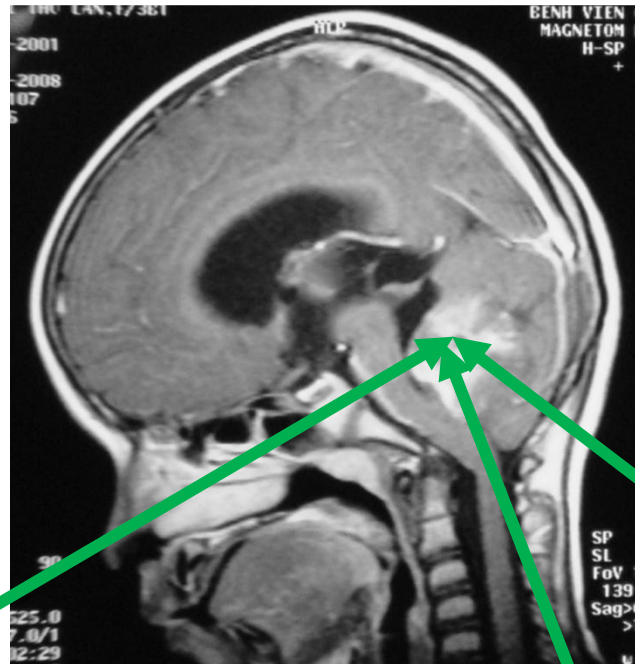


COMPLICATION OF
ENDOSCOPIC THIRD VENTRICULOSTOMY
HYDROCEPHALUS/ POSTERIOR FOSSA TUMOR

HYDROCEPHALUS/ POSTERIOR FOSSA TUMOR

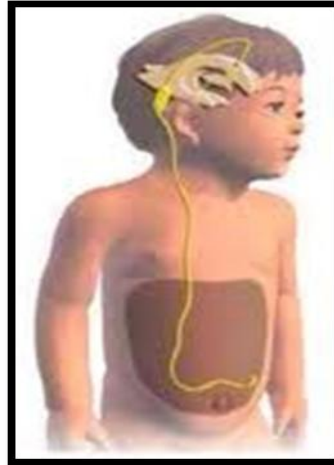


INCREASED INTRACRANIAL PRESSURE (ICP)

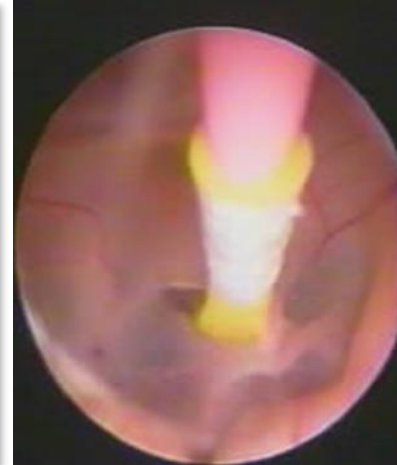
CRANIAL NERVE DEFICITS

SEIZURE, TIA...

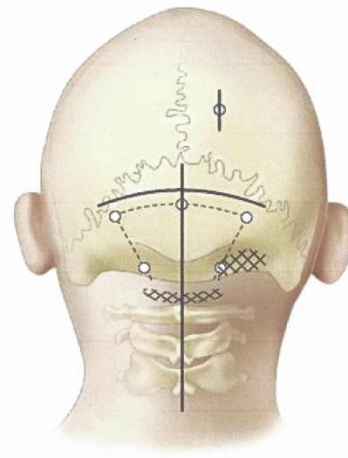
HYDROCEPHALUS/ POSTERIOR FOSSA TUMOR



VP shunt



ETV



EVD

- VP shunt: Ventriculoperitoneal shunt
- ETV: Endoscopic third ventriculostomy**
- EVD: External Ventricular Drainage



ENDOSCOPIC THIRD VENTRICULOSTOMY



1910
Lespinasse

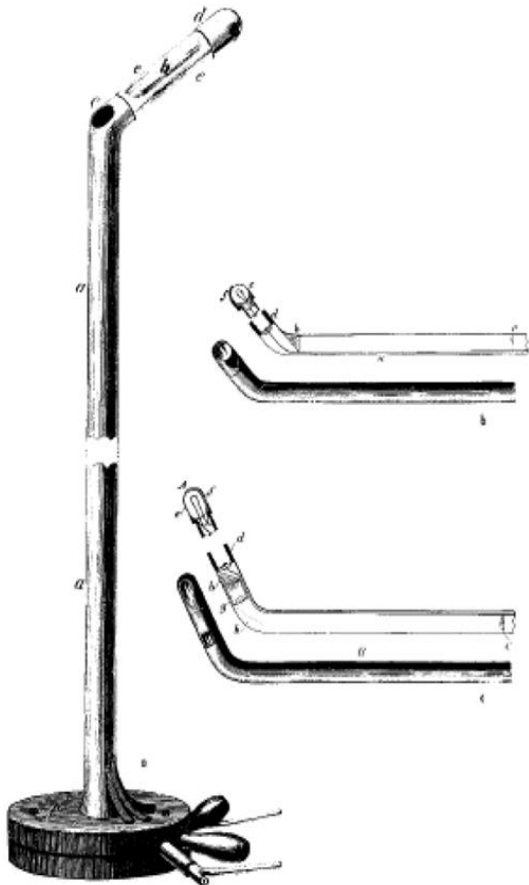
1918
Dandy

1923
Mixer

1963
Scarff

2002
Krombach

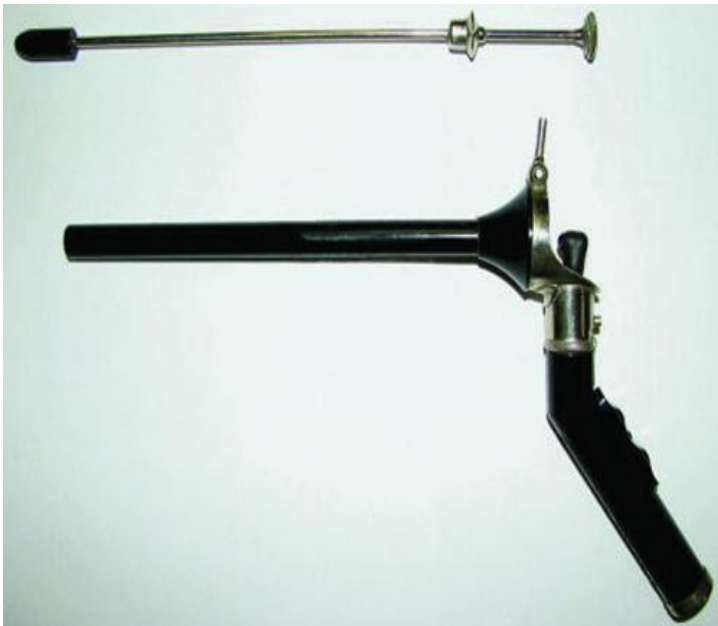
ENDOSCOPIC THIRD VENTRICULOSTOMY



- 1910, Victor Darwin Lespinasse, Chicago:
 - . 2 children
 - . Cauterized the choroid plexus
 - . One child died immediately, live for 5 yrs



ENDOSCOPIC THIRD VENTRICULOSTOMY



-1918, Walter Dandy:

- . 4 infant
- . Extirpated choroid plexus
- . Only one infant survived

-1922, the first third ventriculostomy





ENDOSCOPIC THIRD VENTRICULOSTOMY

-1923, W. Jason Mixter:

- .The first ETV

- . Urethroscope

- . A 9-year-old girl

-1963, Scaff: Fiberoptic

-2002, Krombach : combined MRI



ENDOSCOPIC THIRD VENTRICULOSTOMY

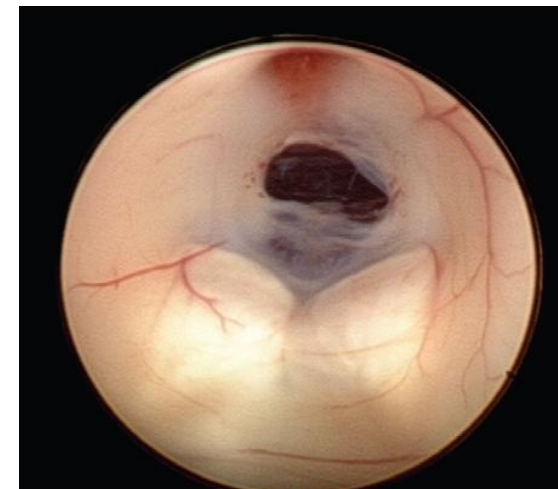
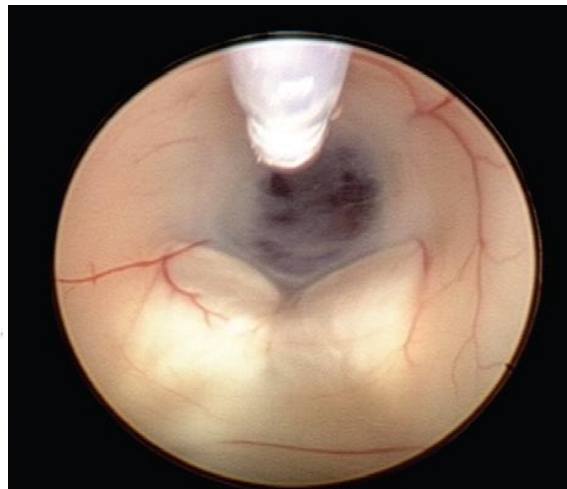
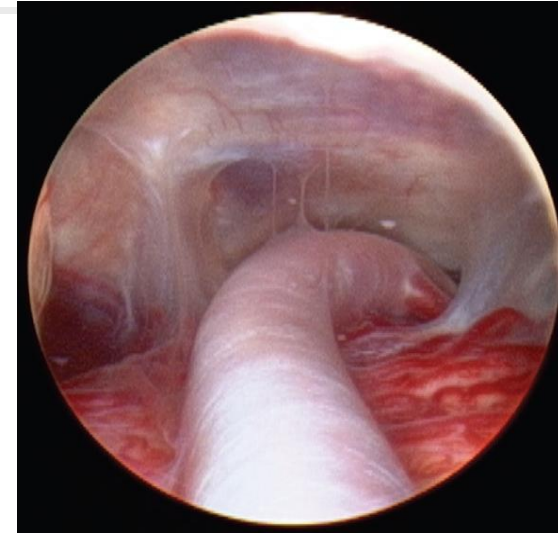
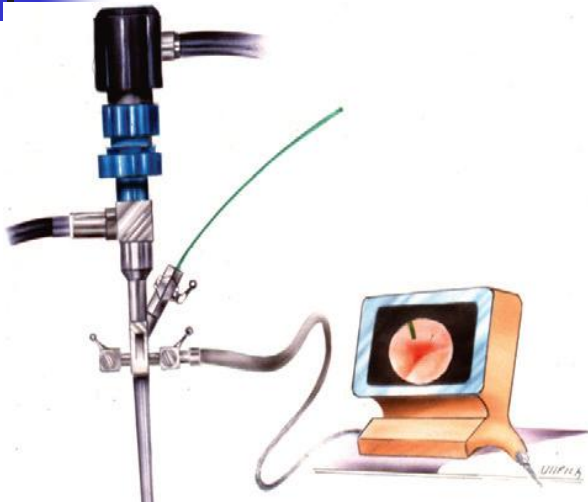


2004-2011

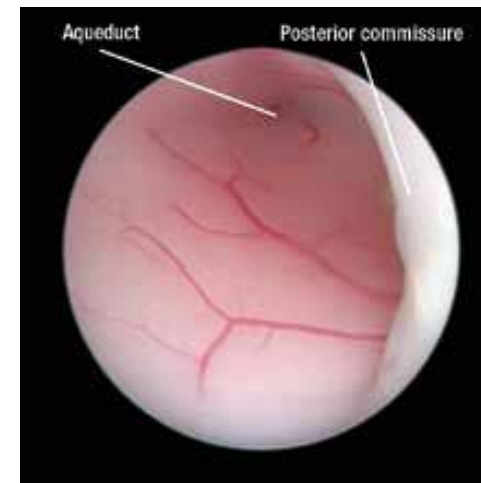
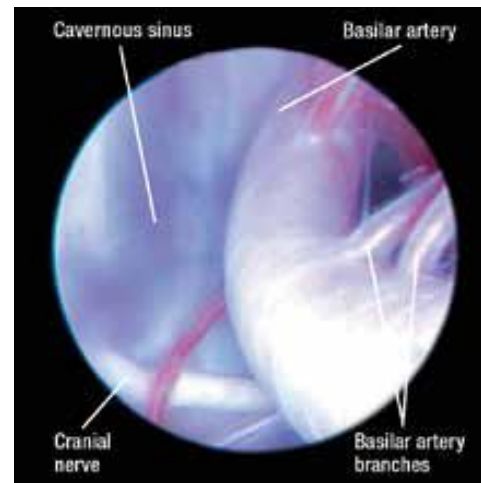
2011-2016

2017

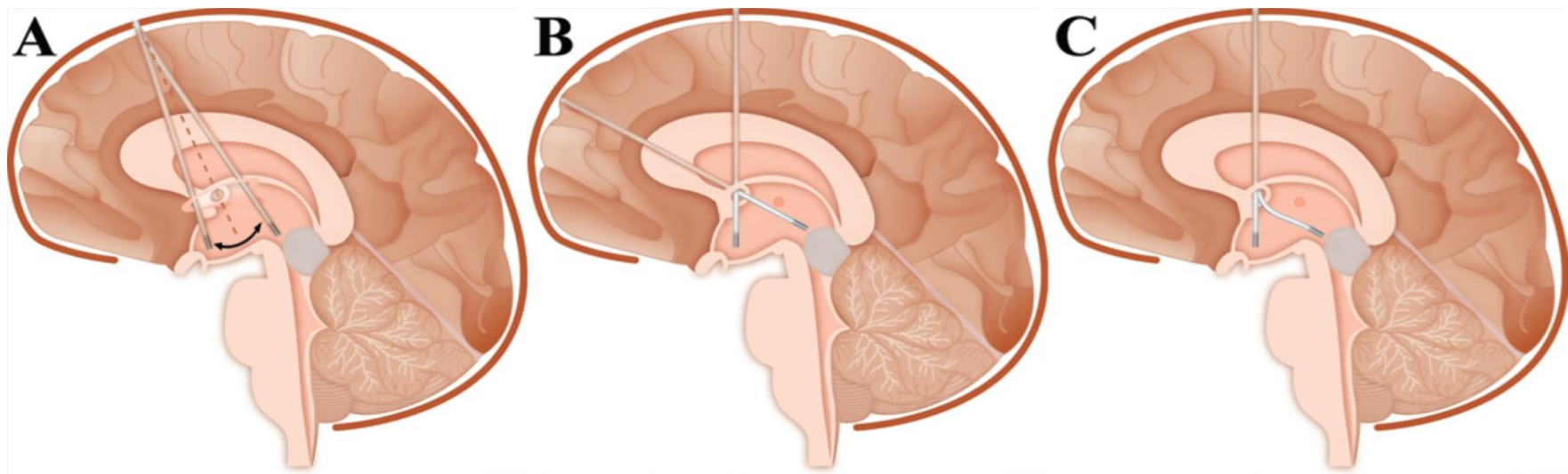
ENDOSCOPIC THIRD VENTRICULOSTOMY



ENDOSCOPIC THIRD VENTRICULOSTOMY



ENDOSCOPIC THIRD VENTRICULOSTOMY





COMPLICATIONS

- Mark S. Greenberg (2016), “Handbook of neurosurgery”:
 - . Hypothalamic injury
 - . Injury to pituitary stalk or gland
 - . Transient 3rd and 6th nerve palsies
 - . Injury to basilar artery, p-comn, or PCA
 - . Uncontrollable bleeding
 - . Bradycardia with cardiac arrest
 - . Traumatic basilar artery aneurysm



COMPLICATIONS

- Alan R. Cohen (2016), “Pediatric Neurosurgery”:
 - . Hemorrhage (9%-15%)
 - . Nerve damage (transient)
 - . CSF leak with meningitis (5%-7%)



COMPLICATIONS

Complications of endoscopic third ventriculostomy

Triantafyllos Bouras, M.D., and Spyros Sgouros, M.D., F.R.C.S.(S.N.)
Journal of Neurosurgery: Pediatrics *Jun 2011* / Vol. 7 / No. 6, Pages 643-649

- The overall complication rate: 8,5%
- neurological : 1.44%
- intraoperative hemorrhage: 3,7% (basilar: 0.21%)
- pos.op mortality: 0.21% (sepsis+ hemorrhage)
- CSF leak: 1.61%



COMPLICATIONS

Endoscopic third ventriculostomy: outcome analysis in 368 procedures: Clinical article

Oumar Sacko, M.D., Sergio Boetto, M.D., Valérie Lauwers-Cances, M.D., Martin Dupuy, M.D., and Franck-Emmanuel Roux, M.D., Ph.D.

Journal of Neurosurgery: Pediatrics *Jan 2010* / Vol. 5 / No. 1, Pages 68-74

(1999- 2007, 368 ETV, 53, Toulouse Uni. Hos.)

- CSF leak: 3.1%
- Menigitis: 2.3%
- Hemorrhage: 1.7%
- Subdural CSF collection: 1.7%
- Seizure: 1%



COMPLICATIONS

Endoscopic options in children: experience with 134 procedures: Clinical article

Joachim M. K. Oertel, M.D., Ph.D., Joerg Baldauf, M.D., Henry W. S. Schroeder, M.D., Ph.D., and Michael R. Gaab, M.D., Ph.D.

Journal of Neurosurgery: Pediatrics *Feb 2009* / Vol. 3 / No. 2, Pages 81-89
(114, 1993-2007, Germany)

- Transient : 13%
- CSF leak: 4,4%
- Meningitis: 2,9%
- Epidural hematoma: 2,2%
- Trochlear nerve palsy: 0.7%
- Transient hemiparesis: 0.7%



COMPLICATIONS

Complications of endoscopic third ventriculostomy

Henry W. S. Schroeder, M.D., Ph.D., Wulf-Rüdiger Niendorf, M.D., and Michael R. Gaab, M.D., Ph.D.

Journal of Neurosurgery *Jun 2002* / Vol. 96 / No. 6, Pages 1032-1040
(188 patient, single institution)

- Mortality: 1% (1: infection, 1: basilar artery)
- Permanent deficit: 1.6%
- Transient: 7,8% (meningitis, confusion, oculomotor, decrease of consciousness)
- Asymptomatic: 4.7%



CASE REPORT

- **LE QUOC BINH**

14/09/2017

- 28/09/2017: ETV

- 28/09/2017: EVD+OP

- 16/10/2017:

- 24/10/2017:



