Picc and midline occlusions, nurses' knowledge: an observational study

Authors: Franguelli M., Ulivieri D., Ursino F., Bondielli F., Aula F., De Matteis A., Cervasio M., Cappellin M., Consoli D., Agostinelli B., Capalbo S., Montagnani L.

San Martino Polyclinic of Genoa – Liguria – Italy.

The study evaluate nurses' knowledge about the best practices to prevent PICC and Midline occlusions, in order to set up corrective interventions.

Nurses were divided in two groups, group A included nurses who attended the refresh training about vascular access on May 2017, while group B included nurses who didn't. We used a questionnaire created by a literature review. In our Polyclinic we observed four departments. Every department has at least two similar wards, so we can compare similar patients.

During the study period occurred 37 occlusion on 377 PICC (9.81%), and 59 occlusions on 488 Midline (12.09%). Incidence of occlusions is similar among the units.

Incidence of PICC occlusions (9.81%) is lower, in our Polyclinic, than the mean value obtained from other studies founded in the literature (11.32%).

Pre-occlusion time, the time between the devices placement and its occlusion, is 42 days for PICCs and 15 days for Midlines, respectively, in medicine units, 120 and 20 days in oncology units, 81 and 40 days in hematology units, and 16 and 13 days in surgery units.

43% of nurses from group A and 35% from group B gave the correct answer about the right timing of flushing. 33% from both groups disconnect IV infusion set and syringes without clamping the devices while using neutral needle-free connectors, as the producer of the device recommends. 29% from group A and 38% from group B knows that drugs interactions may increase occlusion risk.

The number of correct answers (65% in group A and 62% in group B) and a p-value >0,05 suggest that there isn't any difference in theoretical knowledge, but it's fundamental to correct the malpractices highlighted. Nurses specifically trained by the PICC Team, like the ones in oncology and hematology units, who can instruct and correct their coworkers guarantee a better management of PICCs and Midlines and longer pre-occlusion time. These specifically trained nurses appear to be a good solution to improve the management of the devices.

Bibliography extract

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