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REUNIÓN ANUAL
DE LA SOCIEDAD ESPAÑOLA
DE URGENCIAS DE PEDIATRIA



Valencia, del 14 al 16 de abril de 2016

VARIABILIDAD EN EL MANEJO DEL TRAUMATISMO CRANEAL LEVE EN EUROPA. UN ESTUDIO DE REPEM

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Introducción

- **Importante causa de morbimortalidad**
- **Variabilidad en el manejo**
- **Pruebas complementarias**





Objetivo

- **Describir la variabilidad en el uso de pruebas de imagen, observación e ingreso en niños con TCE leve en Europa**





Método

- **Estudio multicéntrico, de cohortes retrospectivo.**
- **Pacientes atendidos entre 1/1/2012 y 31/12/2014**
- **Niños <18 a con historia de TCE trivial o leve en las 24 h previas.**





Método

- **Excluido si:**
 - Prueba de imagen previa.
 - Focalidad.
 - Retraso psicomotor
 - Sospecha de abuso.
- **Formulario estandarizado de recogida de datos**



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Patient code: ____-____-____

BACKGROUND HISTORY

Sex: Male Female Unknown

Date of birth (dd/mm/yyyy): ____-____-____

Date of attendance (dd/mm/yyyy): ____-____-____

Comorbidities:

NONE Brain tumor Ventricular shunt Neurological disorder
 Bleeding disorder (explain): _____ Other (explain): _____

TRAUMA CHARACTERISTICS

Does it fulfill Trivial Head Trauma Criteria?

Criteria I Yes No Unknown

Criteria II Yes No Unknown

Isolated Head Trauma: Yes No Unknown

If yes, please describe associated injuries: _____

Time elapsed since trauma and presentation in ED (hh:mm): ____ : ____

Mechanism of injury:

Occupant in motor vehicle crash Pedestrian struck by vehicle
 Bicycle rider struck by automobile Bicycle collision or fall
 Other wheeled transport crash Fall to ground from standing, walking or running
 Walked or ran into a stationary object Fall from height
 Fall downstairs Sport related
 Assault Head struck by object (unintentional)
 Other mechanism (explain): _____
 Unknown

If fall from height:

No or ≤ 90 cm (or < 3 feet)
 91 cm – 152 cm (3-5 feet)
 153 cm – 305 cm (6-10 feet)
 >305 cm (> 10 feet)

If fall from stairs:

5 steps or less
 6 – 15 steps
 > 15 steps
 Unknown

Struck with a heavy object?: Yes No Unknown

Scalp haematoma:

No Frontal Parietal Temporal Occipital

Loss of consciousness? Yes No Unknown
 Repetitive vomiting? (> 3 vomits) (patients > 2 years old) Yes No Unknown
 Acting normally according to parent? Yes No Unknown
 Seizure? Yes No Unknown
 Amnesia? (patients > 2 years old) Yes No Unknown
 Headache? (patients > 2 years old) Yes No Unknown
 Dizziness? Yes No Unknown

Glasgow Coma Scale 13 14 15

PATIENT MANAGEMENT

• Skull Radiography? Yes No
 If yes Normal Skull fracture Other (describe): _____

• Ultrasound? Transfontanelar study Skull fracture searching No
 If yes Normal Skull fracture Other (describe): _____

• Head CT? Yes No
 If yes Normal
 Not interpretable (radiologist dictation states CT is of limited quality due to motion or other artifact)
 Abnormal (includes traumatic intracranial findings or skull fractures; CT with isolated scalp injuries, e.g. scalp hematoma is considered normal)
 Skull fracture Cerebral contusion
 Subdural hematoma Cerebral edema
 Subarachnoid hemorrhage Intraventricular hemorrhage
 Pneumocephalus Midline shift
 Cerebral hemorrhage Epidural hematoma

• ED Disposition:
 Discharged Observation unit
 Admitted into Ward PICU

• Neurosurgical interventions? Yes No
 If yes, check all the apply:
 Fracture elevation Dura repair for CSF leak
 Intracranial Pressure Monitor Hematoma drained
 Other (explain): _____

• Intubation? (excluding brief intubations for imaging tests) Yes No

If admitted into observation unit

Number of hours: _____
 During the admission, had a second CT been done? Yes No

If admitted into Ward...

Number of hours: _____
 During the admission, had a second CT been done? Yes No

• Was the patient attended again in the same ED due to the same MHT? Yes No
 If yes, did the patient underwent any imaging? Yes No
 If yes? Skull radiography Ultrasound Head CT
 And then? Normal Abnormal

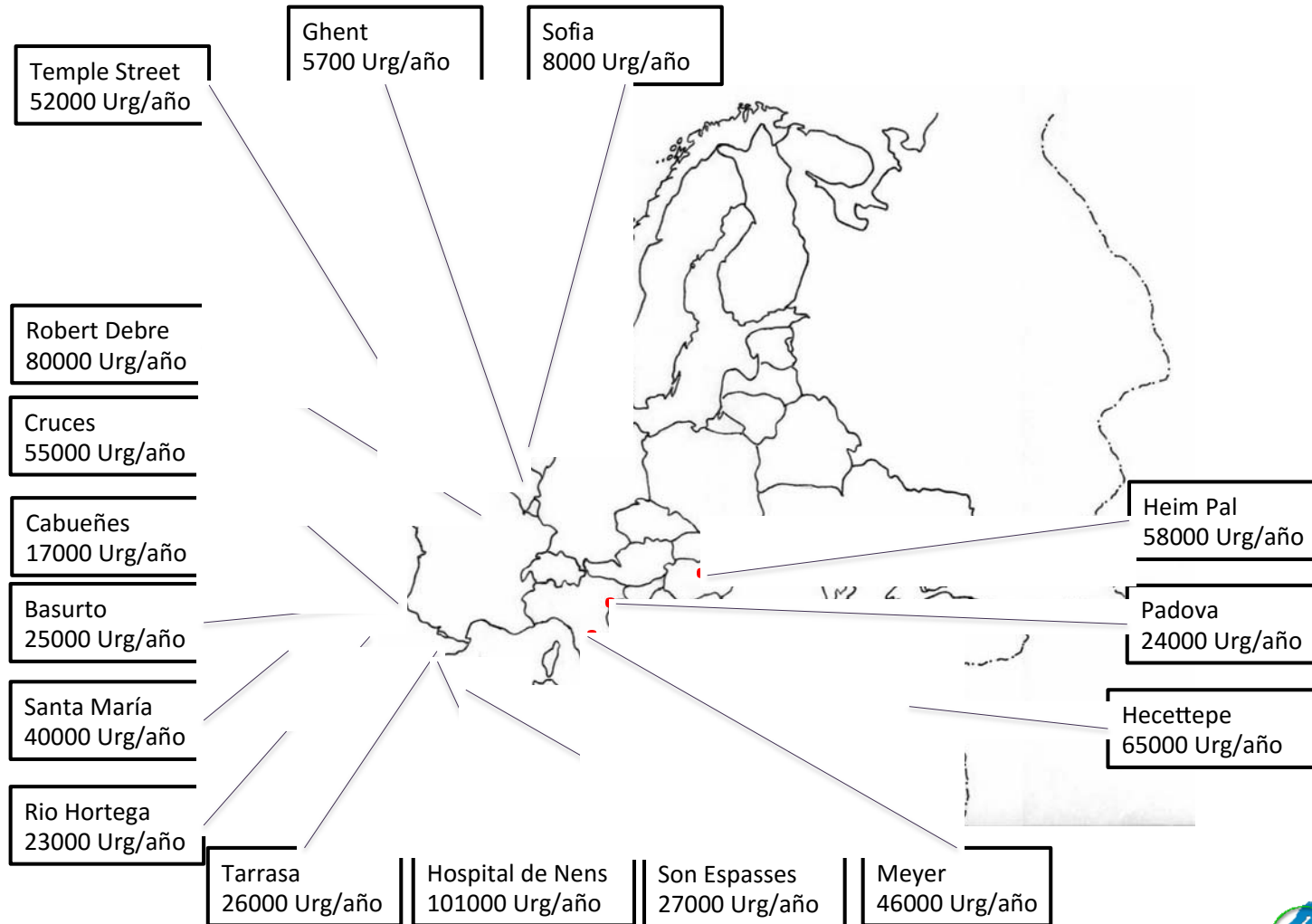
OBSERVATIONS:



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Resultados

| Hospital | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| n | 517 | 895 | 430 | 141 | 438 | 459 | 1190 | 515 | 1950 |
| TCE leve | 91,5% | 86,1% | 70,2% | 32,6% | 82,0% | 84,8% | 82,6% | 85,4% | 63,6% |
| Edad media (meses) | 46,2 | 49,4 | 52,3 | 54,8 | 57,2 | 78,9 | 78,5 | 96,7 | 66,0 |
| Sexo varón | 61,8% | 58,5% | 58,6 | 61,9% | 61,3% | 61,5% | 61,6% | 60,0% | 58,9% |
| Ingreso | 0,5% | 1,8% | 1,2% | 0,8% | 0,2% | 1,2% | 2,9% | 18,3% | 7,5% |
| LICci | 0% | 1,5% | 0,7% | 0,7% | 0% | 0,2% | 0,4% | 0% | 0.5% |





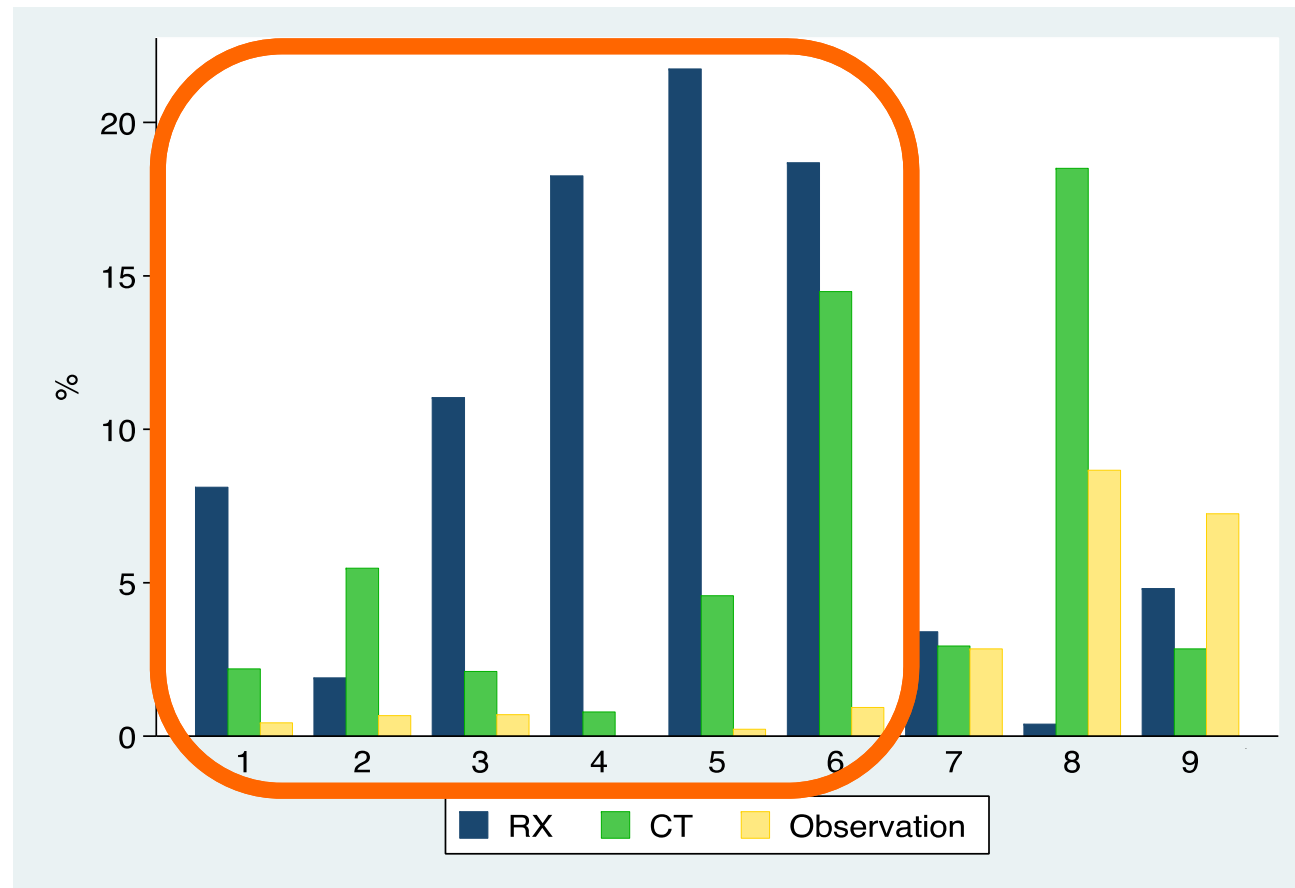
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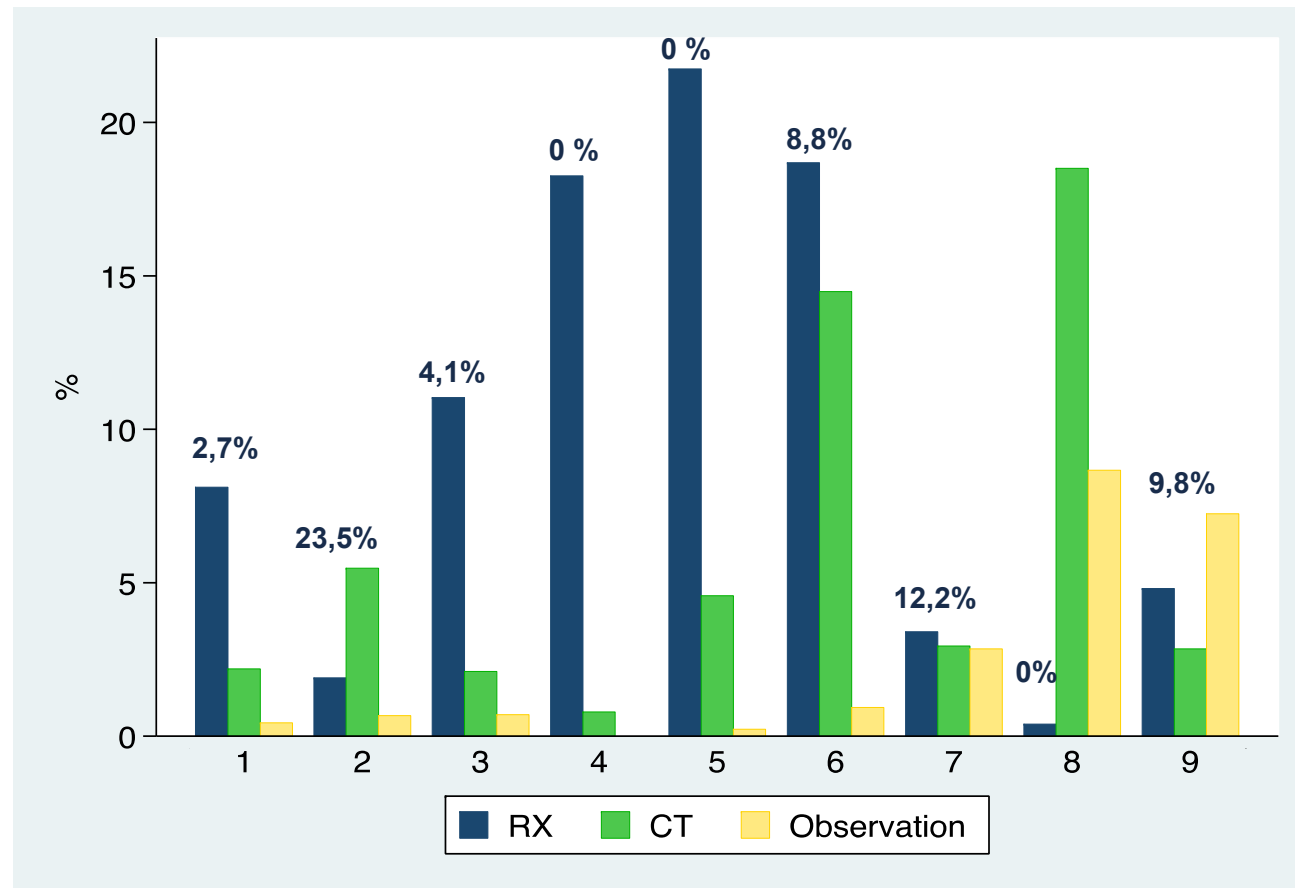


Resultados





Resultados





Conclusiones

- **Variabilidad significativa en el manejo del TCE leve:**
 - Pruebas de imagen
 - Observación
 - Ingreso.
- **Posibles causas:**
 - Diferente criterio de los pediatras
 - Diferencias en las poblaciones
 - Grado de preparación en urgencias pediátricas

