CO₂ for Other Uses

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CO₂ Angiography Society Annual Conference
New Orleans | June 4, 2016
CO$_2$ for Other Uses

- **Arterial Uses:**
  - Arterial portography
  - Traumatic bleeding
  - Embolization
  - Visceral arterial anatomy
  - Arterial intervention

- **Venous Uses**
  - Venous occlusion
  - Wedged hepatic venography
  - Venous intervention
  - Foam sclerotherapy
CO$_2$

Arterial Portography
Arterial portography with CO$_2$ injection into hepatic artery
Termination of hepatic arteriole
Transsinusoidal arterioportal communication
CO$_2$
Wedged Arterial Splenoportography
Gastric variceal bleeding in a 56 year old w/pancreatic tumor
Splenic arterial portography w/ contrast injection into SA

CO\textsubscript{2} wedged arterial splenoportography

Acta Radiologica 50, 3, 2009
CO$_2$
Celiac DSA in a patient with blunt splenic trauma
CO$_2$ Celiac DSA in splenic rupture

Extravasating CO2

SA

SV
CO$_2$ guided embolization for renal arterial bleeding in a patient with renal failure
Pseudoaneurysm w/AVF in L kidney
$\text{CO}_2$ DSA after embolization
CO₂ for Venous Collaterals
R upper extremity venogram in a 31 year old man with R arm swelling
R axillosubclavian vein thrombosis
CO$_2$ Venogram
CO$_2$ Wedged Hepatic Venogram to Guide Transjugular Liver Biopsy
Wedge Hepatic Venogram

CO₂

Contrast
CO$_2$ guided TIPS
Hepatic occlusion venography with a balloon catheter
CO$_2$ portograms before and after TIPS
CO₂ Guided Central Venous Catheter Placement
CO$_2$ PICC via left arm basilic vein

Basilic vein

22G needle

.018” wire
CO$_2$ to guide subclavian vein puncture
Transhepatic dialysis catheter placement

RA
RV
HV
CO₂
CO₂ venogram for AICD or Pacemaker replacement
CO$_2$/STS Foam Sclerotherapy

- Varices
- Varicocele
- BRTO
Preparing CO$_2$/STS Foam

Angi Plus

CO2MMANDER
CO$_2$ Sclerotherapy

VM | Varicocele | BRTM
Combined Transfemoral and Transtibial Approach in Recanalization of SFA Occlusion using CO$_2$
History

• 60F w/obesity, IDDM, retinopathy and neuropathy x 30 yrs; CAD with stents, HT, CRF (CR 2.0) and hyperlipidemia.

• Failed R fem-pop saphenous V bypass

• 1 block claudication

• Right ABI: NC, and toe pressure of 48
CO$_2$ DSA
Unsuccessful antegrade access to SFA
Transtibial Recanalization of SFA occlusion

- .018 Glide wire
- 4F sheath
- Terumo wire
- DF

[Image of radiographic images of the procedure]
Transtibial wire advanced into aorta, snared with 10 mm Goose Neck for the through and through wire and advanced a 7Fr Ansel Sheath to the right iliac and common femoral artery.
Post Viabahn
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