Research & Reviews: Journal of Pharmacology and Toxicological Studies

e-ISSN: 2322-0139
p-ISSN: 2322-0120

An overview of Drug interactions

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Editorial

Received date: 13/03/2021
Accepted date: 14/03/2021
Published date: 28/03/2021

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ABSTRACT

A drug interaction is often defined as an interaction between a drug and another substance that forestalls the drug from performing needless to say. This definition applies to interactions of medicine with other drugs (drug-drug interactions), also as drugs with food (drug-food interactions) and other substances.

Whenever two or more drugs are being taken, there's an opportunity that there'll be an interaction among the drugs. The interaction may increase or decrease the effectiveness of the drugs or the side effects of the drugs. Drug interactions contribute to the value of healthcare due to the prices of medical aid that are required to treat problems caused by changes in effectiveness or side effects. Interactions can also cause psychological suffering which will be avoided. This

EDITORIAL

Mechanism of Drug Interactions

There are several mechanisms by which drugs interact with other drugs, food, and other substances. An interaction may result when there's a rise or decrease in

Change In Absorption

Most drugs are absorbed into the blood then visit their site of action. Most drug interactions that are thanks to altered absorption occur within the intestine. There are various potential mechanisms through which the absorption of medicine are often reduced. These mechanisms include:

- An alteration in blood flow to the intestine
- Change in drug metabolism (breakdown) by the intestine
- Increased or decreased intestinal motility (movement)
- Alterations in stomach acidity
- A change within the bacteria that reside within the intestine

Change In Drug Metabolism And Elimination

Most drugs are eliminated through the kidney in either an unchanged form or as a by-product that results from the alteration (metabolism) of the drug by the liver. Therefore, the kidney and therefore the liver are vital sites of potential drug interactions. Some drugs are ready to reduce or increase the metabolism of other drugs by the liver or their elimination by the kidney.

Metabolism of medicine is that the process through which the body converts (alters or modifies) drugs into forms that are more or less active (for example, by converting drugs that are given in inactive forms into their active forms that really produce the specified effect) or that are easier for the body to eliminate through the kidneys. Most drug metabolism takes place within the liver, but other organs also may play a task (for example, the kidneys, intestine, etc.).The cytochrome P450 enzymes are a gaggle of enzymes within the liver that are liable for the metabolism of most drugs. They are, therefore, often involved in drug interactions. Drugs and certain sorts of food may increase or decrease the activity of those enzymes and thus affect the concentration of

e-ISSN: 2322-0139
p-ISSN: 2322-0120

medicine that are metabolized by these enzymes. a rise within the activity of those enzymes results in a decrease within the concentration and effect of an administered drug. Conversely, a decrease in enzyme activity results in a rise in drug concentration and effect.

Results of drug interactions

Drug interactions may cause a rise or decrease within the beneficial or the adverse effects of the given drugs. When a drug interaction increases the advantage of the administered drugs without increasing side effects, both drugs could also be combined to extend the control of the condition that's being treated. for instance, drugs that reduce vital sign by different mechanisms could also be combined because the vital sign lowering effect achieved by both drugs could also be better than with either drug alone

The absorption of some drugs is increased by food. Therefore, these drugs are crazy food so as to extend their concentration within the body and, ultimately, their effect. Conversely, when a drug's absorption is reduced by food, the drug is taken on an empty stomach.

How can drug interactions be avoided?

1. Give health care practitioners an entire list of all of the drugs that you simply are using or have used within the previous couple of weeks. this could include over-the-counter medications, vitamins, food supplements, and herbal remedies.
2. Inform health care practitioners when medications are added or discontinued.
3. Inform health care practitioners about changes in lifestyle (for example, exercise, diet, alcohol intake).
4. Ask your health care practitioners about the foremost serious or frequent drug interactions with the medications that you simply are taking.
5. Since the frequency of drug interactions increases with the amount of medicines, work together with your health care practitioners to eliminate unnecessary medications.