



ORIGINAL ARTICLE

Falls in less than one year-old infants: Management in the emergency department^{☆,☆☆}



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KEYWORDS

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Radiography

Abstract

Objectives: A study was performed in order to describe injuries associated with falls in children aged <1 year who attended the emergency department. The approaches used were examined, as well as the factors associated with the greater use of these approaches, and the management of the patient.

Patients and methods: This was a multicentre, descriptive and analytical study that included all patients aged <1 year who had experienced a fall for which they attended the emergency departments of one of 8 Spanish Hospitals belonging to the "Unintentional Paediatric Injury Working Group" of the Spanish Paediatric Society. A record was made of the data regarding the visit, circumstances before arrival at the hospital, injuries observed, and the diagnostic and therapeutic approaches used.

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Results: A total of 1022 patients had experienced falls, that is, 0.35% of the emergencies attended in the study hospitals (95% CI, 0.348–0.352). The most commonly affected part was the head (58%). Cranial radiography was ordered in 31.8% of cases, and was associated with the presence of bruising or signs of fracture on examination ($p < 0.001$), falls from heights >100 cm ($p < 0.001$), and age <3 months ($p = 0.004$). Minor head injury was the most common finding (85.6%), followed by fractures, especially cranial fractures (7.1%), which were associated with bruising or signs of fracture on examination ($p < 0.001$), and age <3 months ($p < 0.001$). Six percent of the patients required admission to hospital. The risk factors for hospital admission in this group were falls from heights >50 cm and age <3 months.

Conclusions: Injuries after falls in infants aged <1 year are commonly due to head trauma and frequently require additional diagnostic tests.

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PALABRAS CLAVE

Caídas;
Niños;
Urgencias;
Pruebas
complementarias;
Radiografías

Caídas en menores de un año: ¿qué hacemos en urgencias?

Resumen

Objetivos: Describir y analizar las lesiones asociadas a caídas en los menores de un año, la actuación durante su atención en urgencias, los medios empleados en su manejo y los factores que condicionan un mayor uso de los mismos.

Material y métodos: Estudio multicéntrico, descriptivo y analítico. Se incluyeron los menores de un año que habían acudido por caídas al servicio de urgencias de 8 hospitales integrantes del Grupo de Trabajo de Lesiones no Intencionadas de la Sociedad Española de Urgencias Pediátricas. Se recogieron datos sobre las circunstancias previas a la llegada a urgencias, las lesiones observadas, la actuación en urgencias y los medios empleados durante su manejo.

Resultados: Se identificaron 1.022 pacientes, un 0,35% de las urgencias atendidas (IC 95%: 0,348–0,352). La localización más frecuente del traumatismo fue craneal (58%). La indicación de radiografía de cráneo (31,8%) se relacionó con hematomas o signos de fractura en la exploración física ($p < 0,001$), alturas mayores de 100 cm ($p < 0,001$) y edad menor de 3 meses ($p = 0,004$). Tras el traumatismo craneal leve (85,6%), las fracturas fueron el diagnóstico más frecuente, fundamentalmente craneales (7,1%), asociándose con una edad menor de 3 meses ($p < 0,001$) y con la existencia de hematoma o signos de fractura en la exploración física ($p < 0,001$). Un 6% de los casos requirieron hospitalización, identificándose la edad menor a 3 meses y una caída mayor a 50 cm como factores de riesgo.

Conclusiones: Las lesiones por caídas en los menores de un año se producen fundamentalmente por traumatismos craneales y siguen constituyendo una indicación frecuente de realización de pruebas complementarias.

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Introduction

Of all unintentional injuries, falls constitute the most frequent reason for visiting paediatric emergency departments in the United States, generating more than 2 million visits in patients aged less than 19 years in 2013.¹

The injuries sustained in falls are among the main causes of death and permanent brain damage secondary to unintentional injuries. The rate of mortality is highest in infants aged less than 1 year and adolescents,² in who falls are associated with a large number of hospitalizations and a considerable economic and social burden.

Despite the current recommendations of major research groups³ that support watchful waiting in cases of mild fall-related injury, the performance of diagnostic tests in

the initial assessment of these patients continues to be a widespread practice in many paediatric emergency departments.

The aim of our study was to describe and analyze fall-related injuries in infants aged less than 1 year, their management in emergency departments, the resources used in its management and the factors associated with an increased use of resources.

Materials and methods

We conducted a substudy in the context of a larger study on the epidemiology and risk factors of fall-related injuries in infants aged less than 1 year.⁴

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