Short treatments for acute bone and joint infections (BJI) are recommended. We implemented a protocol in 2009 to improve diagnosis and bacteriological documentation, and to shorten antibiotic therapies as per French guidelines” Bréhin et al (2019).

Abstract:

BACKGROUND: Short treatments for acute bone and joint infections (BJI) are recommended. We implemented a protocol in 2009 to improve diagnosis and bacteriological documentation, and to shorten antibiotic therapies as per French guidelines (French Pediatric Infectious Disease Group, GPIP).

METHODS: To assess the impact of the new clinical protocol for BJI, we conducted a retrospective study from January 1st, 2006 to August 31st, 2012. Two successive cohorts were compared, before and after protocol implementation. All children suspected of community-acquired BJI were included. Confirmed osteomyelitis and septic arthritis required a positive bacterial isolate; otherwise, cases were considered probable. We compared clinical, biological, and radiological data; duration of antibiotic therapy and hospital length of stay; and complications and sequelae.

RESULTS: A total of 377 children with suspected BJI were included. The bacteriological identification improved from 32% to 44% when patients were completely evaluated. Isolated bacteria were Staphylococcus aureus (53%), Kingella kingae (17%), Streptococcus pyogenes (15%), and Streptococcus pneumoniae (8%). Before protocol implementation, 70% of patients had a central venous line versus 9% after implementation. Mean duration of IV antibiotics (11 days versus 6 days), mean duration of total antibiotic therapy (45 days versus 32 days) and mean hospital length of stay (13 days versus 7 days) had significantly improved.

CONCLUSION: Improvement in bacteriological diagnosis and shorter antibiotic regimens lead to shorter hospital length of stays with no additional morbidity. Simplifying the protocol and better diffusion among health professionals should contribute to shortening BJI treatment duration.
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