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PHARMACY NEWSLETTER

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Pharmacy Newsletter provides information regarding the Pharmacy and Therapeutic Committee's decisions, current concepts in drug therapy, MOH (Pakistan), FDA (USA), CSM (UK) and other regulatory agencies' warnings, drug interactions, ADR and matters related to drug usage.

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Managing your Warfarin Therapy

A Patient's Guide & Record



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آغا خان یونیورسٹی ہسپتال، کراچی

The Aga Khan University Hospital, Karachi



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Pharmacy News

'Warfarin' – High Alert Medication Policy Update

Preamble

Oral anticoagulation with warfarin is a challenging task for health care providers around the world. Due to narrow therapeutic index and less predictable pharmacokinetics, its use should be abided by strict safety measures. These include safe prescribing, monitoring, patient education and regular follow ups. The important monitoring aspects are evaluation for active bleeding, bleeding tendencies and laboratory parameters such as prothrombin time/ international normalized ration.

Our Scenario: Appreciating the potential risk to the patients, Pharmacy and Therapeutics Committee (P and TC) of AKUH has categorised Warfarin as High Alert Medication and developed a Prescribing and Monitoring Guideline along with Patient's Guide and Record Book.

Salient features of the guidelines are given below:

Correct Patient:

- Patient should be identified properly with two identifiers before prescribing, dispensing and administration.

Prescribing and Monitoring:

- Verbal orders are not allowed for Warfarin.
- All the prescribing and monitoring shall be guided by the approved guidelines.
- Order shall be complete, correct and include all the necessary parameters.
- Baseline INR should be checked before ordering and repeated at suitable intervals to ensure proper dosing.
- Target INR value is set and known to all care providers in order to ensure proper dose adjustment and monitoring.
- Proper assessment for side effects is carried out (esp. bleeding) at suitable intervals.
- Order should be reviewed every 24 hours or upon the availability of recent lab values.

Dispensing and Patient Education:

- Warfarin will be dispensed from pharmacy against a valid physician order.
- Dispensed dose will be labeled properly with complete dosing information.
- Medication related education is provided to patient/family upon discharge and on OPD

refills to ensure safe use of this drug.

Guidelines Also Mention:

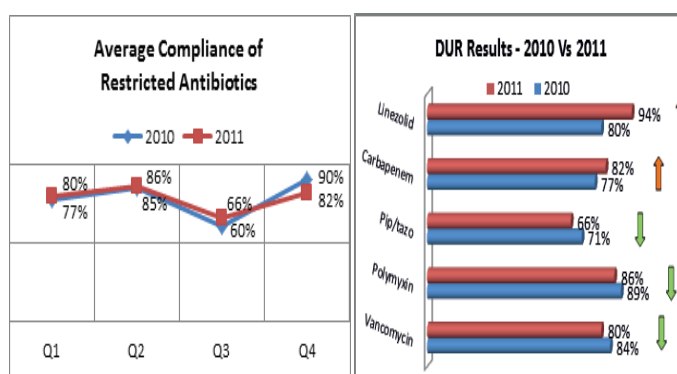
- need and rationale of loading dose
- maintenance dose and dose adjustments
- target INRs for different indications
- duration of therapy
- common and important drug-to-drug and drug-food interactions
- reversal before surgery
- risk factors for bleeding
- management of moderate and severe bleeding
- head to toe assessment for side effects

Details are available in High Alert Medications Policy (annexure) available at :

<http://intranet/pharmacy/pdf/QA018.pdf>

Rational use of Antibiotics 2011 – Snapshot Preamble

Antibiotic Subcommittee (ABSC) of AKUH has selected six broad spectrum and costly antibiotics that are considered as the last resort for multi-drug resistant microorganisms. Hence, their usage is guided by the approved protocol for prescribing. Adherence to set criteria is also periodically monitored to ensure their rational use. Six restricted antibiotics are imipenem, meropenem, vancomycin, polymyxin B, piperacillin/tazobactam and linezolid.



Methodology for Drug Utilisation Reviews (DURs)

A representative sample of patients was taken who were administered the restricted antibiotics. Sample was based on the volume of consumption of antibiotics specialty wise. Each patient was assessed against the criteria of restricted antibiotic usage, approved by the Antibiotic Subcommittee (ABSC) of the Hospital. Results are plotted as either compliance or non-compliance to the criteria of the usage. The data is presented in the ABSC.

Major Non-Compliance to the Approved Criteria of Restricted Antibiotics in Year 2011:

S#	Antibiotic	Concern	Improvement required in
1.	Meropenem	<ul style="list-style-type: none"> cultures were not sent prior to start of the therapy prolonged empiric therapy 	Paediatrics Medicine
2.	Imipenem	<ul style="list-style-type: none"> cultures were not sent prior to start of the therapy based on cultures, on-time de-escalation was not carried out 	Surgery Medicine
3.	Vancomycin	<ul style="list-style-type: none"> cultures were not sent prior to start of the therapy on-time de-escalation not done based on C/S levels were not monitored properly 	Medicine Surgery Paediatrics
4.	Polymyxin	<ul style="list-style-type: none"> empiric polymyxin upon admission cultures were not suggestive of multiple antibiotic resistant organisms (MARO) 	Surgery
5.	Piperacillin/ Tazobactam	<ul style="list-style-type: none"> cultures were not sent prior to start of the therapy duplication with other penicillins 	Emergency Surgery
6.	Linezolid	<ul style="list-style-type: none"> unclear indication for linezolid, prior infectious disease approval was not taken duplication with vancomycin 	Surgery

What can you do to help?

Clinicians should focus on the major non-compliance factors and attempts should be made to abide the use of restricted antibiotics against the approved criteria of the Hospital.

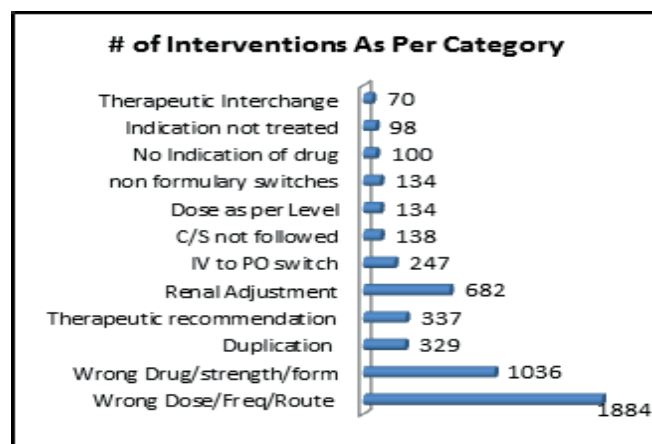
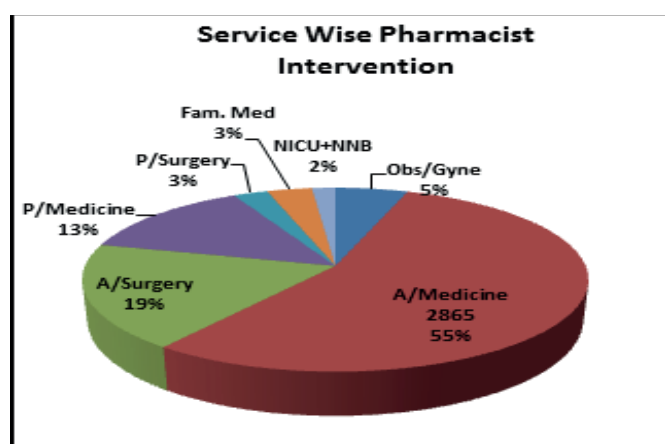
For complete information on the prescribing and monitoring protocol of these antibiotics, faculty and staff can refer to the pocket Antibiotic Guideline or the online version at :

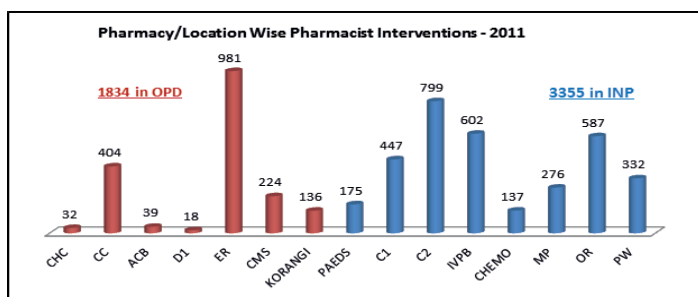
http://intranet/pharmacy/Antibiotic_GL_completebook.pdf

Pharmacist Interventions – Curbing Potential Prescribing Errors

According to the patient safety recommendations worldwide and JCIA standards, review of prescription by a pharmacist is an important step to prevent any medication error at the time of prescribing. It is

also a tool to prevent serious medication errors. The 2011 snapshot of pharmacists' interventions to provide care to a more acceptable level:





Reporting Adverse Drug Reactions:

Literature suggests that Adverse Drug Reactions (ADRs) account for 4-6 per cent morbidity and 0.15 per cent mortality in a given population. It is important for patient safety perspective to identify and report the ADRs. To report an ADR, browse the online ADR reporting form;

<http://intranet/pharmacy/adrrf.htm>

FDA Safety Updates and Alerts - 2011

Drug	Month	Updates
Antipsychotics	February	Treatment during pregnancy (third trimester) imposes potential risk for abnormal muscle movements (extrapyramidal signs or EPS) and withdrawal symptoms in newborns.
Proton Pump Inhibitors	March	Hypomagnesemia can be associated with long-term use.
Topiramate	March	Increased risk of development of cleft lip and/or cleft palate (oral clefts) in infants of women treated with topiramate during pregnancy.
Rosiglitazone	April	Associated with the risk of cardiovascular events (including heart attack and stroke).
Angiotensin Receptor Blockers	June	Use of ARBs may be associated with a small increased risk of cancer. FDA will provide the information as the review is completed.
Varenicline	June	Increased risk of certain cardiovascular adverse events in patients who have cardiovascular disease.
Epoetin alfa	June	In patients with chronic kidney disease, it increases the risk of serious cardiovascular events such as heart attack or stroke.
Valproate Product	June	Risk of impaired cognitive development in children exposed to valproate products In-Utero (during pregnancy).
Simvastatin	June	Use of the highest approved dose of simvastatin (80 mg) should be limited because of increased risk of myopathy.
Oral Bisphosphonates	July	Use of oral bisphosphonate drugs is associated with an increased risk of cancer of the esophagus. FDA will provide the update when more information is available.
Citalopram	August	Abnormal heart rhythms are associated with high doses.
Fluconazole	August	Use of long-term, high dose fluconazole during pregnancy (first trimester) may be associated with birth defects in infants.
Zoledronic acid	September	It is contraindicated in patients with creatinine clearance less than 35 ml/min or in patients with evidence of acute renal impairment.
Ondansetron	September	Ondansetron may increase the risk of abnormal heart rhythm, including torsade de pointes.
Methylene Blue	October	Serious CNS reactions are reported when it is given with psychiatric medications that interfere the serotonin system of the brain.
Linezolid	October	Serious CNS reactions are reported when it is given with psychiatric medications that interfere the serotonin system of the brain.
SSRIs'	December	Has potential risk of persistent pulmonary hypertension of the newborn when used during pregnancy.

Source: www.fda.gov