Enzalutamide and analytical interferences in digoxin assays.

Titre	Enzalutamide and analytical interferences in digoxin assays.
Type de publication	Article de revue
Auteur	Deguigne, Marie [1], Brunet, Marion [2], Abbara, Chadi [3], Turcant, Alain [4], Le Roux, Gaël [5], Lelièvre, Bénédicte [6]
Editeur	Taylor & Francis
Type	Article scientifique dans une revue à comité de lecture
Année	2018
Langue	Anglais
Date	2018 May 09
Pagination	1-5
Titre de la revue	Clin Toxicol (Phila)
ISSN	1556-9519
Résumé en anglais	OBJECTIVE: We report two cases of elevated digoxin plasma levels in patients receiving enzalutamide. Cases reported: The first patient, an 84-year-old male treated with enzalutamide, was hospitalized due to deterioration in his general state. Atrial fibrillation was discovered and treatment with digoxin was initiated. Supratherapeutic digoxin concentrations (4 µg/L and 3.5 µg/L 3 days later) led to treatment being stopped despite the lack of clinical or biological signs of overdose. The second patient, an 84-year-old male treated with digoxin and enzalutamide, was hospitalized for the same reasons. Digoxin concentration upon admission was 2.8 µg/L. Despite stopping treatment, digoxin blood levels were observed to have increased on D3 and D7 following admission (3 and 3.6 µg/L, respectively). However, no clinical or biological findings indicated an overdose. Blood samples were sent to the Pharmacology and Toxicology Laboratory for analysis. METHODS: The second patient's digoxin plasma level was determined using the chemiluminescent microparticle immunoassay (CMIA®, Abbott, Illinois) method. Enzalutamide levels were determined using HPLC-UV/DAD method. An interference study was performed using different assay methods by adding enzalutamide to control plasma at various concentrations from a Xtandi (40mg) capsule. RESULTS: Plasma concentration of digoxin at D7 for patient 2 was identical in both laboratories (3.5 vs. 3.6 µg/L). Enzalutamide was found in the patient's plasma (12,5 mg/L). Adding 4, 10, 20, and 40 mg/L of enzalutamide to the untreated plasma showed that the plasma concentration of digoxin was positive (from 0.35 to 3.69 µg/L) using the CMIA method. CONCLUSIONS: Our results highlight the analytical interferences of enzalutamide with digoxin assays using the CMIA method.
URL de la notice	http://okina.univ-angers.fr/publications/ua18738 [7]
DOI	10.1080/15563650.2018.1469758 [8]
Autre titre	Clin Toxicol (Phila)

Identifiant (ID) PubMed	29741399 [9]

Liens
[1] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=32646
[2] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=32642
[3] http://okina.univ-angers.fr/cabbara/publications
[4] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=19836
[5] http://okina.univ-angers.fr/publications?f%5Bauthor%5D=32645
[6] http://okina.univ-angers.fr/benedicte.lelievre/publications
[7] http://okina.univ-angers.fr/publications/ua18738
[8] http://dx.doi.org/10.1080/15563650.2018.1469758
[9] http://www.ncbi.nlm.nih.gov/pubmed/29741399?dopt=Abstract