Replacement Short Peripheral Intravenous Catheters with Clinical Monitoring

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Introduction: Intravenous (IV) therapy is nowadays one of the most common procedures to administrate different treatments to patients, especially in hospital environment. There are many problems derived from insertion and maintenance of short peripheral intravenous catheters (PIVC), being after-puncture acute phlebitis the major risk of intravenous therapy.

Objective: To evaluate short PIVC left in place for as long as they are clinically indicated.

Methods: Observational and prospective study of consecutive patients from the Internal Medicine and Surgery in an acute care hospital.
From Sep16 till Nov17 all consecutive patients with PIVC that were expected to stay in place and receive IV treatment for at least 48 hours.
Catheter insertion and care were standardized. To left catheter in place we used the phlebitis score.

Phlebitis score		
Departamento Enfermería		
Tabla de puntuación de observación de signos flebitis (Score de flebitis)		
Sitio de inserción se observa sano	0	No hay signos de flebitis Observar la cánula
Uno de los siguientes signos está presente: • Dolor leve en el sitio de inserción o leve eritema en el sitio de inserción	1	Posibles primeros signos de flebitis Observar la cánula
Dos de los siguientes síntomas están presentes: • Dolor en el sitio de inserción • Eritema • Sangrado	2	Signos tempranos de flebitis Cambiar la cánula
Todos los siguientes signos son evidentes: • Dolor en el trayecto de la cánula • Eritema • Induración	3	Signos de flebitis Cambiar la cánula Considerar tratamiento
Todos los siguientes signos son evidentes y extensos: • Dolor en el trayecto de la cánula • Eritema • Induración • Palpación del cordón venoso	4	Signos avanzados de flebitis y comienzo de tromboflebitis Cambiar la cánula Considerar tratamiento
Todos los siguientes signos son evidentes y extensos: • Dolor en el trayecto de la cánula • Eritema • Induración • Palpación del cordón venoso • Fiebre	5	Estado avanzado de tromboflebitis Cambiar la cánula Iniciar tratamiento

Results: A total of 833 patients were enrolled in the study, 358 with polyurethanes catheters and due to a shortage in supply, 475 with FEP polymer. The gauge used was: 20% 18G, 20% 24G, 25% 22G, 35% 20G. The mean patientage was 71±5 (range 45-96).
Catheter with FEP remained in site no more than 48 hours, 64% less than 24 hours they were replacement for extravasations or phlebitis.
The polyurethanes catheter were left in place more than 96 hours. The longest IV dwell time for a case patient was 12 days and 11 for five patients; all these cases the catheters were removed for the end of therapy or extravasations. Those who remained ≤4 days were due to the end of therapy, only 3 cases presented chemical phlebitis.
No cause of bacteremia occurred.

Conclusions: the results of our study are consistent with recent publications, which support the idea not to change peripheral intravenous catheters routinely and that polyurethanes catheter have better performance; it also allowed to avoid harm and discomfort to the patient and of course additional cost.
The hazard for catheter-related complications (mechanical, phlebitis, catheter-related infections) did not increase during prolonged catheterization

et al:Saavedra, A; Escudero, M; Sánchez, E ; Caturini, V; Cruz, L; Loyola, N; Báez, V; Domínguez, G; gladys, Castro Muñoz, Y; Fernández, A; Coca, E; Cabral, V; Díaz, E; Falcón, V; Garzón, N; Leguizamón, G; Insaurrealde, X; Martínez, D; Jiménez, F; Maldonado Reyes, ; Keller, S; Muller, M; Ortiz, M; Ayala, M; Céspedes, S; Fina, M; Peralta, N