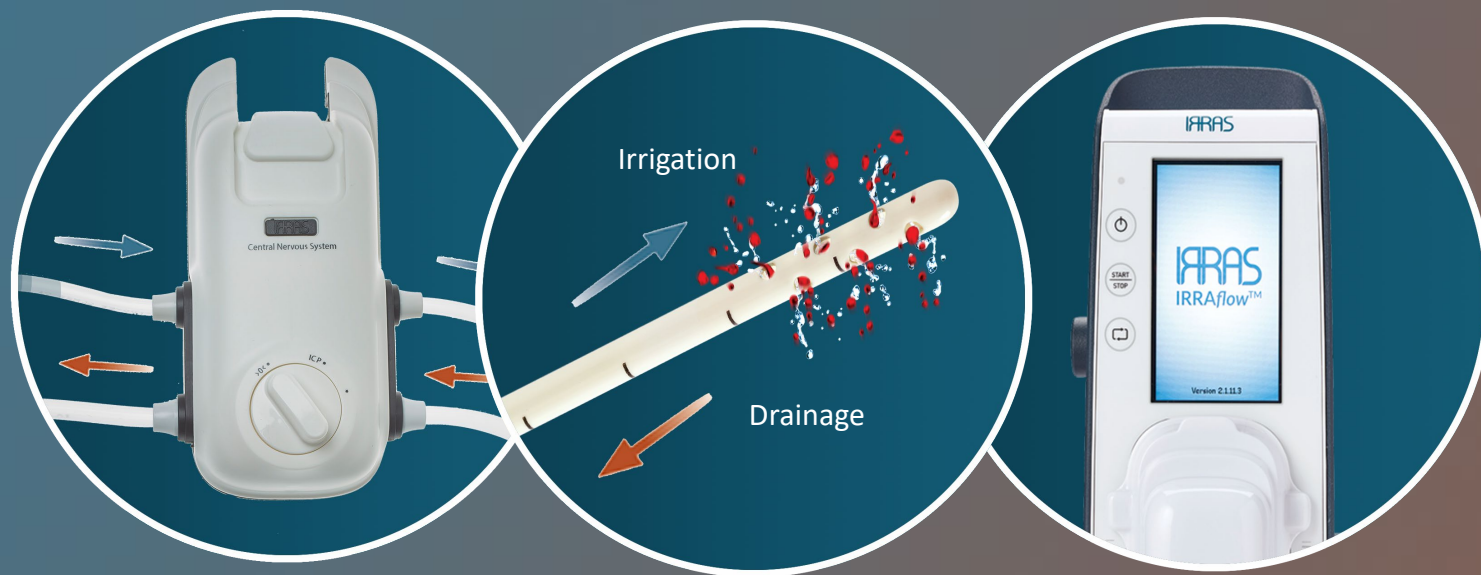




Case Experience Library



IRRAS

Case Experience Disclaimer

Case experiences are representation of actual cases. However, these results do not predict future performance of the IRR*Aflow* CNS system. Procedural performance of the IRR*Aflow* CNS system may differ on a case-by-case basis.

IRRA*flow* CNS Indications

The use of the IRR*Aflow* CNS System is indicated when Intracranial Pressure monitoring is required, and for externally draining intracranial fluid as a means of reducing intracranial pressure.

IRRA*flow* CNS Contraindications

Due to the severity of the underlying pathology, all of the following contraindications for the IRR*Aflow* CNS System are relative and should be considered by the medical professional if applicable; Anticoagulation therapy, Coagulation disorders, Hemophilia, a low thrombocyte count, treatment with Warfarin or Clopidogrel and untreated scalp infections. In general, a MRI or CT of the brain should have been performed before introducing the IRR*Aflow* Catheter.



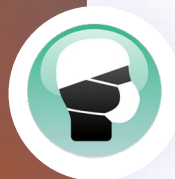
Case review: Intracranial hemorrhage

Male | 18 years old



PATHOLOGY TREATED

Intraparenchymal and Intraventricular Hemorrhage due to Hypertension



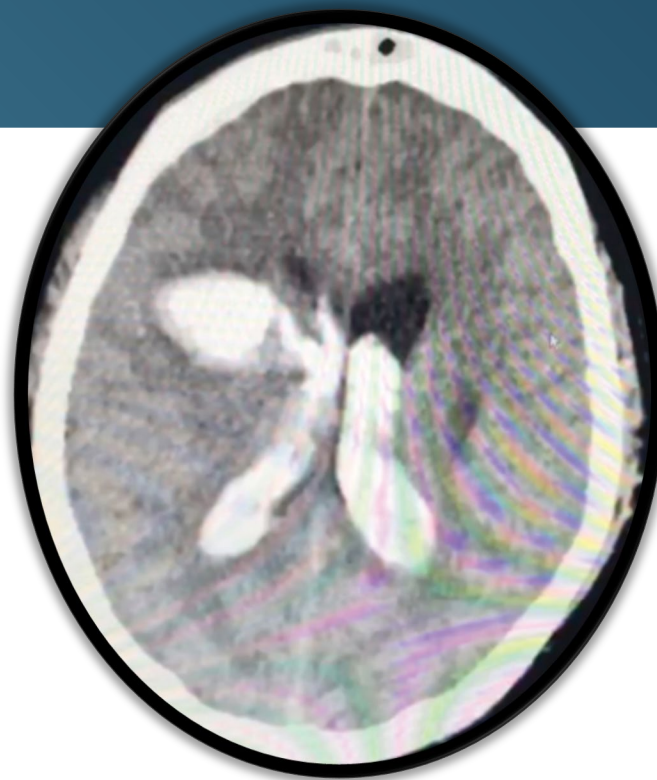
TREATMENT DESCRIPTION

- IRRAf^{low} Catheter Probe inserted
- Active Fluid Exchange performed for 27 total hours

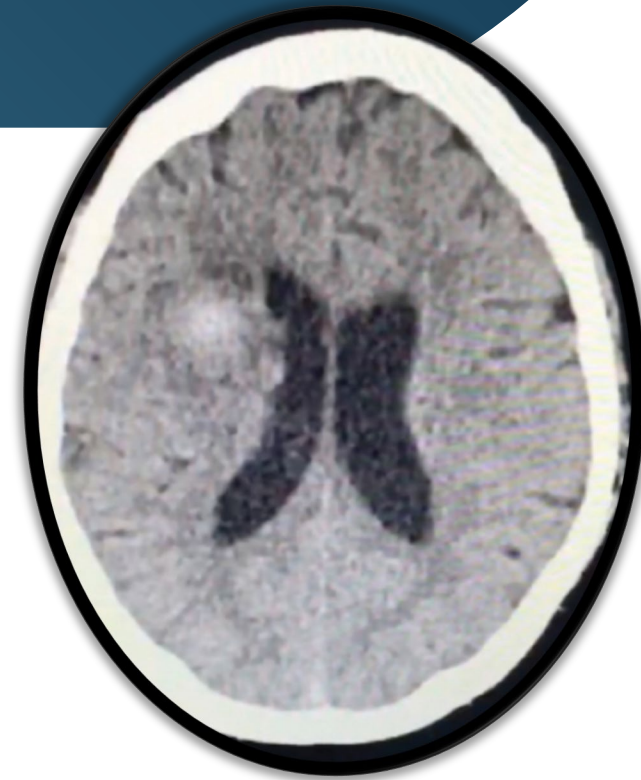


TREATMENT RESULT

- Patient stabilized, returned to regular ward, discharged to rehab
- No drainage occlusions seen
- No infection seen



Pre-IRR Af low
treatment



Post-IRR Af low
treatment



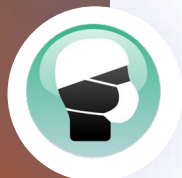
Case review: Intracranial hemorrhage

Female | 65 years old



PATHOLOGY TREATED

Hypertensive basal ganglia hemorrhage with bilateral ventricle involvement.



TREATMENT DESCRIPTION

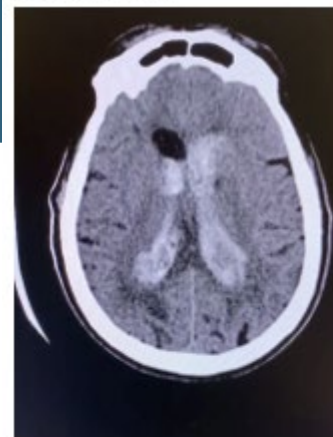
- IRRAlow Catheter Probe inserted
- Active Fluid Exchange performed with IRRAlow system for less than 8 days
- 2 doses of 2mg tPA in 200mL NS infusions were utilized to assist in facilitating the clearing of casted ventricles. Doses given over a 2 Day period, 24 hours apart.



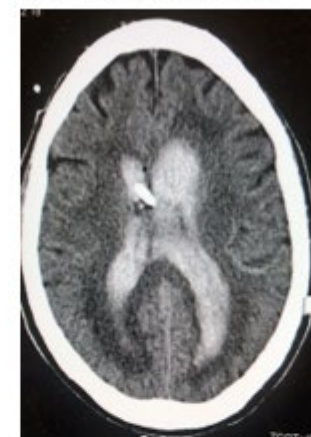
TREATMENT RESULT

- Patient stabilized, returned to regular ward, discharged to rehab
- No drainage occlusions
- No infection

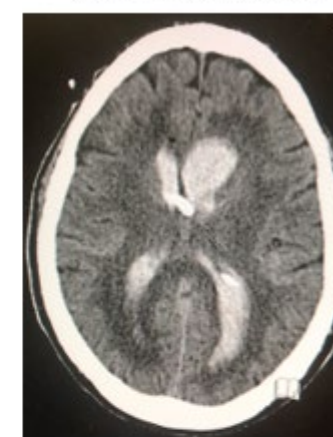
Admission



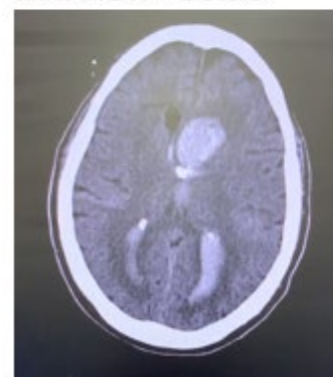
IRRAflow <24hrs



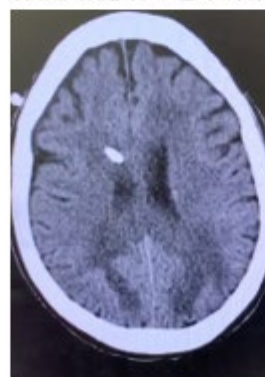
IRRAflow <48hrs



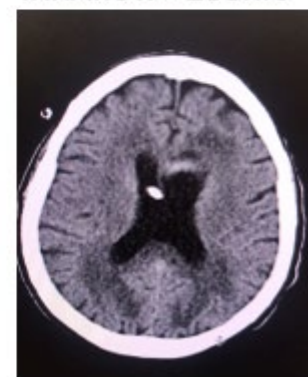
IRRAflow <96hrs



IRRAflow <144hrs



IRRAflow <288hrs



"All other EVDs would have occluded within hours, due to all the blood within ventricles thus requiring multiple tPA pushes, possible EVD replacement and/or patient decline."

Dr. Gregory Fautheree

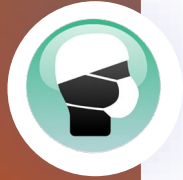
Case review: Chronic subdural hematoma

Male | 82 years old



PATHOLOGY TREATED

Computed tomography (CT) showed a 2.5 cm left convexity mixed density extra-axial hematoma causing 9 mm rightward midline shift and subfalcine herniation.



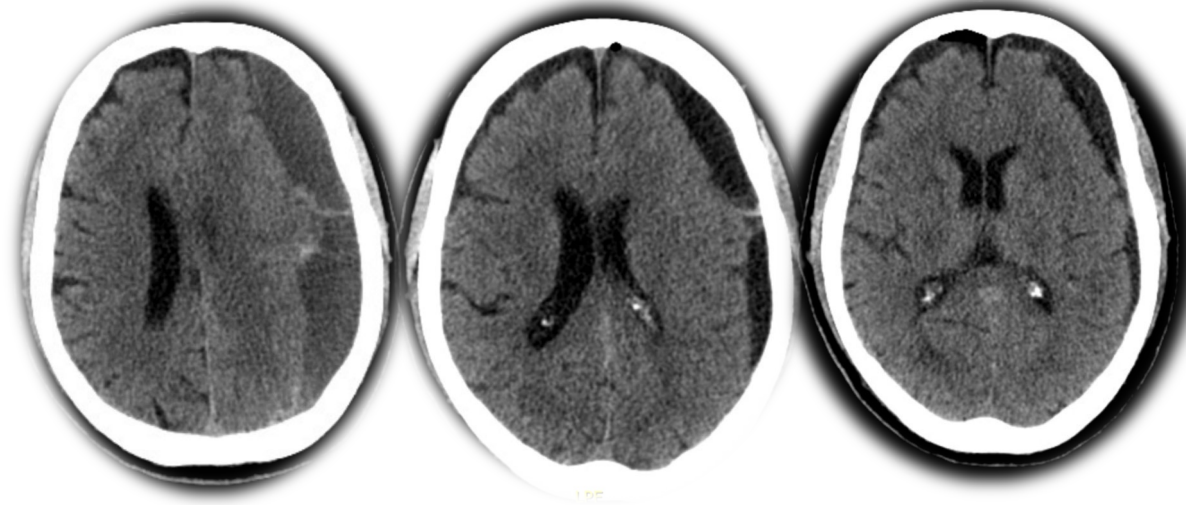
TREATMENT DESCRIPTION

- Mini craniotomy for evacuation of the subdural hematoma.
- Intraoperatively, there was minimal brain re-expansion.
- IRRFlow.



TREATMENT RESULT

- Head CT done prior to discharged showed continued improvement in subdural fluid collection and complete resolution of the midline shift.
- The patient was seen on POD 14 with complete resolution of symptoms.



Pre-IRRFlow
treatment

Post-IRRFlow
treatment



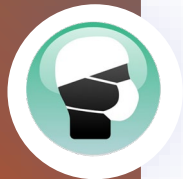
Case review: Ventriculitis

Female | Early 40's



PATHOLOGY TREATED

- Aggressive CSF shunt-related Ventriculitis
- Neurosurgeon description – “mass of germs, impossible to evacuate”



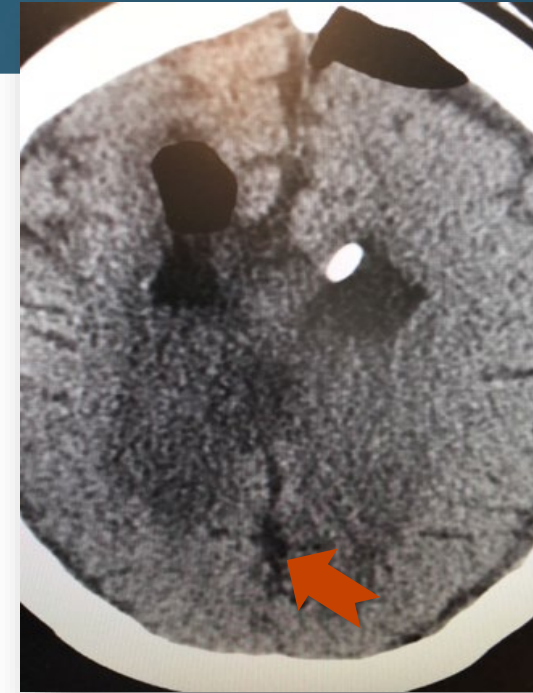
TREATMENT DESCRIPTION

- Physician not yet trained on IRRAflow
- Distributor trained via Skype
- IRRAflow Catheter Probe inserted
- Active Fluid Exchange cleared mass
- IRRAflow Catheter Probe remained in place for entire antibiotic therapy
- After inflammation subsided, IRRAflow removed, shunt replaced



TREATMENT RESULT

- Patient survived and released from rehab
- Facility preparing case for publication



**Pre-IRRAflow
treatment**



**Post-IRRAflow
treatment**

“The patient is conscious, no bacteria is left in the brain. She went from 100% probability of death to now conscious.

This should not have been possible without IRRAflow.”

Dr. Brenham Rezai

