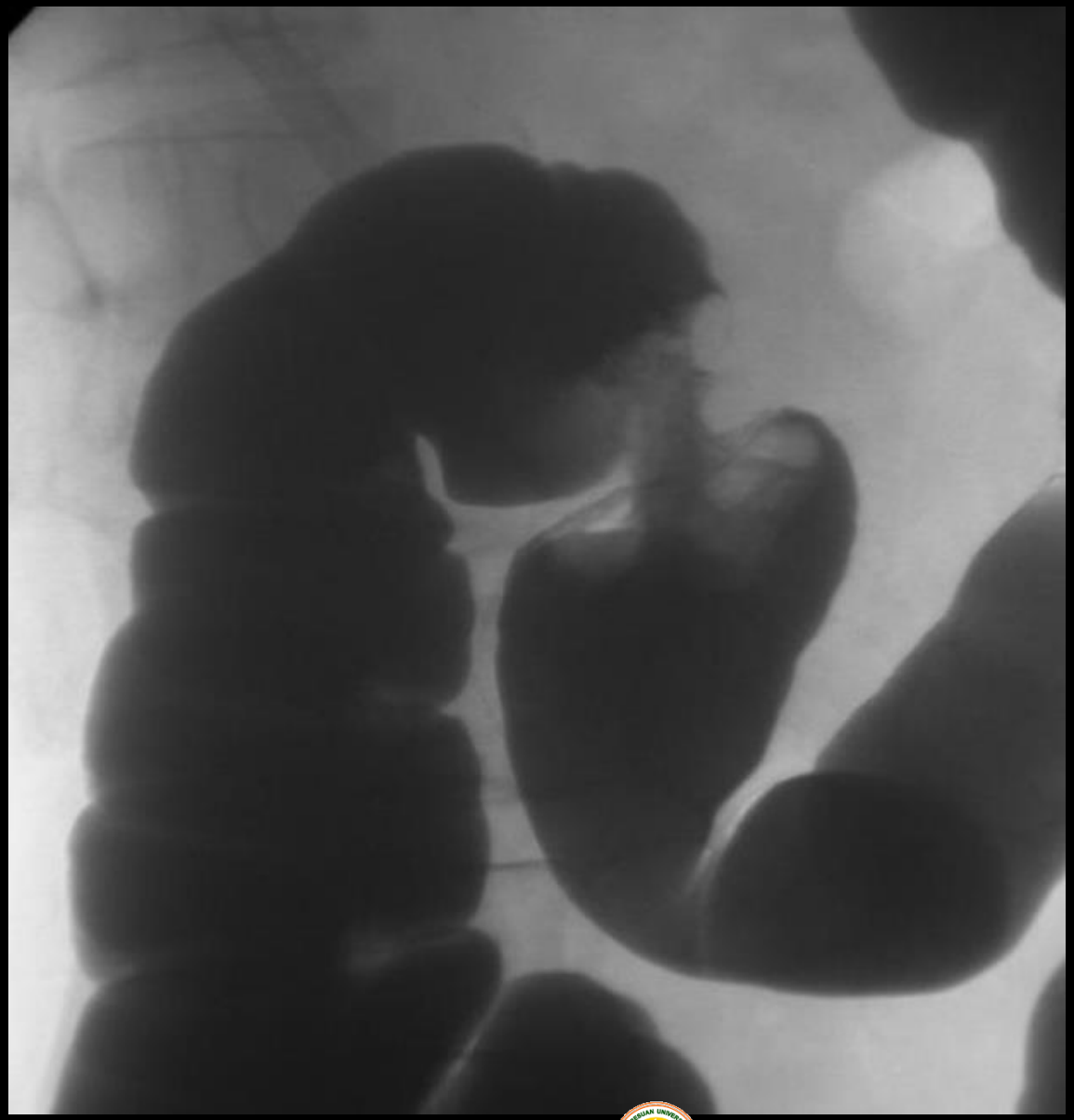
Small VS large bowel

	Small bowel	Large bowel
Valvulae conniventes	Yes	No
Haustration	No	Yes
Diameter	<2.5 cm	< 5 cm
Loops	Many	Few
Distribution of loops	Central	Peripheral
Solid fecal content	No	Yes

Investigation

- Plain film
  - Colon usually dilated proximal to the obstruction
  - No air distal to point of obstruction
- CT to identifies cause

- Apple core lesion on double-contrast barium studies



From: http://rad.usuhs.edu/medpix/parent.php3?mode=quiz&imid=12024&quiz=no

Reference

- Gore; Textbook of gastrointestinal radiology; 3rd edition, 2008

Thank you