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 Regulatory Toxicology and Pharmacology
 Volume 91, December 2017, Pages 151-158

Assessment of preclinical pharmacokinetics and acute toxicity of pioglitazone and telmisartan combination (Article)
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Abstract

The prevalence of hypertension is very common amongst the diabetic patients and is reported as the major cause of mortality in diabetes. Pioglitazone reported to have an ability to alter the blood cholesterol level and cardioprotective efficiency along with its antidiabetic activity. Telmisartan, through activation of PPAR-γ receptor exerts insulin sensitizing property in addition to its primary cardioprotective efficiency. Theoretically, a combination of pioglitazone and telmisartan may be beneficial to effectively control the high blood glucose level and management of coexisting cardiovascular complication in diabetes. The aim of this research was to experimentally evaluate the pharmacokinetic interaction of pioglitazone and telmisartan when are coadministered in rat. Pioglitazone and telmisartan were administered orally as a single dose individually and in combination to the rats. The plasma samples of the pharmacokinetic study were analysed using a validated LC/MS method. The acute toxicity of the combination with a high dose in rats was also evaluated as a part of the determination of its safety profile. There was no significant change in pharmacokinetic parameters were resulted due to the coadministration of pioglitazone and telmisartan in rat. Absence of major toxicological effect supports the in vivo safety of the combination. © 2017 Elsevier Inc.

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[Acute toxicity](#)
[Pharmacokinetics](#)
[Pioglitazone](#)
[Telmisartan](#)

Indexed keywords

EMTREE drug terms:

[pioglitazone](#)
[rosiglitazone](#)
[telmisartan](#)

EMTREE medical terms:

[acute toxicity](#)
[adult](#)
[animal experiment](#)
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Chemicals and CAS Registry Numbers:

pioglitazone, 105355-27-9; 111025-46-8; rosiglitazone, 122120-73-4; 155141-29-0; telmisartan, 144701-48-4

Manufacturers:

Drug manufacturer:

Hangzhou Hyper Chemicals, China

Funding details

Funding number	Funding sponsor	Acronym
	International Islamic University Malaysia	IUM
	Jadavpur University	JU

Funding text

The authors are grateful to Bioequivalence Study Centre, Jadavpur University, Kolkata, India and International Islamic University Malaysia, Kuantan, Pahang, Malaysia for providing necessary instrumental and laboratory facilities to carry out this research successfully.

 ISSN: 02732300
 CODEN: RTOPD
 Source Type: Journal
 Original language: English

 DOI: 10.1016/j.yrtph.2017.10.029
 Document Type: Article
 Publisher: Academic Press Inc.

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