Modern Management of Sigmoid Volvulus

Nils Johansson and Eva Angenete
Sahlgrenska University Hospital
Gothenburg University

Background - Epidemiology

- The incidence depends on the region and population
- USA and Western Europe:
  volvulus 2-3.4% of all colon obstruction
  - 50% sigmoid volvulus
- Mostly men > 70 yrs

Background - Aetiology and pathofysiology

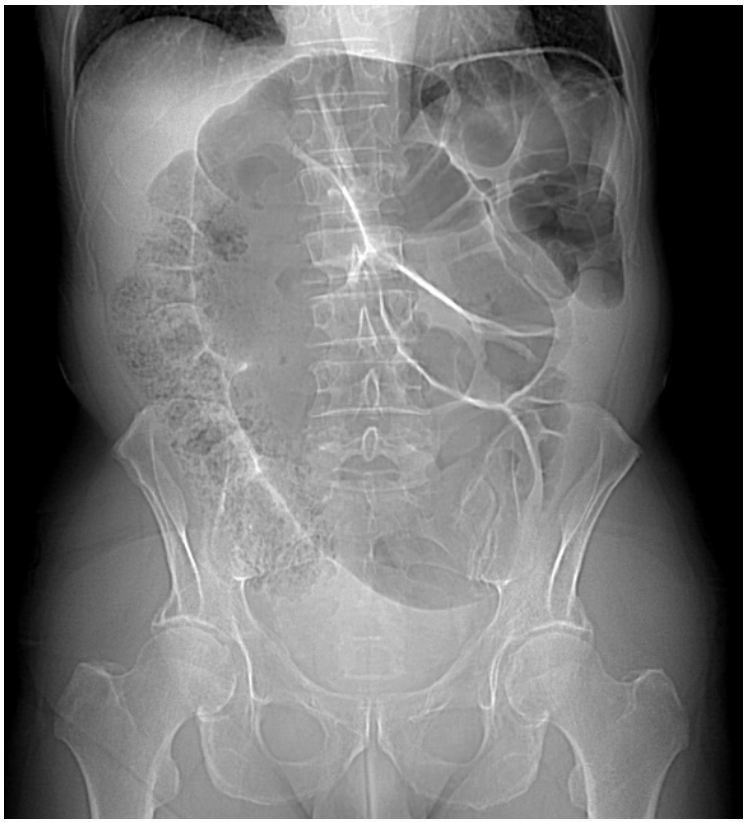
- Unkonw aetiology
- Suggested predisposing factors:
  - Chronic constipation
  - Neurologic disease
  - Anatomic predisposition
- Chronic constipation → Elongation of the colon

Background - symptoms

- Common symptoms:
  - Pain in the lower abdomen
  - Constipation
  - Vomiting
  - Abdominal swelling
  - Bloating
- Often 3-4 days between start of symptoms and initial contact with health care

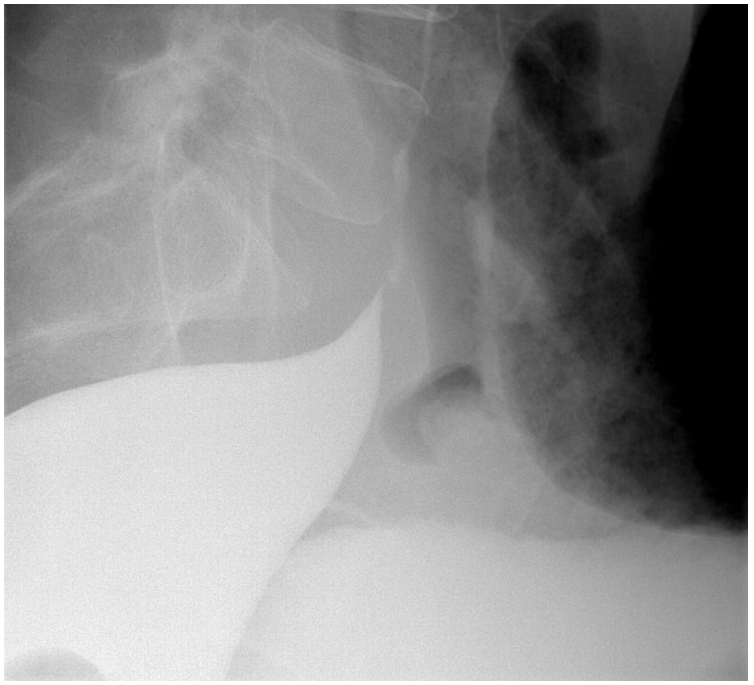
Background - diagnostics

- Previously plain x-ray and barium enema
- Plain x-ray correct diagnosis: 60-90%
- ”Coffee bean”-sign almost 60%



Background - diagnostics

- Barium enema
  - ”Bird’s beak”-sign – increases the diagnostic turn out with 20-30%
- Currently most common CT
  - ~100% sensitivity
  - > 90% specificity



Background - treatment

- Only 2% spontaneous resolution
- Conservative or operative approach
- One attempt with conservative approach: decompression:
  - Barium enema, rectal tube or endoscopy

Background – conservative treatment

- Endoscopic decompression more common
- Rigid or flexible endoscope – 80% success rate
- Flexible endoscope – 95-97% successrate
- A majority has a recurrence (54-86%)

Background – operative treatment

- Planned surgery within 2-5 days
- Emergency surgery if peritonitis or failed decompression
- Higher mortality if emergency surgery compared to planned surgery

Study of patients at a University Hospital in Sweden

The aim was to evaluate the treatment of sigmoid volvulus from 2000 until 2016 at a University Hospital in Sweden

Method

- Retrospective chart review
- ICD-10 code K56.2
- Patients under 16 excluded

Patients

- 168 patients
- 453 separate admissions
- Follow-up median 8.3 yrs (0.2-16.6)
- 148 had their first episode of sigmoid volvulus during the study period

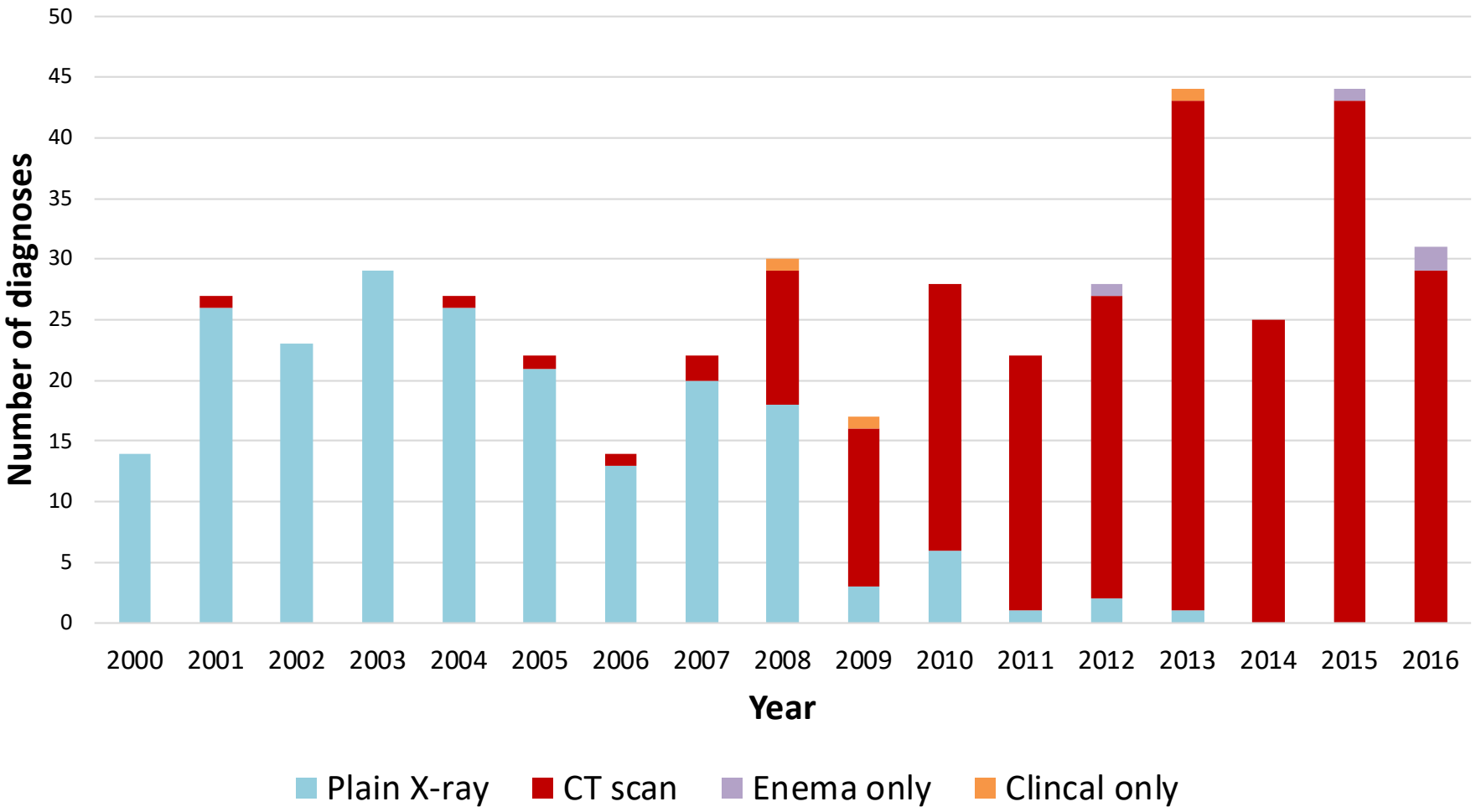
Demography

- 63% men
- Age median 75 yrs (21-96)
- 64% had at least one recurrence
- Median 2 recurrences (1-16)
- Median time until recurrence: 58 days (2-1658)

Results

- 61% had surgery
- Younger and healthier
- Most common co-morbidity:
  - Stroke, 17%
  - Parkinsons, 13%
  - Demens, 13%
- Hospital stay median 3 days (1-97)

Type of diagnostic tool



Results conservative treatment

- 438 conservative treatments
- 92% successful
- 2.7% mortality
- Rectal tube the most common, 95%

Results conservative treatment

- Failed in 35 cases:
  - 2 patients died
  - 33 underwent emergency surgery
- Successful in 403 cases:
  - Discharged without ruther plan
  - Some on the way to planned surgery

Results conservative treatment

- 15% of successful treatments were followed by planned surgery
- However, the majority were discharged without furhter plan:
  - 21.6% with no further vovulus after the first attack
  - 12.1% with no further volvulus after the second attack
  - 10.2% with no further volvulus after attack 3-17

Results operative treatment

- 107 surgeries
  - 57% planned surgery
    - 44% during the same admission and 56% at another admission after a median of 70,5 dagar (6-519)
  - 43% emergency surgery
- 5 recurrences after surgery
  - 4 operated a second time
- Primary anastomosis, 82%
- Hartmann's procedure 15%

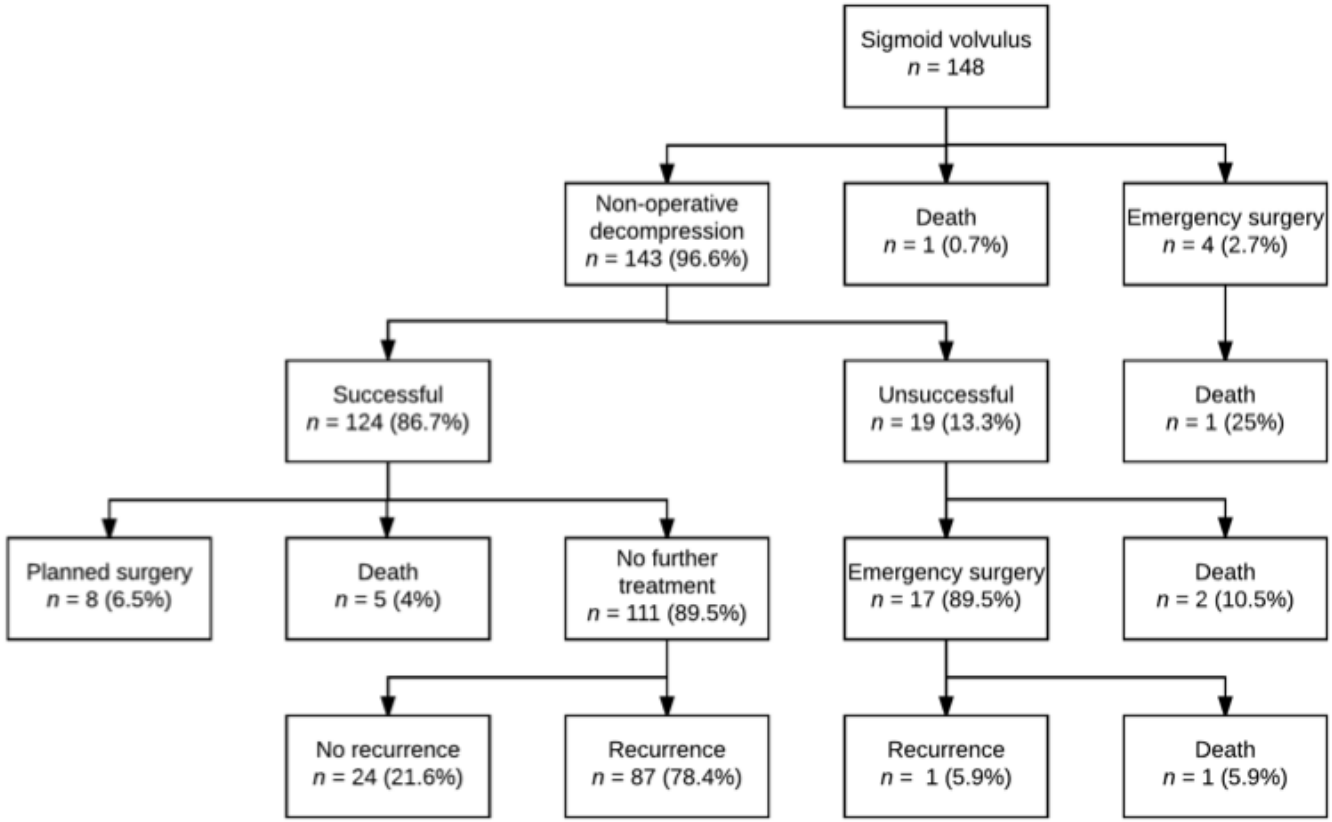
Results operative treatment

- Higher mortality after emergency surgery (13%) compared to planned surgery(3.3%)
- The most common complications:

Complication	Emergency surgery	Planned surgery
Pneumonia	15.2%	6.6%
Anastomotic leakage	6.5%	9.8%
Wound rupture	8.7%	3.3%

- More complications after emergency surgery

Results of initial treatment



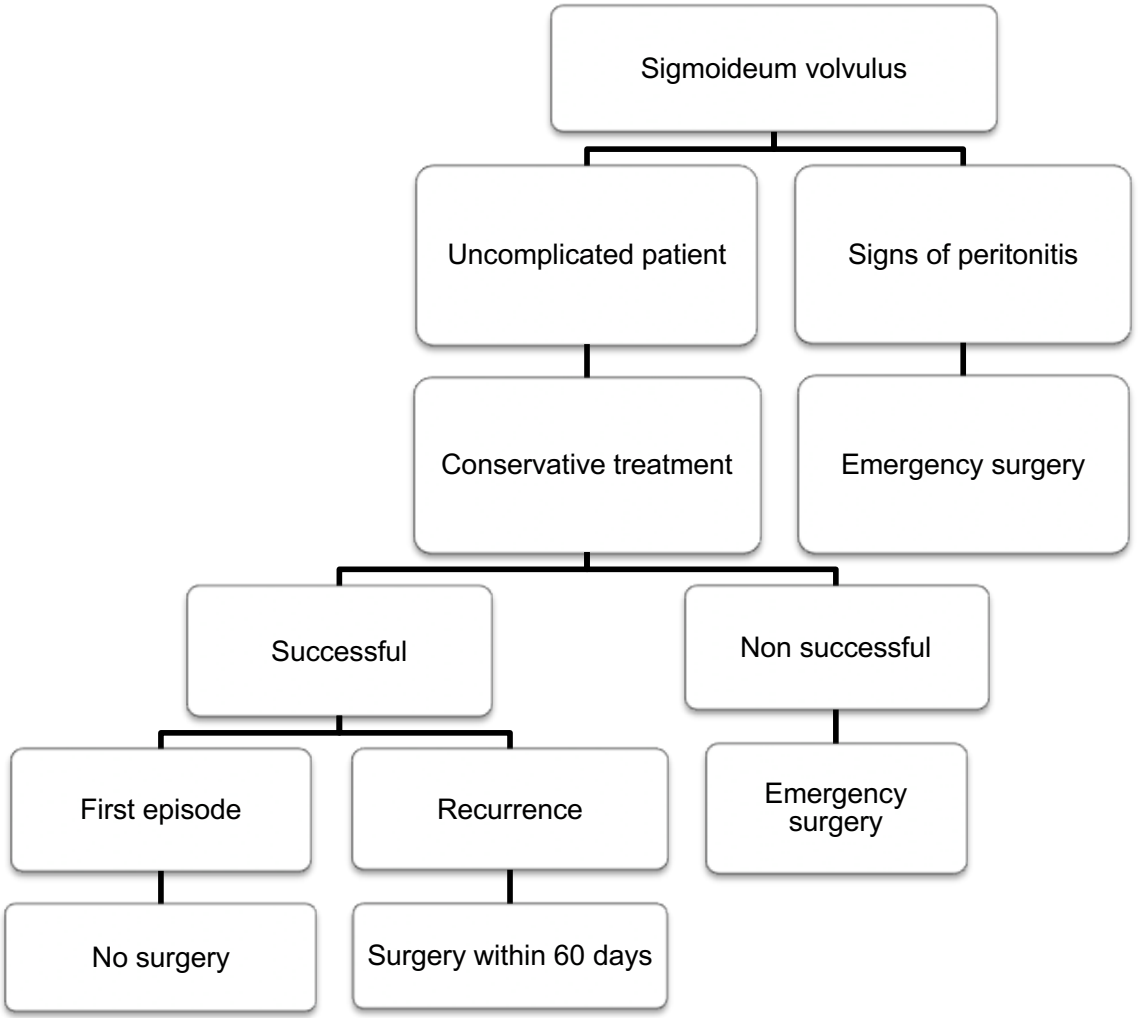
[1] = Within 30 days of intervention

[2] = At least one recurrence during the study period

Diskussion

- Färre recidiv efter första episoden
- Planerad kirurgi efter andra episoden
  - För att undvika onödiga operationer
- Risk för recidiv som kräver akut kirurgi

Suggested treatment plan



Conclusion

- High risk for recurrence
- Low mortality when planned surgery
- Recurrence is cumbersome for both patients and society
- Patients should be operated earlier after successful decompression than in this material, to reduce readmissions for recurrence

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