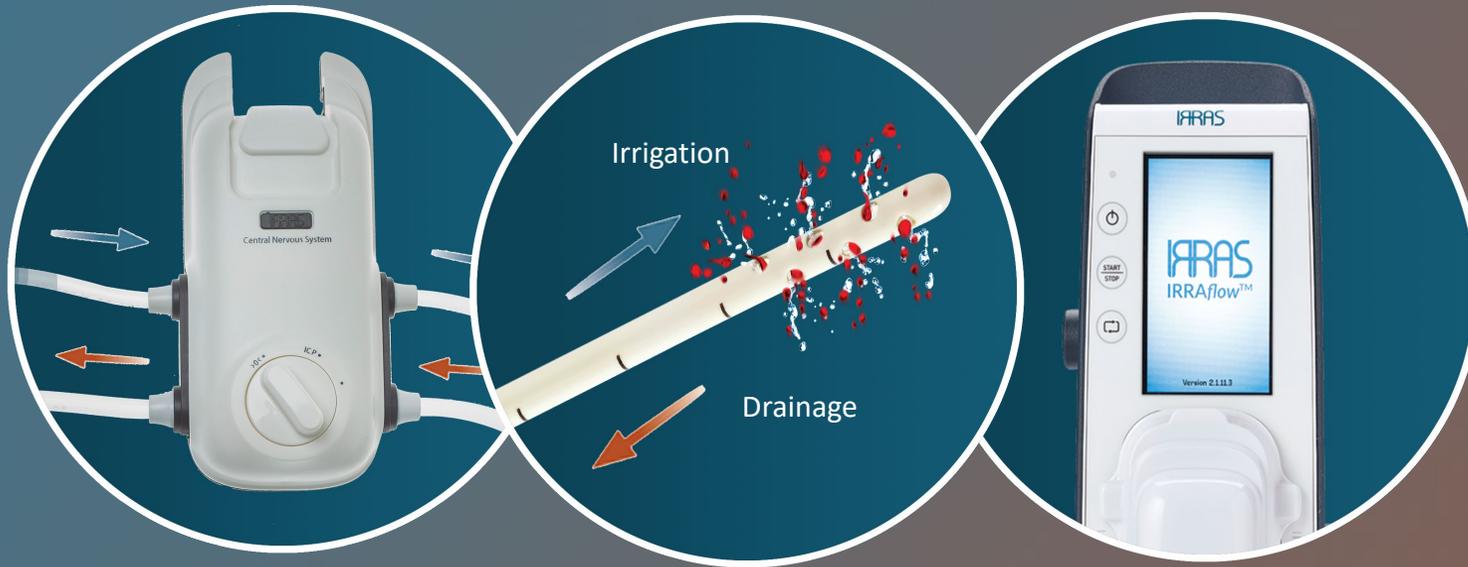


IRRAflow[®]



Case Experience Library



IRRAS

Case Experience Disclaimer

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

IRRAflow CNS Indications

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

IRRAflow CNS Contraindications

Due to the severity of the underlying pathology, all of the following contraindications for the IRRAflow 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 IRRAflow Catheter.



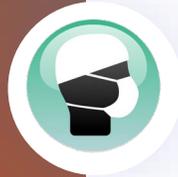
Case review: Intracranial hemorrhage

Male | 18 years old



PATHOLOGY TREATED

Intraparenchymal and Intraventricular Hemorrhage due to Hypertension



TREATMENT DESCRIPTION

- IRRAflow 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-IRRAflow treatment



Post-IRRAflow treatment



Case review: Intracranial hemorrhage

Female | 65 years old



PATHOLOGY TREATED

Hypertensive basal ganglia hemorrhage with bilateral ventricle involvement.



TREATMENT DESCRIPTION

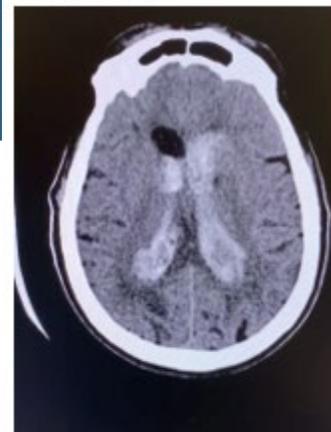
- IRRAf^{low} Catheter Probe inserted
- Active Fluid Exchange performed with IRRAf^{low} system for less than 8 days
- 2 doses of 2mg tPA in 200mL NS infusions were utilized to assist in facilitating the clearing of casted ventricles. Doses given over a 2 Day period, 24 hours apart.



TREATMENT RESULT

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

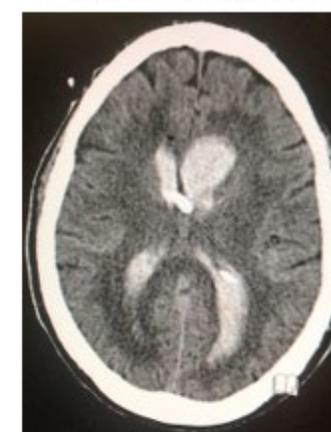
Admission



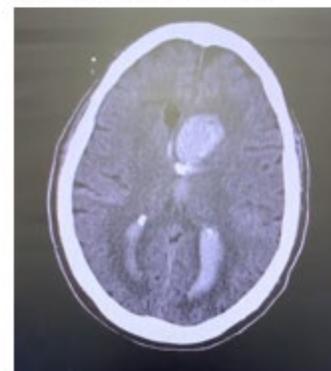
IRRAflow <24hrs



IRRAflow <48hrs



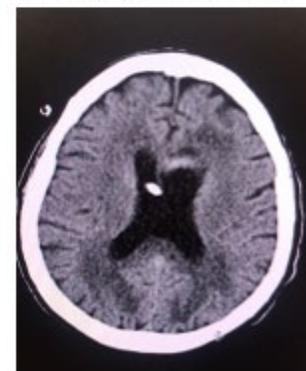
IRRAflow <96hrs



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.



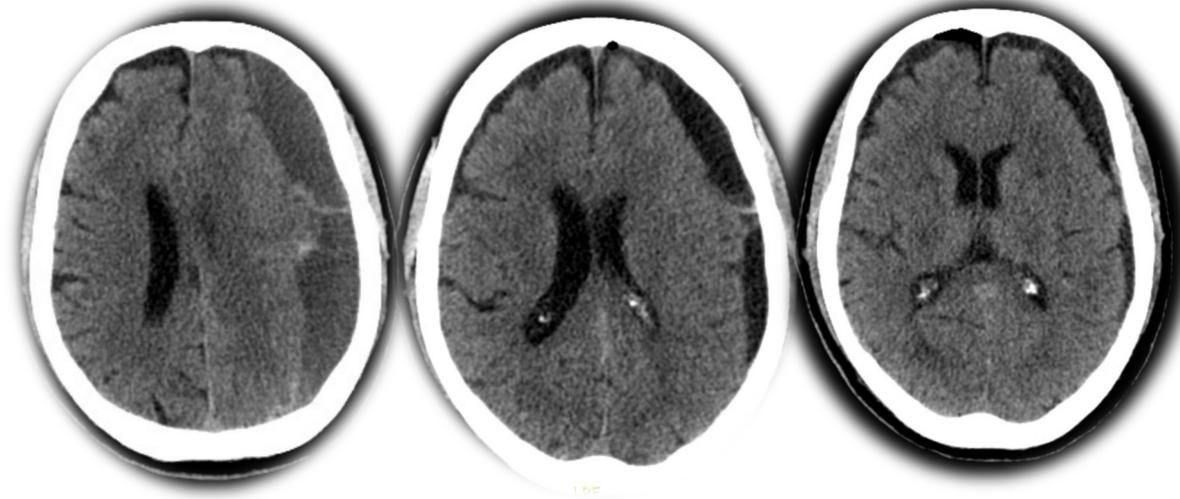
TREATMENT DESCRIPTION

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



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-IRRAflow
treatment

Post-IRRAflow
treatment



Case review: Ventriculitis

Female | Early 40's



PATHOLOGY TREATED

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



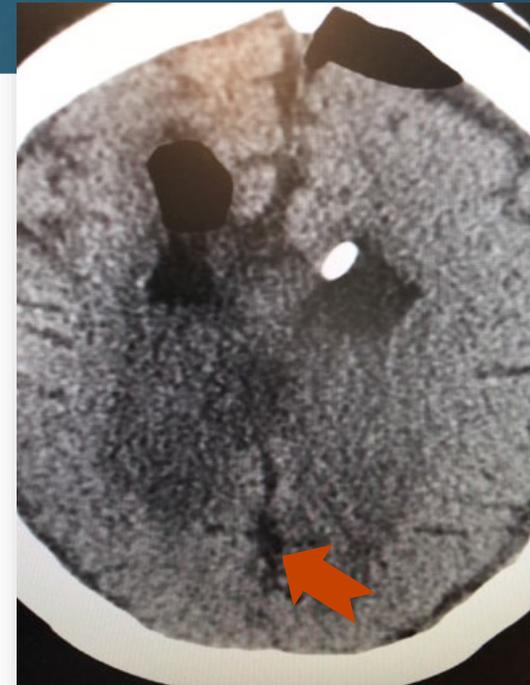
TREATMENT DESCRIPTION

- 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

