A REVIEW ON THE DRUG-DRUG INTERACTIONS WITH METABOLISM AND BRAND NAMES WITH SOME USES

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ABSTRACT

Drug interactions are the harmful or beneficial effects of co administered medicinal products, these interaction may be synergistic or antagonistic pharmokinetics or pharmodynamics, drug interactions exists between drugs and drugs, drugs and foods, drugs and herbs, benefits effects include convenience, Reduced toxicity and reduction.

Antihistimine, antihistimine, asthma, analgesic, typhoid, hypertension, tuberculosis antibiotics, filaria, rheumatoid arthritis, antipyritic, anticancer immunological diseases, ectopic pregnancy, fever, osteoarthritis and antipyritic, analgesic, hiv aids, chicken pox, Salicylate, phenytoin, estrogens, hmg coa reductase inhibitors, barbiturates, chloramphenical, antacids, anticoagulant.

When two or more drugs are administered concurrently or within a reasonable time or after each other (both prescription drugs and non prescription drugs are involved), the result may be in difference, synergism, potention, antagonism this is called AS .DRUG-DRUG INTERACTION.

Drug metabolism interactions results in the increase of biological half life or reduction of clearance there requiring lower doses, imiprimine reduces the clearance of epinephrine, some examples of the drugs that inhibit metabolism like Erythromycin, ketocanazole, fluxetin, cimitidine, Allopu rinol , carbamazepine, phenobarbital, Rifampacin , and phenytoin. Risk of Therapeutic failure, stoppage of induced may lead to toxic concentration of substrate and induction may lead to formation of toxic metabolites.

Keyword: Drug Formulation and contain.

INTRODUCTION

Drug interactions are the harmful or beneficial effects of co administered medicinal products, these interaction may be synergistic or antagonistic pharmokinetics or pharmodynamics, drug interactions exists between drugs and drugs, drugs and foods, drugs and herbs, benefits effects include convenience, Reduced toxicity and reduction.

DEFINITION

When two or more drugs are administered concurrently or within a reasonable time or after each other (both prescription drugs and non prescription drugs are involved), the result may be in difference, synergism, potention, antagonism this is called AS .DRUG-DRUG INTERACTION.

DRUG DRUG INTERACTIONS

ASTHMA

Salbutamol +(diuretic) furoside-hypokalemiea(muscle weakness, paralysis) Salbutamol( sympathomimetic) +(beta blocker) propanolol-narrowing the air way vessels difficult in breathing severe inacute attacks . Salbutamol brand names-aerotaz, sabrel

ANALGESIC

Aspirin (ANALGESIC) +(beta blocker) atenolol - effectiveness decreases and metabolism of atenolol increases Brand name of atenolol - tenerific, atezon

ANTIHISTIMINE

Citizen HCl (ANTIHISTIMINE) +theophyline (asthma) - decreases the clearance activity Brand name of citizen - alorox syrup, alateral tablet, antrin tablet.

TYPHOID

Norflaxacin +warfarin(anticoagulant) - enhances the effect of anticoagulant Norflaxacin +NSAIDS (analgesic) - increase the risk of cns stimulant Brand name of Norflaxacin - alflox, biflox norflex

ANTIHYPERTENSION

Nifdefpine +beta blocker - increase the chf, severe heart failure Nifdefpine +cimitidine - decreases the Nifdefpine action through enzyme inhibition Brand name of Nifdefpine-adolat, procardia xl, nifdefpine xl

ANTITUBERCULOSIS

Rifampacin +cyclosporin - reduced the cyclosporin risk of organ rejection Rifampacin +isoniazid - risk of liver damage Rifampacin +pyrazimmine - risk of liver damage Rifampacin +quinine - decreases the blood levels Rifampacin brand name - acox, coxid, fampacin, rifcillin,

ANTIBIOTICS

Ampicillin+tetracycline-decreases the effect Ampicillin +atenolal - decreases the effect of ampicillin Ampicillin +typhoid vaccine - decreases the immunological resp of typhoid vaccine

FILARIA

Alabinidazole +clozapine - decreases the blood count Brand name of Alabinidazole - albenzole, eskazole zentel, amidole

RHEUMATOID ARTHRITIS ANTICANCER, AUTOIMMUNODISORDERS, ECTOPIC PREGNANCY
Methotrexate sodium + penicillin - inhibit the risk of toxicity
Methotrexate + aminoglycosides - inhibit the G6 absorption, decreases the G6 absorption of Methotrexate sodium
FEVER, OSTEOARTHRITIS, ANALGESIC, ANTIPYRETIC
Nimesulide + furosemide - rate of binding action is decreased.
Nimesulide + tolotubimide, fibrates, salycylates - displacement of protein binding capacity
Nimesulide + sulphonylurease - increase the action of hypoglycemic agent
Brand name of nimesulide - nimalid, nisc, insulide gel

HIV AIDS, CHICKEN POX
Aciclair + ketocanazole - synergistic effect
Aciclair +pro bend-half life time increases renal clearance
Aciclair + zidovudine - neurotoxic effects

OTHER INTRACTION AND ASSOCIATED WITH DISEASES
Salicylates
Interference with renal excretion of drugs that undergo active tubular secretion, salicylates renal excretion dependent on urinary pH when large doses used.
Clinically documented INTRACTION
Carbonic anhydrase inhibitors - increased acetaolamide serum concentration, increase salicylate toxicity due to decrease the pH
Corticosteroids - increased the salicylate elimination toxic effect on gastric mucosa
Phenytoin
Induces the hepatic microsomal drug metabolism
Corticosteroids - decreases the serum corticosteroids levels
Doxycycline - decreases the serum Doxycycline levels
Quinidine - decreases the serum Quinidine levels
Chloramphenical - increased the serum phenytoin

ESTROGENS
Metabolism inducible, enter hepatic circulation of estrogen may be interrupted by alteration in bowel flora.
Amprolipin - interruption of enter hepatic circulation of estrogen.
Phenytoin - increased the estrogen metabolism

HMG COA REDUCTASE INHIBITORS
Lovastatin, simastatin and to lesser extent, increase the risk of myopathy
Atazanavir - decreases the statin metabolism
Cefibrate -increased the risk of myopathy
Cyclosporin - decreased statin metabolism
Rifampin - increased the statin metabolism
Ritonavir - decreases the statin metabolism

CHLORAMPHENICAL
Inhibit hepatic drug metabolizing enzyme
Phenytoin - decreases phenytoin metabolism
Sulfonylureas - decreases the Sulfonylureas metabolism
Calcium channel blockers
Cyclosporin - decreased cyclosporin metabolism
Rifampin - increased the metabolism of calcium channel blocker

BARBITURATES
Tacrolimus - increased the Tacrolimus metabolism
Theophylline - increased the theophylline metabolism reduced theophylline effect

ANTIFUNGAL azole derivative
Barbiturate - increased metabolism of itraconazole

Anticoagulant
NSAIDS - inhibit the platelet function
Simvastatin - decreases the warfarin metabolism

Barbiturate - enzyme induction

ANTACIDS
Antacids may absorb drugs in gastrointestinal tract, reducing absorption, antacid tend to speed gastric emptying
Atazanavir - decreases the absorption of Atazanavir
Itraconazole - reduced gastrointestinal absorption of itraconazole due to increase pH
Tetracycline - decreases gastrointestinal absorption of Tetracycline
Allopurinol - inhibit the hepatic drug metabolism enzyme
+anticoagulant - increased the hypo pro thrombinemia effect

MONITORING AND MANAGING DRUG INTERACTIONS
IT is important to understand the patient current medication, including drugs prescribed by other physician, herbal products and nutrition supplements, dialogue with patients about diet and alcohol consumption is required, the goals of the medication therapy should be fewest drugs in the lowest doses for the short test possible period, the Pharmacology effect expected, wanted and unwanted, of all drugs taken should be determined because these effects usually include the spectrum of drug interaction as far as possible, drugs with wide margin should be preferable so that unexpected interaction do not lead to toxicity effects,

Monitoring Patients
Monitoring of patients after a change of treatments is important as some interaction may take about week of more time to observe, if dosage adjustments does not work, the drug may be replaced with another one which has lesser interaction, they are many sources available as reference tools for verification of the drug interaction, some of the sources are metck manal, drugs. Com, rxlist. Com, drug has specific tool I. E. INTRACTION checker for verifying drug interactions, with this tool persons can verify the interaction of many drug, informed decisions saves lives,

DISCUSSION
Drug interactions are the harmful or beneficial effects of co-administered medicinal products, these interaction may be synergistic or antagonist istic pharmacokinetics or pharmaco dynamics, drug interactions exists between drugs and drugs, drug and foods, drugs and herbs, benefits effects include convenience
Reduced toxicity and reduction, Synergistic interaction are those that give added benefits Examples of synergistic drug interaction increase the analgesic effect of paracetamol with codeine, reduction of bacterial resistance with co-administration of chloramycin with Amoxicillin. cytotoxic drugs combination in treatment of cancer requires lower doses, of each drug to obtain better Therapeutic effects with less side effects, saquinavir is poorly absorbed, treatment is three times dosing when combined with Ritonovir there is multiple features increasing the blood concentration, antagonism interaction are those may interact and conteract the action of one another example is oxybutin in for treating in contience in a patients taking donepezil for alzheimers diseases and also alcohol and caffeine , phenobarbital and cimitidine, acetylcholine and ATROPINE.

Results of drug drug interactions
Pharmacodynamic interaction are the actions that you are produced by the drug on the body, one drug alter the sensitive, or responsiveness of the body to other drug by producing antagonism, effect, pharmaco kinetics interactions are the action that are produced by the body on drugs, these interaction affect the intensity and duration of the drug action and not the effect, they usually alter drug absorption, distribution, metabolism, and excretion on of another drug nisman is called AS DRUG-DRUG INTRACTION. Drug metabolism interactions results in the increase of biological half life or reduction of clearance there requiring lower doses, imipramine reduces the clearance of epinephrine, some examples of the drugs that inhibit metabolism like Erythromycin, ketocanazole, fluoxetine, cimitidine, Allopurinol, carbamazepine, phenobarbital, Rifampicin , and phenytoin. Risk of Therapeutic failure, stoppage of induced may
lead to toxic concentration of substrate and induction may lead to formation of toxic metabolites.

CONCLUSION

TETRACYCLINE AND QUINOLINES form insoluble complexes with metals and there by their absorption is reduced that I’d reason for advising to avoid antacids preparations, milk products with certain products, some drugs reduced, absorbed and causes effects, absorption of Metothrexate or digoxin by cholesteromyamine, antacids also alters pH decreases the absorption of week acids and increasing the absorption of the week bases, prestalic movements regulates the passage of drugs, laxatives causes the drug to move rapidly through the intestine resulting poor drug absorption

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