Quality of triage of children with anaphylaxis at the Pediatric Emergency Department

Esozia Arroabarren, Jorge Alvarez, Marta Anda, Miriam Palacios, Montserrat De Prada, Carmen Ponce
Complejo Hospitalario De Navarra, Pamplona, Spain

Background: Early recognition and epinephrine administration are essential in anaphylaxis management since delays in its diagnosis and treatment have been associated with fatal anaphylaxis. Validated 5-level paediatric triage systems prioritize anaphylaxis to Level I (Resuscitation) or II (Emergent). Inadequate triage of these patients may worsen their prognosis. We analysed the quality of the triage of children with anaphylaxis.

Methods: Retrospective review of the triage charts (local adaptation of the Canadian Paediatric Triage and Acuity Scale) of a cohort of children attended for anaphylaxis at a Paediatric Emergency Department (PED) between 2012 and 2016. According to their final triage level, we compared: demographics, waiting time for physician, initial triage level according to the initial assessment (Paediatric Assessment Triangle [PAT]), symptomatic patients during medical examination and epinephrine administration at PED and observations recorded by triage staff.

Results: We analysed 137 charts. Final triage levels were: Level I: 18.1%, Level II: 15.2%, Level III: 56.9% and IV:9.5%, respectively. Median ages were: 8.83 (IQR: 13.41y); II: 4.45 (IQR:13y); III: 4.5 (IQR:14.5y) and IV: 5.58 (IQR: 5.58y)(p=0.09). Median waiting times for physician were: Level I: 0 (IQR: 22min); Level II: 7 (IQR:22min); III: 10 (111min) and IV: 17 (IQR: 72min)(p=0.01). Patients with initial triage level V (stable PAT): Level I: 68%; II:71.4% , III: 91%; IV:92.3%(p=0.006). Rates of symptomatic patients during medical examination and epinephrine administration at PED: Level I: 80%/76%; II: 57.1%/61.9%; III:48.6%/51.3% and IV: 53.8%/46.2% (p=0.056 and p=0.089). Symptoms compatible with anaphylaxis were recorded by triage staff in 28% of Level I, 33.3 of II, 39.7% of III and in 7.6% of level IV triage charts (p=0.134)

Conclusions: Only 33.3% of the triage patients were triaged correctly. A significant number of the charts contained sufficient information to suspect an anaphylaxis. Inadequate triage delayed medical attention and treatment. Symptom recognition should be stressed out to triage possible anaphylaxis. Specific risk discriminators for anaphylaxis are needed to improve its identification during triage procedure.