PREDICTIVE FACTORS OF DEEP VENOUS THROMBOSIS IN CHILDREN WITH ACUTE HEMATOGONOUS OSTEOMYELITIS

Rabeh S, Trifa M, Ellouze O, Fekih Hassen A, Tilli F, Ben Khalifa S
Department of anesthesia and intensive care, Children’s Hospital, Tunis, Tunisia

Abstract:
Background: The aim of our study was to determine predictive factors of deep venous thrombosis (DVT) in children with acute hematogenous osteomyelitis (AHO).

Material and methods: After ethics committee approval and parental informed consent, we conducted a prospective study including all children admitted between April 2007 and December 2009 with the diagnosis of AHO. Each child had on admission an inflammatory balance (C-Reactive Protein (CRP) and Erythrocyte sedimentation rate (ESR)) and a bacteriological investigation (blood culture, pus and tissue biopsies in operated patients). A Doppler ultrasound was systematically performed on admission of patients and repeated if the child developed local inflammatory signs during the hospitalization. We monitored the evolution of fever and the occurrence of systemic complications. Patient’s characteristics were compared with Student’s t (quantitative variables) and Chi-square (qualitative variables) tests. Multivariate logistic regression analysis was used to determine the independent predictive factors. A p value < 0.05 was considered to be statistically significant.

Results: The study included 70 children, average age was 7 years. A germ was found in 45 cases (64.5%). Staphylococcus aureus (SA) was isolated in 39 patients (6 were methicillin resistant). Seven children developed deep vein thrombosis. The multivariate logistic regression analysis confirmed CRP higher values (p=0.009) and time to Apyrexia (p=0.002) as independent predictive factors of DVT

Conclusion: The incidence of deep vein thrombosis associated to acute hematogenous osteomyelitis was 10% in our survey. Independent predictive factors of DVT were CRP higher rate and time to apyrexia.

Objective:
The aim of our study was to determine predictive factors of deep venous thrombosis (DVT) in children with acute hematogenous osteomyelitis (AHO).

Patients and methods:
• Design: Prospective descriptive study.
• Inclusion criteria: Children hospitalized for acute osteomyelitis between April 2007 and December 2009.
• Non inclusion criteria: Neonatal nosocomial OMA, those secondary to direct inoculation or infection by contiguous.

Methods: Each child had on admission an inflammatory balance (C-Reactive Protein (CRP) and Erythrocyte sedimentation rate (ESR)) and a bacteriological investigation (blood culture, pus and tissue biopsies in operated patients). A Doppler ultrasound was systematically performed on admission of patients and repeated if the child developed local inflammatory signs during the hospitalization. We monitored the evolution of fever and the occurrence of systemic complications.

Results:
• The study included 70 children, average age was 7 years. A germ was found in 45 cases (64.5%). Staphylococcus aureus (SA) was isolated in 39 patients (6 were methicillin resistant).
• Seven children developed deep vein thrombosis (10%, table 1).
• The multivariate logistic regression analysis confirmed CRP higher values (p=0.009) and time to Apyrexia (p=0.002) as independent predictive factors of DVT

Conclusion: The incidence of deep vein thrombosis associated to acute hematogenous osteomyelitis was 10% in our survey. Independent predictive factors of DVT were CRP higher rate and time to apyrexia.

Reference: