P1608 EXPERIENCE AND COMPlications WITH THE USE OF PICCS IN HEMATOLOGIC PATIENTS

Topic: 30. Infections in hematology (incl. supportive care/therapy)

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Background: In the last few years the widespread use of peripherally inserted central catheter (PICCS) has provided a benefit for patients with hematological disorders. PICCS can be used for administration of supportive therapy, chemotherapy or parenteral nutrition. In some cases, they represent a better alternative to other catheters because of their easier and safer insertion/removal and its capacity to provide long-term venous access. Nevertheless, infection and thrombosis are two of the main complications associated with their use, but their rates and risk factors are highly variable.

Aims: To review the experience with PICCs in patients with hematologic diseases as well as to describe and analyze the possible complications associated with their use.

Methods: This is a retrospective unicenter study that included all adult patients with hematologic diseases that required a PICC insertion between June 2019 and December 2021. This procedure was performed by specifically trained nurses, who from this date began to tunnel PICCs guided by ultrasonography, at our hospital day care units. These nurses were in charge of weekly monitoring and cleaning the devices. Demographic and clinical data were obtained from the electronic medical records. Results were analyzed using SPSS Statistics program (v.21).

Results: A total of 99 PICCs were inserted into 82 different patients (68 (1 PICC); 12 (2 PICCs); 1 (3 PICCs); 1 (4 PICCs)). Table 1.a summarizes baseline characteristics of the cohort. The median duration of the devices was 123 days (interquartile range (IR) 48-176) with 13,203 in situ days. By the time of this analysis, 87 PICCs have been removed. The reasons for PICC insertion and removal are shown in table 1.b. Interestingly, 41.4% of the PICCs were inserted in patients receiving any type of antithrombotic therapy due to their underlying condition (low molecular weight heparin= 31.3%; oral anticoagulation=7.1% and low dose aspirin=3%). The incidence of PICC related thrombosis (PRT) was 4.04% with a rate of 0.30/1000 PICC days. One PICC was removed after the diagnosis of PRT, 2 could be safely maintained until end of treatment and 1 patient died due to disease progression 3 days after PRT. No patient had thrombus progression. All PRT occurred in patients that were not receiving antithrombotic therapy. Hodgkin lymphoma (HL) compared with other diagnosis was found as the only significant risk factor for PRT (p=0.03). The incidence of PICC related infection (PRI) was 7.1% with a rate of 0.53/1000 PICC days. The median onset of PRI was 22 days (IR 4-89) and 6/7 PICCs were removed after PRI. Microbial isolates of PICC bloodstream infections were: Coagulase-negative staphylococci (N=5); Staphylococcus aureus (N=1); Bacillus thuringiensis (N=1). Age (p=0.4); sex (p=0.8); type of disease (p=0.8); steroid use (p=0.9)/neutropenia (p=0.4) at the time of line placement; parenteral nutrition (p=0.1); type of PICC (p=0.8) and days with PICC (p=0.5) were not significant risk factors for PRI. No early PICC-related complications were documented and PICC complications were not the primary cause of death for any patient.

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Summary/Conclusion: In our experience, PICCs are safe devices for patients with hematological diseases and can be used for a prolonged period. We did not find early complications during PICC insertion. We found a low rate of PRT, with a higher predisposition in HL patients. A favorable low rate of PRI was also observed in this series which could be explained by the adequate management of the devices at our institution with a weekly follow-up nurse control.