

# Title: Intracerebral hemorrhages in patients with hemophilia: three years of follow-up at the Comprehensive Care Program in Cuba (2008–2010).



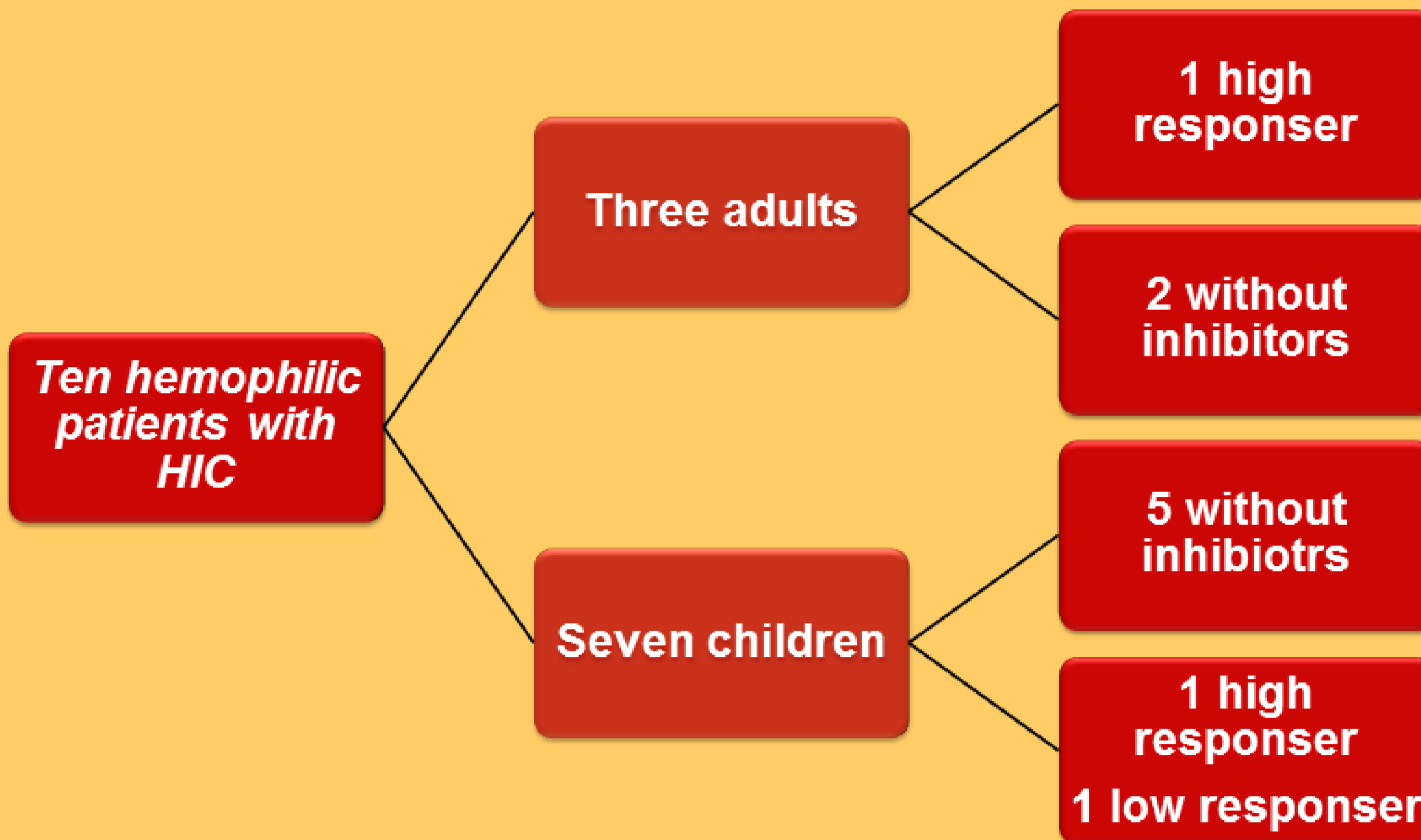
**Authors:** D Castillo\*, O Agramonte\*, A Arencibia\*, T Delgado\*, A Almirall\*\*\*, Y Gato\*\*, C Valdés\*\*, M Campo\*\*, JL Hernández\*\*.

**Hospital:** \*Institute of Hematology & Immunology, La Habana, \*\*Pediatrics hospital “Pepe Portilla”, Pinar del Rio, \*\*\*Clinic-Surgery hospital “Carlos M. de Céspedes”, Cuba

## Introduction

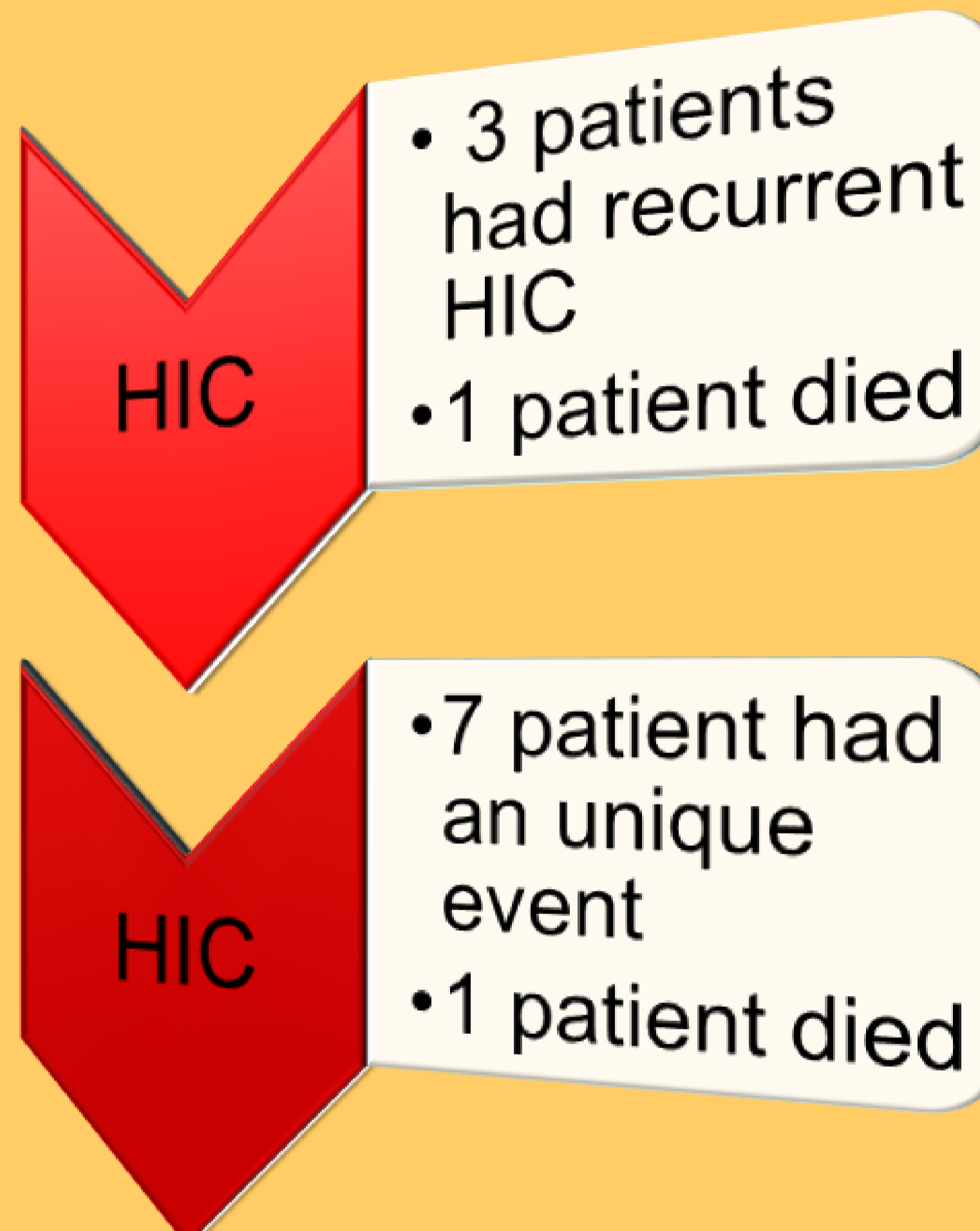
Intracerebral hemorrhage in patients with hemophilia is one of the most serious bleeding event and it is a life-threatening complication. This kind of hemorrhage can occur spontaneously or by trauma and some of the hemophiliacs who suffer it are more propensus to have recurrent bleeding. During three years, ten individuals with hemophilia A with intracerebral hemorrhage were observed: three adults and seven children.

## Patients with central nervous system bleeding



Patients presented at the diagnosis diverse neurological manifestations: severe headache, vomiting, photophobia, dizziness and tendency to sleep. All patients were admitted at the intensive care unit. After that they were attending by neurosurgery and neurology services. Children received secondary prophylaxis. They were treated with factor VIII concentrates (octanate) and r factor VII activated.

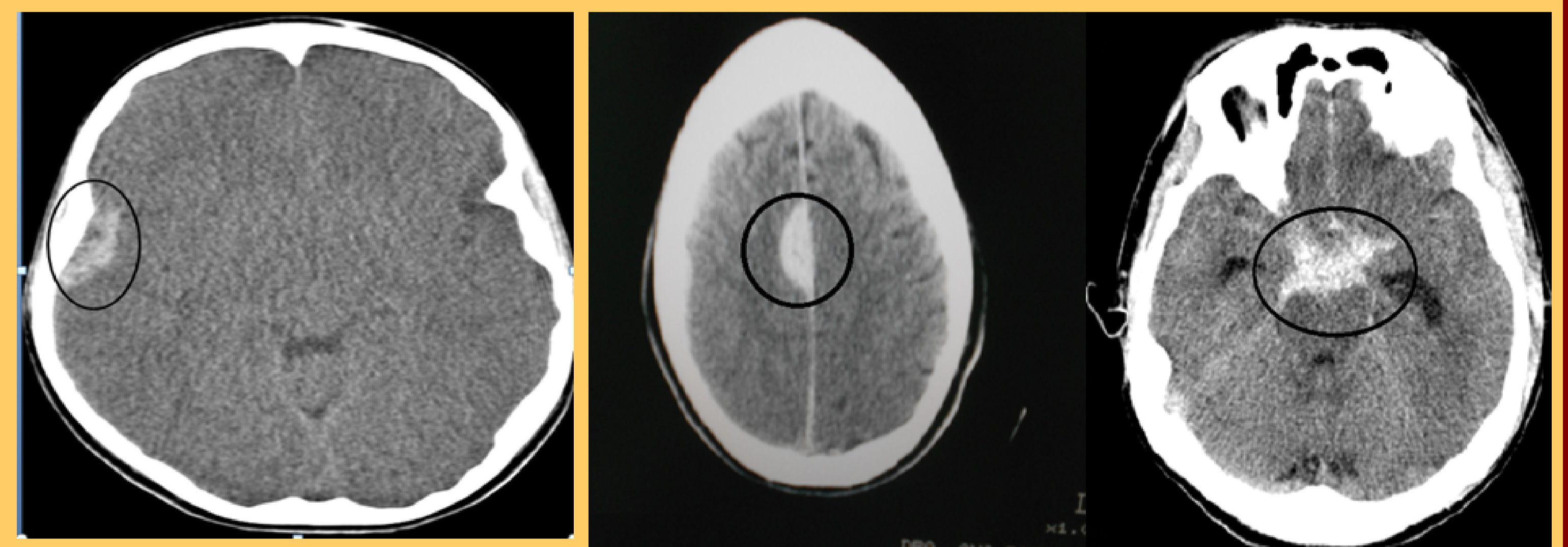
## Evolution



The central nervous system bleeding constitutes a neurological emergency. Rapid diagnosis and management is essential due to clinical worsening during the first hours of evolution of this type of bleeding, which is associated with a worse prognosis. The goals of treatment are to prevent possible complications and initiate appropriate treatment.

## Results

Both computed tomography and nuclear magnetic resonance are suitable for the initial diagnosis. CT is a sensitive technique for the identification of acute hemorrhage and is considered the technique of choice, permit identifying the precise location of the hemorrhage and its effects: mass effect, edema, ventricular and subarachnoid



Subarachnoid hemorrhage

Intraparenchymal hemorrhage

## Patients with recurrent central nervous system bleeding

Patient	Hemophilia	Type of bleeding	Inhibitor	Surgical treatment	Current status	Sequels
1	A severe	<ul style="list-style-type: none"> <li>•Subdural hematoma</li> <li>•Cerebellar hemorrhage</li> <li>•Intraparenchymal hemorrhage</li> <li>•Intraparenchymal hemorrhage</li> <li>•Intraparenchymal hemorrhage</li> </ul>	No	First event: craniectomy with decompression and evacuation of the hemorrhage	Alive	No
2	A moderate	<ul style="list-style-type: none"> <li>•Subarachnoid hemorrhage</li> <li>•Subdural hematoma</li> </ul>	Low responder	Second event: craniectomy with decompression and evacuation of the hemorrhage	Alive	No
3	A moderate	<ul style="list-style-type: none"> <li>•Intraparenchymal hemorrhage</li> <li>•Subarachnoid hemorrhage</li> </ul>	No	no	Alive	No
4	A severe	<ul style="list-style-type: none"> <li>•Intraparenchymal hemorrhage</li> <li>•Intraparenchymal hemorrhage</li> </ul>	No	no	Died	--

## Conclusions

To start substitute treatment immediatly after central nervous system bleeding suspicious is essential for the good evolution and it contribute to diminish the morbidity and mortality in hemophilic patients.

