PKP-008 IMPLEMENTATION OF A MONITORING PROTOCOL FOR DIGOXIN

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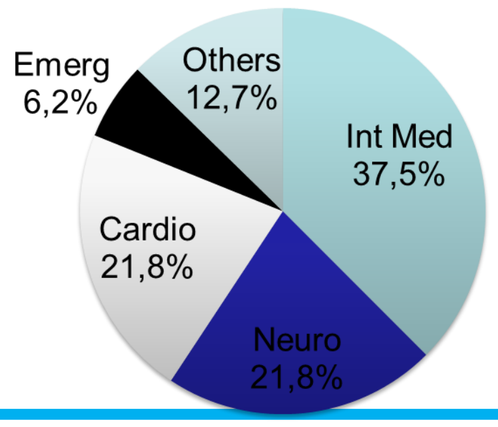
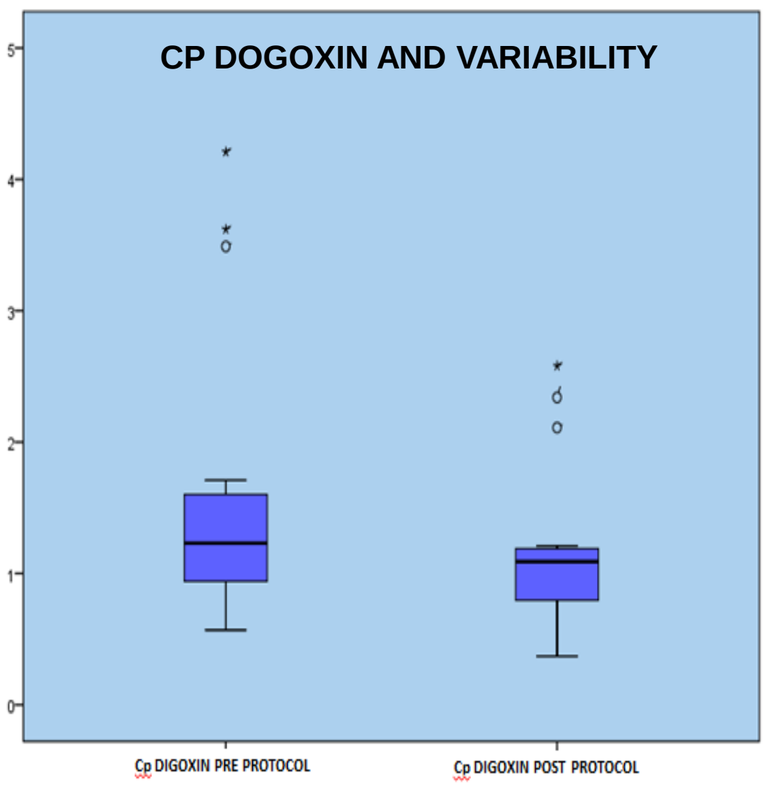
Objective: Analyze the implementation of a monitoring protocol for digoxin after its elaboration and diffusion among the clinicians of the hospital..

Methods: The development of a protocol of digoxin impregnation was proposed. A simple explanatory table was performed indicating the loading dose administered according to the glomerular filtration rate (FG) and recommended times for pharmacokinetic monitoring and second dose. The protocol was agreed with some medical services (Internal Medicine, Cardiology, Emergencies, Intensive Care Medicine and Neurology) through clinical sessions given by the pharmacist. In them we insisted in dose adjustment according FG and in monitoring plasma levels of digoxin after the first loading dose for a Bayesian estimation. The project started in November 2015 and were analyzed prospectively pharmacokinetic monitoring carried out in 5 months. Data (age, sex, FG, service, Cp, protocol compliance, and pharmacokinetics recommendation) were obtained from the Unit of Clinical Pharmacokinetics through the computer application Gestlab®.

MONITORING PROTOCOL FOR DIGOXIN						
FG ml/min	0h	+ 6h	+ 8h	+ 12h	+ 16h	+ 24h
>75	0,5 mg	1, Cp monitoring. 2. Admin 0,25 mg		Next dose of DGX according to pharmaceutical recommendation		
45-75	0,5 mg		1, Cp monitoring. 2. Admin 0,25 mg		Next dose of DGX according to pharmaceutical recommendation	
25-44	0,25 mg		1, Cp monitoring. 2. Admin 0,25 mg		Next dose of DGX according to pharmaceutical recommendation	
<25	0,25 mg			1, Cp monitoring 2. Admin 0,25 mg		Next dose of DGX according to pharmaceutical recommendation

Distribution of requests for clinical services





Results:

The lack of standardization in digoxin impregnation made us to analyze plasma levels (Cp) of digoxin during previous 5 months: 16 patients (56.2% male) of 77.4±10.8 years and 47.2±23 mL/min FG. Of these only 18.7% were performed after the first dose and only took into account the FG dosing at 12.5%. The average Cp digoxin was 1.43±1.0 ng/mL, with an variability of 69.9%.

After the implementation of the protocol, a total of 32 patients (28.1% male) of 81±7.6 years and 56.3± 22.9 mL/min FG were included in the analysis of protocol compliance. The distribution of requests for Clinical Service was: 37.5% Internal Medicine, 21.8% Neurology, 21.8% Cardiology and 6,2% Emergencies. 84.4% of monitoring were performed after the 1st dose. In 62.5% of patients the dose was adjusted according FG. The average level of digoxin Cp was 1.07±0.28 ng/mL.

Conclusions: Favorable changes generated after application of the new protocol were better coordination among prescribers, an increase of 50% in the number of monitoring, reducing the average Cp of digoxin in the first pharmacokinetic monitoring and less interindividual variability (26%).