

# *Case Presentation*

## *GI Departments Meeting*

**Irit Avni, M.D.**

IBD Unit

Rabin Medical Center

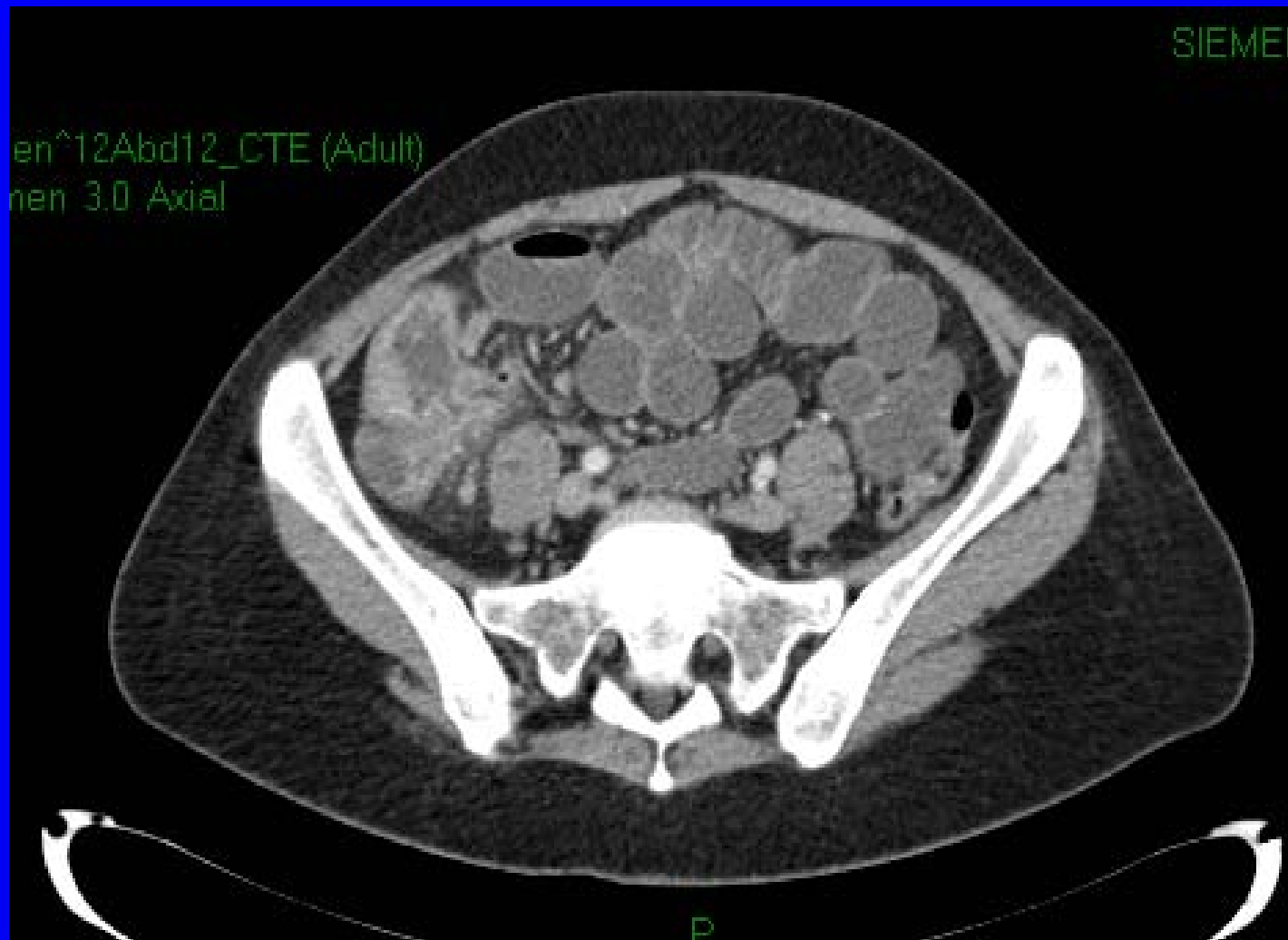
# *Case Presentation*

- 36 y/o female
- Crohn's
  - Abdominal pain
  - Diarrhea
  - Anemia / CRP
  - Colonoscopy:
    - Terminal Ileitis
  - CT:
    - Thickened, enhanced TI

# *Clinical Course*

- Prednisone
- Pentasa
  - Clinical remission - 2yrs
- Exacerbation
  - Prednisone
  - 6 - MP (1.5 mg/kg)
  - Remission - 1 yr
- Exacerbation – Budesonide

# *Enterography*



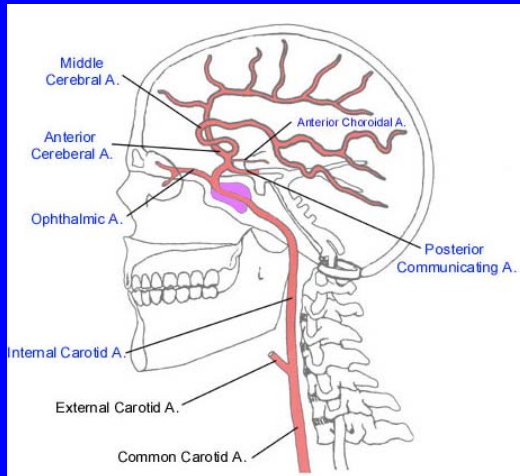
# *Intervention*



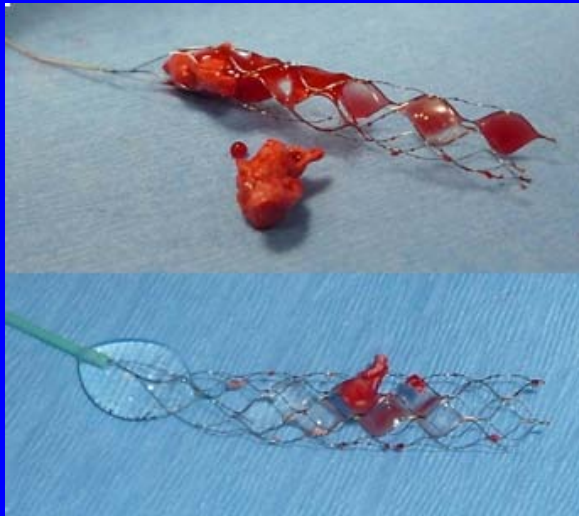
- Infliximab (5 mg/kg)
- 6 - MP continued
- Significant clinical improvement

# *3 Weeks Later...*

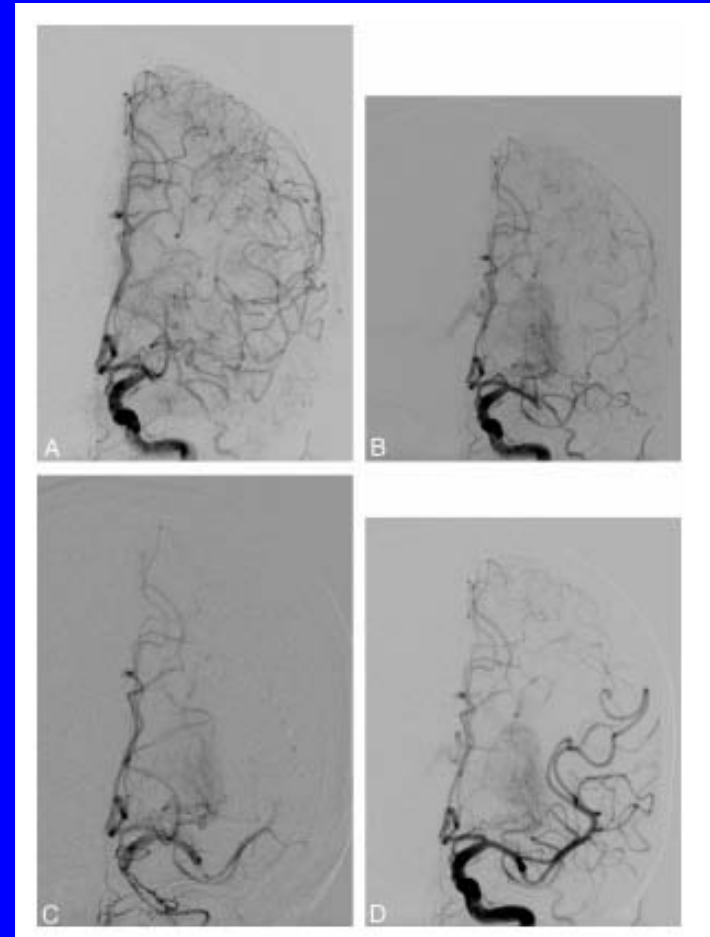
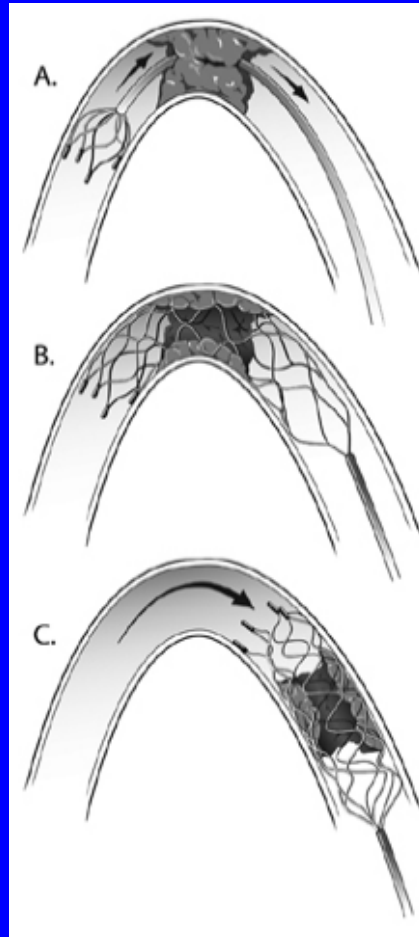
- Dysarthria
- Left hemiplegia
- Head CT – occlusion - right MCA



# *Carotid Catheterization, Intra Arterial tPA & Mechanical Thrombectomy*



Solitaire stent







# *Questions*

- IBD related coagulopathy?
- Underlying thrombophilia?
- Why an arterial event?
- Remicade?

# *Etiology*

- Oral contraceptives - stopped
- Thrombophilia screening:
  - Hereditary:
    - APC resistance / factor V Leiden - negative
    - Protrombin gene mutation - negative
    - Pro- C, pro- S, AT- III deficiencies - negative

# *Etiology*

- Thrombophilia screening:
  - Acquired:
    - Hyperhomocystinemia - absent
    - Anti phospholipid Antibodies:
      - Anti - cardiolipin - normal
      - Anti - b2glycoprotein - normal
      - Lupus anticoagulant - normal

# *Anti Phospholipid Antibodies*

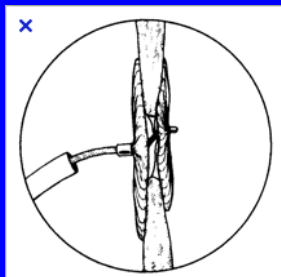
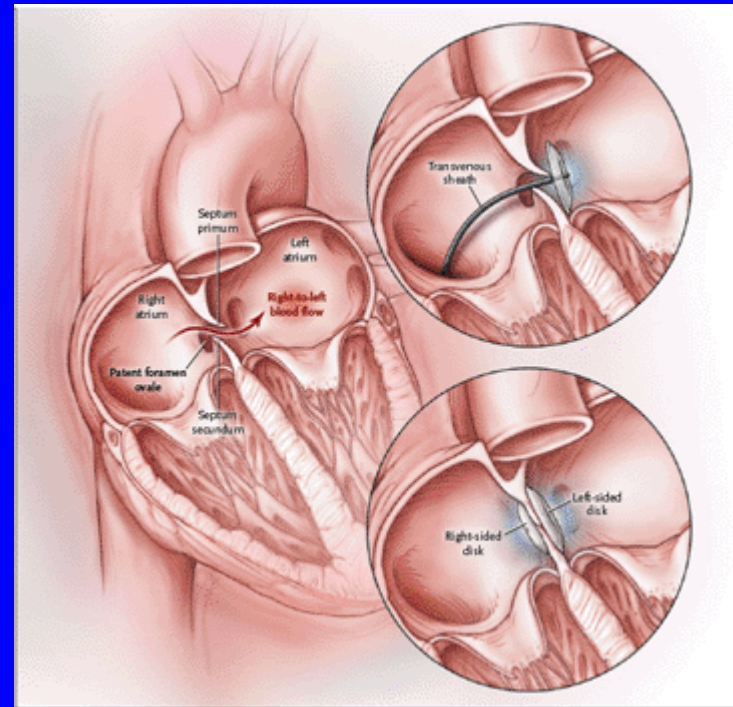
- After 12 weeks:
    - Anti - cardiolipin - normal
    - Anti - b2Glycoprotein - normal
    - Lupus anticoagulant - Positive (X2)
- Anti - phospholipid syndrome

# *Cardiovascular Evaluation*

- Shunt / cardioembolus?
- TTE + bubble study :
  - 2/4 injections positive
  - Doppler – no color jet
- TEE -
  - 1/2 injections positive
  - Doppler - no color jet

# Cardiac Catheterization

- Cardiac catheterization - large PFO (>20 mm)
- Successful PFO closure achieved



# *Interim Summary*

- Stroke - complete recovery
- PFO - closed
- Anti - phospholipid syndrome diagnosed
- CD - currently in clinical remission

# *So Why Did It Happen?*

- Anti phospholipid syndrome
- Oral contraceptives
- Crohn's disease
  - Anti - TNF?

3 weeks after PFO closure...





*Surprise!!!*

Patient found to be 8 weeks pregnant

# *Pregnancy Related Issues*

- Catheterization during pregnancy (5w)
  - Irradiation - 1<sup>st</sup> trimester
- Pregnancy after major stroke
- Anti phospholipid syndrome
- Untreated Crohn's disease

# *Thromboembolic Complications in IBD Patients*

- VTE - most frequent
- Population - based cohort studies: 3-fold increased risk compared to controls

*Bersnttein et al; Thromb Haemost; 2001*

*Oldenburg et al; Dig Dis Sci; 2005*

*Kappelman et al; Gut; 2011*

# *Thromboembolic Complications in IBD Patients*

- Large prospective study of IBD outpatients:
  - Overall risk - VTE (HR-3.4)
  - Higher risk during disease flares (HR- 8.4)
  - Highest risk in the outpatient setting  
(HR 15.8 outpatient vs. 3.2 inpatients)

# *Thromboembolic Complications in IBD Patients*

- Prospective cohort study:
  - IBD
  - Healthy controls
  - Other inflammatory disease (RA)
  - Intestinal disease (Celiac)
  - IBD : VTE- x 3.6
  - RA / Celiac : VTE = controls
  - VTE - specific feature of IBD?

# *Arterial Thromboembolic Complications in IBD Patients*

- Arterial << venous
- Additional pro-coagulant risk factor
- Reports in case reports/series:
  - Large artery strokes
  - Lower extremity arterial occlusions
  - Aortic thrombi
  - Premature atherosclerosis
  - Acute MI

# *Anti - TNF & Thromboembolic Complications*

- TNF - alpha :
  - Pro-coagulant cytokine
  - Induces a pro-thrombotic response in vascular endothelium

# *Anti - TNF & Thromboembolic Complications*

- Case reports of thromboses related to anti-TNF :
  - Thromboses in venous infusion sites
  - Retinal vein thrombosis
  - Pulmonary embolism
  - Cerebrovascular events
  - Budd- chiari syndrome



# *Back To Our Patient*



- Pregnant 13 weeks
- Irradiation analysis - 0.5 rad ( $< 5$  rads)
- Nuchal translucency - normal
- LMWH + Aspirin
- Awaits pregnancy ultrasound - 14 weeks
- Crohn's disease - follow up

**Thank you**