

Are the Ottawa Ankle Rules correctly applied in the emergency department of a university hospital?

Pauline Schaumans, Carol Clinckaert, Ives Hubloue

1. Research Group on Emergency and Disaster Medicine, Vrije Universiteit Brussel, Laarbeeklaan, Brussels, Belgium.

Background: The Ottawa Ankle Rules (OAR) were developed in 1992 in order to develop decision rules for the use of radiography in the emergency department (ED) and reduce unnecessary imaging. The purpose of this study is to evaluate how these OAR were applied in the ED of a university hospital between the 1st of July and the end of December of the year 2016. It examines how the OAR application in the ED has evolved compared to a similar study with data from 2015. The previous study led to changes in protocol as well as the implementation of training to improve the application of the OAR in triage. This study evaluates the success of these changes and trainings as well as whether predictive factors can be identified that drive the application of the OAR in the ED.

Methods: In a retrospective cohort study, a sample of patient records aged between 6 and 98 years old with ankle trauma were analyzed, using descriptive statistics, for the application of the OAR at triage and for use of imaging. Logistic regression was used to identify predictive factors.

Results: The OAR were applied at triage in 90% of the cases. This is up from the 60% established by a previous, similar study a year before. However, imaging was still taken in 60% of cases where the OAR were negative. The study could identify some statistically significant predictive factors, but their predictive power is low as they explain 10% of the variation in the data of the OAR application.

Conclusion: The application of the OAR at triage has achieved a high level in this university hospital. The progress from 60% in 2015 to 90% now can be attributed to the training of medical staff in OAR application. The high percentage of imaging taken in OAR negative cases remains an area for further research to identify root causes.