Background
- Digoxin is a high-alert medication because of its narrow therapeutic range and high drug-to-drug interactions.
- Fifty per cent of cases of digoxin toxicity can be prevented by improving treatment with digoxin.

Objectives
- Checking whether the dosage of digoxin in intoxicated patients accords with clinical guidelines recommendations.

Material and Methods
- Retrospective study of patients discharged between 2015–2017, presented as a primary or secondary diagnosis of digitalis toxicity.
- Variables: date of birth, sex, weight, size, diagnosis for treatment with digoxin – atrial fibrillation (AF) or heart failure (HF) – daily dose of digoxin, serum creatinine, digoxinemia and Potasemia [k+].
- It was estimated whether the dosage of digoxin was correct based on anthropometric data and doses of daily digoxin using PKS.
- For those inadequately dosed patients, daily doses of adequate digoxin were calculated.

Results
- N = 64
  - 47 females
  - Median age: 83.7 years (55–102)
  - Median weight: 69.2 kg (45.5–105 kg) with 52% below 70 kg
  - Mean value of GFR 50.65 mL/min (SD=19.9) (77%<60 ml/min)
  - 67% [k+] ≤ 4.5 meq/dl

<table>
<thead>
<tr>
<th>Variables</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily dose of digoxin prior admission</td>
<td>0.163 mg/day (SD=0.06)</td>
</tr>
<tr>
<td>Average digoxinaemia at income</td>
<td>2.94 ng/mL (SD=1.36)</td>
</tr>
<tr>
<td>Doses estimated to obtain concentrations within therapeutic range</td>
<td>0, 110 mg/dia, 32.4% less than the pre-admission dose.</td>
</tr>
</tbody>
</table>

9 patients met the STOPP criterion of inappropriate prescription for administering doses of digoxin >0.125 mg/day to patients older than 65 years with GFR <50 mL/min.

A significant relationship (p<0.003) was found between dose or level/dose index and patient’s GFR.

The serum digoxin concentrations justified intoxication in most patients.

Only two patients presented with serum digoxin concentrations below 1 ng/ml: 81% greater than 2 ng/ml.

No significant differences were found between doses, concentrations or level/dose index of digoxin of patients diagnosed with HF and AF.

Conclusions
- Clinical guidelines recommend evaluating renal function (K+) and serum digoxin concentration, considering the appropriate range for HF (0.6–0.8 ng/dl) and AF (0.8–1.0 ng/dl).
- Control of potassium levels would be insufficient, and doses administered higher than those necessary for the recommended therapeutic range.
- Monitoring of serum digoxin concentrations could reduce digitalis toxicity.