醫院藥師在
MICROMEDEX®資料庫的使用

王 瑩 玉 藥師

2012年 7月13日

藥師的處境: Solution

- 時間有限、情況緊急: Quickly
- 醫學進步太快: Current
- 醫療資訊太多: Effectively
- 病人的期望: Best
- 在執行醫院藥師服務時，缺乏Time勝於缺乏Skill

ASIAWORLD

“Microfiche Medical Index”

於1974成立於丹佛

Micromedex

- Electronic Tertiary resource – comprehensive, easy-to-read, extensively referenced
- DI分成兩部分
  - DRUGDEX
    - 收集一級文獻及專家評論整理出evidence-based, detailed DI
  - DrugPoints 正式名為United States Pharmacopeia Dispensing Information volume I
    - Summary information on dosing, drug interactions, adverse effects, pregnancy warnings, indications, cautions, therapeutic classes, brand information

Micromedex

- Therapeutic indications – graded evidence rating (A, B, C) with usage recommendations (class I, IIa, IIb, III)
- Drug interaction application through iTunes – 50 medications from a patient profile simulataneously and search for interaction
- Researching ADRs – use the standard tertiary references (e.g. Micromedex, Lexicomp, Facts & Comparisons, Clinical Pharmacology)

PSAP-VII Drug information resources and Literature retrieval p46, 54

Features of Micromedex

Drug Identification Solid forms: color, shape, imprint, scoring; image available	Comprehensive, 23,000 U.S. & foreign drugs 無印碼“按一下此處按以下條件搜尋”
Drug interactions	Drug-drug, duplication, allergy, drug-food, ethanol, laboratory, tobacco, pregnancy, lactation
IV compatibility (more detail)	Trissel’s 2
Laboratory information	Individual laboratory value monographs
Patient counseling materials CareNotes	Drug, disease, & procedural 英語、西班牙語、另有13種語言
Inert ingredients (相關文件)	Through Tox & Drug Product lookup
Teratogenicity information	Through REPRORISK
Breastfeeding information	Through REPRORISK

PSAP-VII Drug information resources and Literature retrieval p46-47

Features of Micromedex

Investigational drug monographs	Yes, readily referenced
CAM (Complementary and alternative medicine) information	Yes; AltMedDex
FDA recalls	No
Drug shortages	No
MSDS (material safety data sheets)	Yes
Referencing	Extensive
Available platforms	Web-based, PDA
Cost Subscriptions available to educational institutions free or at a nominal charge	Subscription required. Various package prices available

PSAP-VII Drug information resources and Literature retrieval p46-47

Micromedex – Electronic Tertiary Resources

- Content
  - POISONDEX
  - IDENTIDEX
  - Emergindex
  - DRUG-REAX
  - Trissel's 2
  - Martindale-The Complete Drug Reference
  - Care Notes (formerly USP-DI vol. 2, Advice for the pt)
  - REPRORISK
  - Material Safety Data Sheets (MSDS)
  - Laboratory Advisor
  - NeoFax
  - Index Nominum (international drug directory, **ATC**)

藥事委員會 – 新藥評估


可用途徑
oral
Fidaxomicin
Fidaxomicin
Oral
360° 檢視儀錶板 | 跳轉到 14 其他搜尋結果
MICROMEDEX 藥物綜述資訊
Adult Dosing
Pediatric Dosing
Dose Adjustments
FDA-Labeled Indications
Contraindications
Precautions
Pregnancy Category
Breast Feeding
Drug Interactions (single)
Adverse Effects - Common
Adverse Effects - Serious
US Trade Names
Class
Regulatory Status
Generic Availability
Mechanism of Action/Pharmacokinetics
Administration/Monitoring
How Supplied
Toxicology - Clinical Effects
Toxicology - Treatment
Toxicology - Range of Toxicity
Clinical Teaching
References
檢視綜述文件
檢視詳細文件
PRODUCT LOOKUP
Tox & Drug: Fidaxomicin
Martindale: Fidaxomicin
DRUG CONSULTS (1 結果)
NEW DRUG APPROVALS - 2011 MICROMEDEX NEWS
COMPARATIVE EFFICACY (1 結果)
Vancomycin Hydrochloride
MARTINDALE - 其他資訊 (1 結果)
Antibacterials
其他資訊
MARTINDALE
Fidaxomicin
PDR®
Dificid Tablets
消費者藥物資訊
FIDAXOMICIN (Oral route) - fye-dax-oh-MYE-sin
P&T QUIK 報告
Fidaxomicin Tablets (Sep 2011)
廠商資訊
衛教單
可找到核准的主要臨床試驗

FDA新藥、藥品比較、Martindale

NEW DRUG APPROVALS - 2011 MICROMEDEX NEWS

藥物諮詢

FIDAXOMICIN

FDA Approval Date: 05-27-2011

-DIFICID(TM) (Optimer) is macrolide antibiotic.

-DOSING INFORMATION: The recommended dose for the treatment of Clostridium difficile-associated diarrhea is 200 mg orally twice daily w
10 days.

-PHARMACOKINETICS: Fidaxomicin is minimally absorbed and is primarily transformed by hydrolysis to the active metabolite, OP-1118. Fi
CYP450 substrate. Fidaxomicin is predominately excreted in the feces, with a half-life of approximately 11 hours for fidaxomicin and OP-1118

-CAUTIONS: The most common adverse events are nausea, vomiting, abdominal pain, gastrointestinal hemorrhage, anemia, and neutropenia
only be used to treat infections that are proven or strongly suspected to be caused by Clostridium difficile.

-FDA APPROVED INDICATIONS: Fidaxomicin is indicated in adults for the treatment of Clostridium difficile-associated diarrhea.

New drug approval
2011.06.27

Pediatric Dosage
PHARMACOKINETICS
Drug Concentration Levels
ADME
CAUTIONS
Contraindications
Precautions
Adverse Reactions
Teratogenicity/Effects in Pregnancy/Breastfeeding
CLINICAL APPLICATIONS
Monitoring Parameters
Patient Instructions
Place In Therapy
Mechanism of Action / Pharmacology
Therapeutic Uses
Comparative Efficacy / Evaluation With Other Therapies
REFERENCES

Vancomycin Hydrochloride

Clostridium difficile infection

a) In a prospective, multicenter, double-blind, randomized, parallel-group trial (n=629), fidaxomicin was noninferior to vancomycin in effecting clinical cure and superior in decreasing rates of recurrence of acute symptoms of Clostridium difficile infection. Patients aged 16 years or older with confirmed C difficile infection (more than 3 unformed bowel movements in the previous 24 hours and with stool specimens positive for C difficile toxins A and/or B) were randomized to receive a 10-day course of either oral vancomycin 125 mg four times daily (n=327) or oral fidaxomicin 200 mg twice daily with intervening placebo for the other two doses (n=302). The primary efficacy end point was the rate of clinical cure (3 or fewer unformed stools over 2 consecutive days or marked reduction in unformed stools with continuing abdominal discomfort as evaluated by investigators) in the modified intention-to-treat group (mITT; all randomized patients with documented C difficile infection who received at least 1 study dose) and the per-protocol group (mITT patients who received at least 3 days (in case of failure) or 8 days (in case of clinical cure) of treatment and had documented protocol adherence and end-of-treatment evaluation); noninferiority was established if the lower limit of the one-sided 97.5% confidence interval (CI) for the treatment difference was greater than -10%. In the per-protocol analysis, clinical cure rates were 92.1% (n=244/265) in the fidaxomicin group and 89.8% (n=254/283) in the vancomycin group (lower limit of 97.5% CI for difference, -2.6%); clinical cure rates in the modified intention-to-treat analysis were 88.2% (n=253/287) and 85.8% (n=265/309), respectively (lower limit of 97.5% CI for difference, -3.1%). Among secondary endpoints, there was a significantly lower rate of recurrence during 4 weeks following therapy with fidaxomicin compared with vancomycin in both the modified intention-to-treat analysis (15.4% vs 25.3%; 95% CI, -16.6% to -2.9%; p=0.005) and the per-protocol analysis (13.3% vs 24%; 95% CI, -17.9% to -3.3%; p=0.004). There was no significant difference between fidaxomicin and vancomycin in the rate of recurrence in patients infected with the hypervirulent NAP1/B1/027 C difficile strain. For non-NAP1/B1/027 strains, there was a 69% relative reduction in risk of recurrence favoring fidaxomicin. There were no significant differences between fidaxomicin and vancomycin with regard to the rates of adverse events [2].

b) Fidaxomicin was noninferior to vancomycin in achieving clinical cure of Clostridium difficile infection in a multicenter, prospective, randomized, double-blind, double-dummy trial (n=509). Eligible patients were aged 16 years and older with acute C difficile infection (defined as 3 or more unformed bowel movements (UBM) in the previous 24 hours, and presence of C difficile toxin A or B in the stool within 48 hours of randomization). Although up to 4 doses of vancomycin or metronidazole 24 hours before enrollment were allowed, use was not allowed during the study; however, use concomitant level 2 systemic antibiotics were allowed. Patients were randomized to receive in a double-dummy manner either fidaxomicin 200 mg every 12 hours (n=252; mean age, 64.3 +/- 17.9 years) or vancomycin 125 mg every 6 hours (n=257; mean age, 62.5 +/- 18.4 years) for 10 days. The primary outcome was clinical cure (defined as

DRUGDEX
之藥品比較
且限定適應症

INTRODUCTION

DRUG GROUPS

- Aminoglycosides
- Antimycobacterials
- Cephalosporins and related beta lactams
- Chloramphenicols
- Glycopeptides
- Lincosamides
- Macrolides
- Penicillins
- Quinolones
- Sulfonamides and diaminopyrimidines
- Tetracyclines
- Miscellaneous Antibacterials

CHOICE OF ANTIBACTERIAL

- Abscess, abdominal
- Abscess, brain
- Abscess, liver
- Abscess, lung
- Actinomycosis
- Anaerobic bacterial infections
- Anthrax
- Antibiotic-associated colitis
- Arthritis, bacterial
- Bacillary angiomatosis

Antibacterials

MARTINDALE - The Com

- Drugs
- Azithro
- Cethro
- Clarithromycin, Clarithromycin
- Dirithromycin, Dirithromycin
- Erythromycin, Erythromycin Stearate
- Flurithromycin, Flurithromycin Ethyl Succinate
- Josamycin, Josamycin Propionate
- Kitasamycin, Kitasamycin
- Meleumycin, Meleumycin
- Midecamycin, Midecamycin Acetate
- Oleandomycin, Oleandomycin Phosphate
- Pristinamycin, Pristinamycin
- Quinupristin/Dalfopristin, Quinupristin Mesilate

Antibiotic
Associated colits

Fidaxomicin 藥物比較

- Precautions
- Pregnancy Category
- Breast Feeding
- Class
- Regulatory Status
- Generic Availability
- Mechanism of Action/Pharmacokinetics
- Toxicology - Range of Toxicity
- Clinical Teaching
- References

檢視綜述文件 | 檢視詳細文件

COMPARATIVE EFFICACY (1 結果)

- Vancomycin Hydrochloride

MARTINDALE - 其他資訊 (1 結果)

- Antibacterials

pulvules

其他資訊

MARTINDALE

- Fidaxomicin

PDR®

- Dificid Tablets

消費者藥物資訊

P&T QUIK 報告

- Fidaxomicin Tablets (Sep 2011)

藥物工具

- 步步驗證比較 Fidaxomicin 與...

Fidaxomicin 同時在以下項中找到..

Macrolide

Toxicology and Exposure Information (1)

Reproductive Risk Information (1)

TERIS (1)

- FIDAXOMICIN

Fidaxomicin

檢視 DRUGDEX 中的詳細資訊

Dosing & Indications

Adult Dosing

檢視 DRUGDEX 中的詳細資訊

- Clostridium difficile infection: 200 mg ORALLY twice daily with or without food for 10 days [1]

Vancomycin Hydrochloride

[Vancocin HCl Pulvules]

檢視 DRUGDEX 中的詳細資訊

Dosing & Indications

Adult Dosing

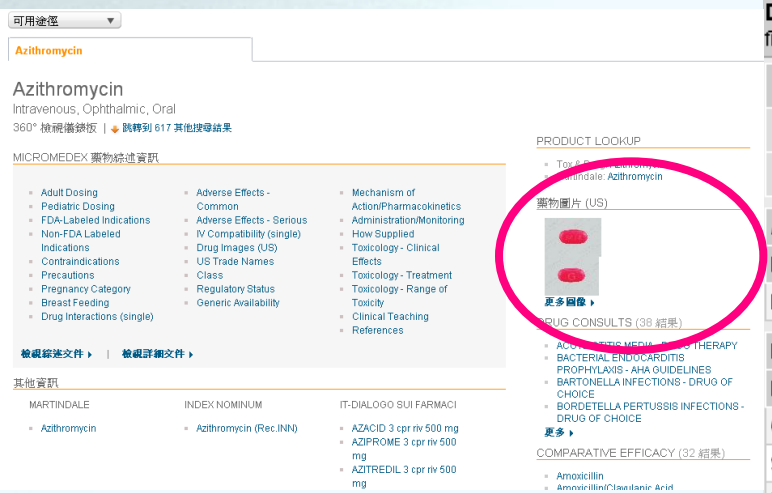
檢視 DRUGDEX 中的詳細資訊

- target serum vancomycin trough concentrations should be above 10 mg/L and should be 15 to 20 mg/L for complicated infections (endocarditis, osteomyelitis, meningitis, and hospital acquired pneumonia) caused by Staphylococcus aureus [2]
- Bacteremia associated with intravascular line: (methicillin-resistant Staphylococcus aureus, ampicillin-resistant Enterococcus faecalis/faecium) 15 mg/kg IV every 12 hours [3]
- Bacterial meningitis: 30 to 45 mg/kg/day IV divided every 8 to 12 hours; should not be used as single agent for treating bacteria meningitis; maintain serum trough concentrations of 15 to 20 mcg/mL (guideline dosing) [4]
- Bacterial meningitis: (MRSA-associated infection) 15 to 20 mg/kg/dose IV every 8 to 12 hours for 2 weeks for meningitis and 4 to 6 weeks for brain abscess, subdural empyema, spinal

無法指定劑型做直接比較

Fidaxomicin

非所有錠劑藥品都有藥品鑑定 image



由PDR
Package Principal
Display panel

DIFICID
fidaxomicin tablet, film coated

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	NDC Product Code (Source)	52015-080
Route of Administration	Oral	DEA Schedule	

Active Ingredient/Active Moiety		
Ingredient Name	Basis of Strength	Strength
FIDAXOMICIN (FIDAXOMICIN)	FIDAXOMICIN	200 mg

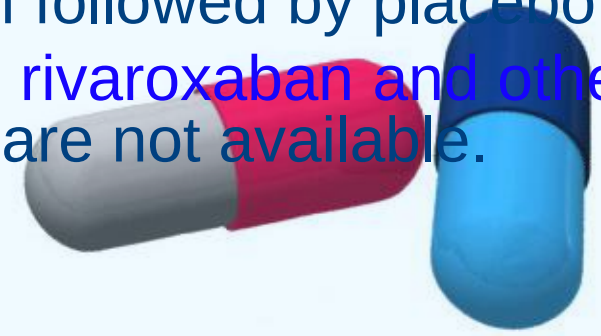
Inactive Ingredients	
Ingredient Name	Strength
CELLULOSE, MICROCRYSTALLINE	
STARCH, CORN	
HYDROXYPROPYL CELLULOSE	
BUTYLATED HYDROXYTOLUENE	
SODIUM STARCH GLYCOLATE TYPE A POTATO	
MAGNESIUM STEARATE	
POLYVINYL ALCOHOL	
TITANIUM DIOXIDE	
TALC	
POLYETHYLENE GLYCOL	
LECITHIN, SOYBEAN	

Product Characteristics			
Color	White (white to off-white)	Score	no score
Shape	Capsule (oblong)	Size	14mm
Flavor		Imprint Code	
Contains			

Packaging

Rivaroxaban P&T Quik

- Rivaroxaban is effective for the prophylaxis of DVT in patients undergoing elective TKR surgery
- The approval of rivaroxaban was primarily based upon 3 randomized, double-blind, comparative clinical trials involving over 9000 patients undergoing elective THR or TKR surgery (The Regulation of Coagulation in Major Orthopedic Surgery Reducing the Risk of DVT and PE or RECORD trials 1, 2, and 3).
- Results indicated treatment with rivaroxaban resulted in significantly greater efficacy, both in head-to-head comparison with enoxaparin and when comparing extended-duration (5 weeks) rivaroxaban with short-duration (2 weeks) enoxaparin followed by placebo.
- Clinical comparisons between rivaroxaban and other direct oral factor Xa inhibitors are not available.



eMC SmPC UK

summary of product characteristic UK drug information

double-blind phase III clinical studies, the RECORD-programme.

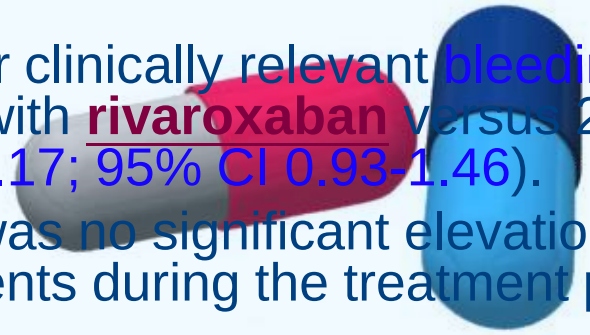
- Rivaroxaban 10 mg once daily (od) started no sooner than 6 hours post-operatively was compared with enoxaparin 40 mg once daily started 12 hours pre-operatively.
- In all three phase III studies (see table 2), rivaroxaban significantly reduced the rate of total VTE (any venographically detected or symptomatic DVT, non fatal PE and death) and major VTE (proximal DVT, non fatal PE and VTE-related death), the pre-specified primary and major secondary efficacy endpoints. Furthermore, in all three studies the rate of symptomatic VTE (symptomatic DVT, non-fatal PE, VTE-related death) was lower in rivaroxaban treated patients compared to patients treated with enoxaparin.
- The main safety endpoint, major bleeding, showed comparable rates for patients treated with rivaroxaban 10 mg compared to enoxaparin 40 mg.

Table 2: Efficacy and safety results from phase III clinical studies

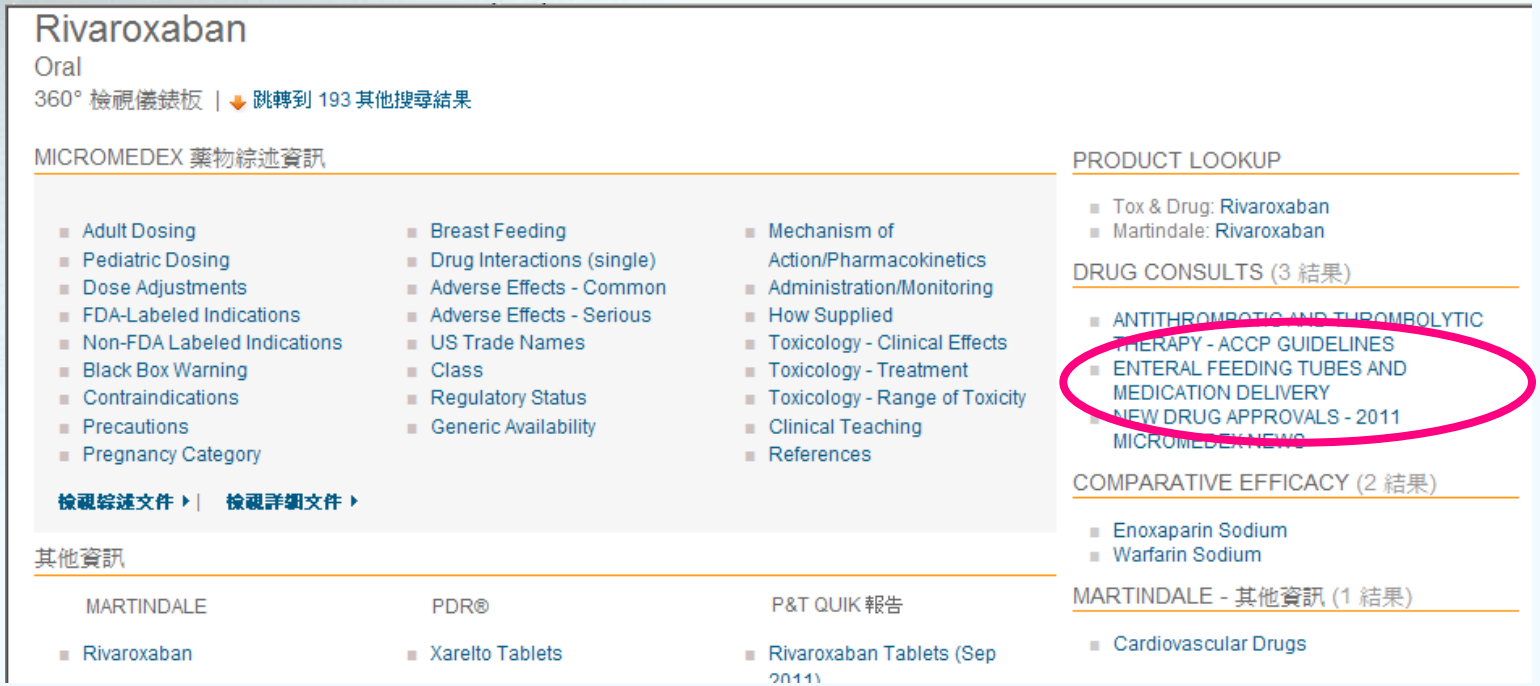
	RECORD 1			RECORD 2		
Study Population	4,541 patients undergoing total hip replacement surgery			2,509 patients undergoing total hip replacement surgery		
Treatment dose and duration after surgery	Rivaroxaban10 mg od35 ± 4 days	Enoxaparin40 mg od35 ± 4 days	p	Rivaroxaban10 mg od35 ± 4 days	Enoxaparin40 mg od12 ± 2 days	p
Total VTE	18 (1.1 %)	58 (3.7 %)	< 0.001	17 (2.0 %)	81 (9.3 %)	< 0.001
Major VTE	4 (0.2 %)	33 (2.0 %)	< 0.001	6 (0.6 %)	49 (5.1 %)	< 0.001
Symptomatic VTE	6 (0.4 %)	11 (0.7 %)		3 (0.4 %)	15 (1.7 %)	
Major bleedings	6 (0.3 %)	2 (0.1 %)		1 (0.1 %)	1 (0.1 %)	

Micromedex va UpToDate

- Sep. 2011 (RECORD3, 4 - May 23 2012)
- In RECORD 3, significantly less occurrence of the primary outcome compared with enoxaparin-treated patients (n=878) of 9.6% versus (vs) 18.9%; (wARR), 9.2%; (95% CI, 5.9 to 12.4; p < 0.001). In RECORD 4, weighted ARR with rivaroxaban was 2.71% (95% CI, 0.17% to 5.25%; p < 0.0001).
- 5.15 2012
- A pooled analysis of four phase III studies was performed comparing **rivaroxaban** 10 mg/day with **enoxaparin** (either 40 mg/day or 30 mg twice per day) for thromboprophylaxis after total hip or knee replacement surgery
- Compared with **enoxaparin**, thromboprophylaxis with **rivaroxaban** was associated with significantly fewer symptomatic VTE events and all-cause mortality (odds ratio 0.48; 95% CI 0.30-0.76) during the treatment period.
- The composite of major and non-major clinically relevant bleeding during the treatment period was 2.8 percent with **rivaroxaban** versus 2.5 percent with **enoxaparin** (odds ratio 1.17; 95% CI 0.93-1.46).
- In all studies with **rivaroxaban** there was no significant elevation of liver enzymes or increase in thrombotic events during the treatment period.



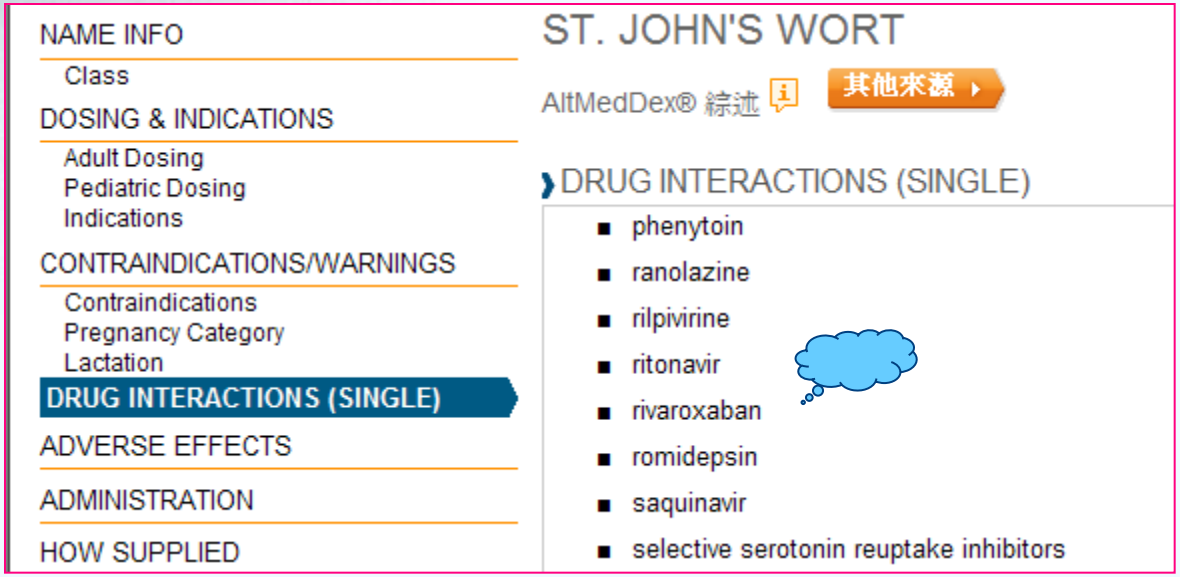
Rivaroxaban



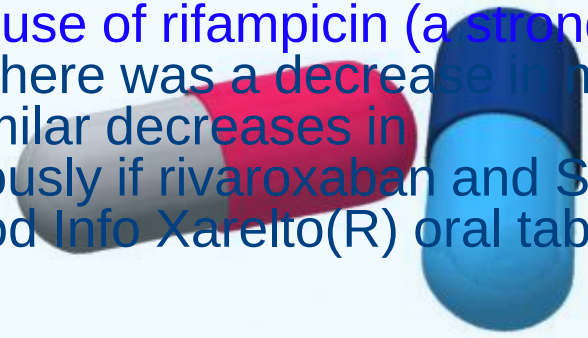
- Adequate absorption of rivaroxaban is dependent on drug passage through the stomach instead of the small intestine. Verify gastric placement of the feeding tube prior to administration of the crushed tablet

ND, NJ, Jtube, NCJ 影響吸收的交互作用

Alternative Medicine



- Summary: Concomitant use of rivaroxaban and St. John's Wort may result in induction of CYP3A4-mediated metabolism of rivaroxaban and reduced rivaroxaban plasma concentrations, with a subsequent decrease in pharmacodynamic effect. Although formal drug interaction studies have not been done with St. John's Wort, in drug interaction studies with concomitant use of rifampicin (a strong CYP3A4 inducer) and rivaroxaban, there was a decrease in mean AUC of rivaroxaban, which led to similar decreases in pharmacodynamic effect. Use cautiously if rivaroxaban and St. John's Wort are coadministered (Prod Info Xarelto(R) oral tablets, 2011).



藥事委員會 – 藥物治療規範

ANTITHROMBOTIC AND THROMBOLYTIC THERAPY - ACCP GUIDELINES

9th Ed 2012

讀板 | 跳轉到 1349 其他搜尋結果

EX 藥物綜述資訊

- osing
- c Dosing
- djustments
- beled Indications
- A Labeled
- ons
- ox Warning
- Confuse
- ndications
- ons
- Pregnancy Category
- Breast Feeding
- Drug Interactions (single)
- Adverse Effects - Serious
- IV Compatibility (single)
- Drug Images (US)
- US Trade Names
- Class
- Regulatory Status
- Generic Availability
- Mechanism of Action/Pharmacokinetics
- Administration/Monitoring
- How Supplied
- Toxicology - Clinical Effects
- Toxicology - Treatment
- Toxicology - Range of Toxicity
- Clinical Teaching
- References

件 ▸ | 檢視詳細文件 ▸

LE

C (UK)

- 0.5mg Tablets
- 1mg Tablets
- 3mg Tablets
- 5mg tablets

INDEX NOMINUM

- Warfarin (Rec.INN)

PDR®

- Coumadin for Injection

IT-DIALOGO SUI FARMACI

- COUMADIN 30 cpr 5 mg

消費者藥物資訊

- WARFARIN (Intravenous route) - WAR-far-in
- WARFARIN (Oral route) - WAR-far-in

PRODUCT LOOKUP

- Tox & Drug: Warfarin Sodium
- Martindale: Warfarin Sodium

藥物圖片 (US)

更多圖像 ▸

DRUG CONSULTS (9 結果)

- ANTITHROMBOTIC AND THROMBOLYT THERAPY - ACCP GUIDELINES
- ANTITHROMBOTIC AND THROMBOLYT THERAPY IN CHILDREN AND NEONAT ACCP GU...
- ANTITHROMBOTIC PROPHYLAXIS AND TREATMENT IN PREGNANT OR LACTATING WOMEN - ...
- ATRIAL FIBRILLATION - DRUG TREATMENT GUIDELINES

更多 ▸

COMPARATIVE EFFICACY (18 結果)

- Acenocoumarol
- Ancrod
- Apixaban

藥事委員會 – 藥物治療規範

PHARMACOLOGIC TREATMENT OF COPD BASED ON DISEASE SEVERITY

All patients with COPD should receive a short-acting inhaled bronchodilator to be used on an as-needed basis; additionally, an active reduction in patient risk factors and influenza vaccination are also recommended in all patients. As COPD severity progresses and additional symptom control is required, the as-needed short-acting and long-acting bronchodilator treatments may become part of a regular treatment regimen (Stage II to Stage IV). Once the regular treatment regimen consists of a short-acting and a long-acting bronchodilator (beta-2 agonist or anticholinergic), an additional short-acting bronchodilator as needed may be beneficial [1].

The following table lists the treatme

Stage of Disease S	
I (Mild)	FEV1/FVC less t greater than or at predicted
II (Moderate)	FEV1/FVC less t greater than or at than 80% predict
III (Severe)	FEV1/FVC less t greater than or at than 50% predict
IV (Very Severe)	FEV1/FVC less t less than 30% pr FEV1 less than 5 plus chronic respiratory failure
*Treatment is additive	
KEY: FEV1 = forced expiratory volume in 1 second; FVC = force	

參考：

1. Global Initiative for Chronic Obstructive Lung Disease: Global Strategy for the diagnosis, management and prevention of chronic obstructive pulmonary disease. US Health Network, Lawrenceville, NJ. 2009. Available from URL: http://us-health-... . As accessed 2010-05-04.

Indacaterol - LABA

GLOBAL INITIATIVE FOR CHRONIC OBSTRUCTIVE LUNG DISEASE™

GLOBAL STRATEGY FOR THE DIAGNOSIS, MANAGEMENT, AND PREVENTION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE
REVISED 2011

藥事委員會 – ADR小組報告

Ondansetron (Zofran) IV: Drug Safety Communication - QT prolongation

Safety alert from FDA

[Posted 06/29/2012]

AUDIENCE: Oncology, Surgery, Gastroenterology

ISSUE: The U.S. Food and Drug Administration (FDA) is informing healthcare professionals and the public that preliminary results from a recently completed clinical study suggest that a 32 mg single intravenous dose of ondansetron (Zofran, ondansetron hydrochloride, and generics) may affect the electrical activity of the heart (QT interval prolongation), which could pre-dispose patients to develop an abnormal and potentially fatal heart rhythm known as Torsades de Pointes.

GlaxoSmithKline (GSK) has announced changes to the Zofran drug label to remove the 32 mg single intravenous dose. The updated label will state that ondansetron can continue to be used in adults and children with chemotherapy-induced nausea and vomiting at the lower intravenous dose recommended in the drug label, a dose of 0.15 mg/kg administered every 4 hours for three doses; however, no single intravenous dose should exceed 16 mg. Information from the new clinical study will be included in the updated drug label.

BACKGROUND: Zofran (ondansetron) is in a class of medications called 5-HT3 receptor antagonists. It is used to prevent nausea and vomiting caused by cancer chemotherapy, radiation therapy and surgery. FDA will evaluate the final study results when available, and will work with GSK to explore an alternative single dose regimen that is both safe and effective for the prevention of chemotherapy-induced nausea and vomiting in adults.

RECOMMENDATION: The new information on QT prolongation does not change any of the recommended oral dosing regimens for ondansetron. It also does not change the recommended lower dose intravenous dosing of ondansetron to prevent post-operative nausea and vomiting.

- The use of a single 32 mg intravenous dose of ondansetron should be avoided. New information indicates that QT prolongation occurs in a dose-dependent manner, and specifically at a single intravenous dose of 32 mg.
- Patients who may be at particular risk for QT prolongation with ondansentron are those with congenital long QT syndrome, congestive heart failure, bradyarrhythmias, or patients taking concomitant medications that prolong the QT interval
- Electrolyte abnormalities (e.g., hypokalemia or hypomagnesemia) should be corrected prior to the infusion of ondansetron.
- The lower dose intravenous regimen of 0.15 mg/kg every 4 hours for three doses may be used in adults with chemotherapy-induced nausea and vomiting. However, no single intravenous dose of ondansetron

OVERVIEW

DOSING INFORMATION
- Drug Properties
- Storage and Stability
- Adult Dosage
- Pediatric Dosage

PHARMACOKINETICS
- Drug Concentration Levels
- ADME

CAUTIONS
- Contraindications
- Precautions
- Adverse Reactions
- Teratogenicity/Effects in Pregnancy/Breastfeeding
- Drug Interactions

CLINICAL APPLICATIONS
- Monitoring Parameters
- Patient Instructions
- Place In Therapy
- Mechanism of Action / Pharmacology
- Therapeutic Uses
- Comparative Efficacy / Evaluation With Other Therapies

REFERENCES

ONDANSETRON

DRUGDEX® 評價 | 其他來源

CAUTIONS

全部展開 | 全部折疊

Cardiovascular Effects

Ondansetron Hydrochloride

Atrial fibrillation
Cardiac dysrhythmia
Electrocardiogram abnormal
Prolonged QT interval
Second degree atrioventricular block
ST segment depression
Tachycardia
Torsades de pointes

Atrial fibrillation

a) Atrial fibrillation to 130 beats per minute occurred within 15 minutes after the second 4-mg intravenous dose of ondansetron administered within 35 minutes of each other to control postoperative nausea in a 47-year-old woman. A 12-lead EKG showed no ST-segment changes; QTc was 419 msec and QRS was 88 msec. Esmolol and metoprolol was without effect. With intravenous procainamide, sinus rhythm was restored after 12 hours [144].

Cardiac dysrhythmia

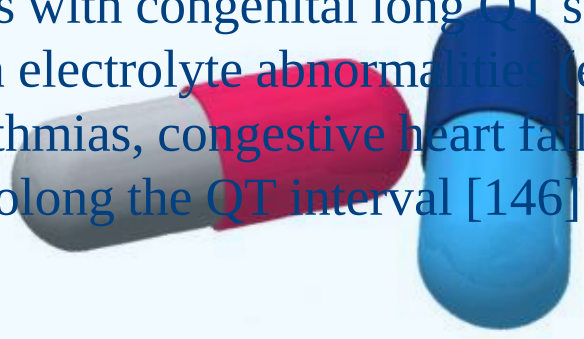
a) Arrhythmias, including ventricular fibrillation, ventricular tachycardia, torsade de pointes, atrial fibrillation, supraventricular tachycardia, and premature ventricular

c) Ondansetron (32 mg IV) has been shown to slightly, but significantly (p less than 0.05), increase the QTc (corrected) interval and decrease the heart rate in healthy volunteers. These electrocardiographic changes were clinically insignificant. Additional studies are warranted to evaluate the electrocardiographic effects of ondansetron in cancer patients [149][150].

June 29 2012

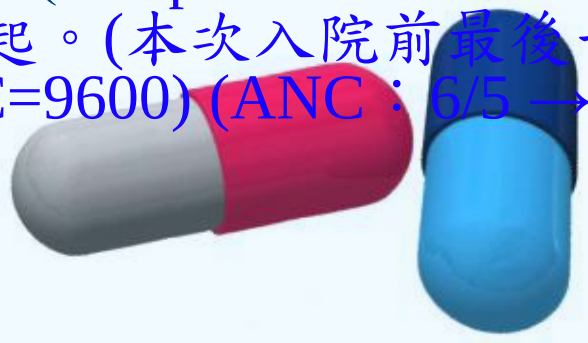
Dolasetron oral

a) Rare cases of transient ECG changes, including QT prolongation, predominantly with the intravenous form, have been reported with ondansetron [146][147][148].
b) Ondansetron should not be used in patients with congenital long QT syndrome. Monitoring is recommended for patients with electrolyte abnormalities (eg, hypokalemia, hypomagnesemia), bradyarrhythmias, congestive heart failure, and for those taking concomitant medications that prolong the QT interval [146][147][148].



ADR案例

- 44歲男性，有精神分裂症與癲癇的病史，在本院日間照護中心治療。自2011年12月起其精神科用藥由Risperidone調整為以下：
- Paliperidone(3mg) 2# bid、Trihexyphenidyl(2mg) 1# bid、Propranolol(10mg) 1# tid
- 2012年5月3日起增加Haloperidol口服併肌肉注射給予：
- Haloperidol(5mg) 0.5# qd pm + Haloperidol decanoate (50mg) 1amp IM on 5/9、5/23)。
- 2012年6月5日病人因progressive severe pneumonia with ARDS, agranulocytosis and septic shock入住MICU，-----血液中白血球變化WBC/ANC: 2100/630(6/5) --> 100/10(6/6) --> 1300/286(6/7)，懷疑其agranulocytosis可能為藥物（Paliperidone or Haloperidol or Propranolol）或嚴重敗血症引起。(本次入院前最後一次監測之白血球數值為2011/2/3, WBC=9600) (ANC：6/5 → 6/6 →6/7：630 →10 →286)



搜尋一：藥物比較 - 兩兩搜尋

DrugPoints, DRUGDEX

在欄中顯示 1: Haloperidol Decanoate

在欄中顯示 2: Propranolol HCl

更新

跳轉到： 頁首 | Dosing & Indications | Black Box Warning | Contraindications/Warnings | Drug Interactions (single) | Adverse Effects | Name Info | Mechanism of Action/Pharmacokinetics | Administration/Monitoring | How Supplied | Toxicology | Clinical Teaching | References

Adverse Effects

檢視 DRUGDEX 中的詳細資訊

Common

- **Cardiovascular:** Hypotension
- **Gastrointestinal:** Constipation, Xerostomia
- **Neurologic:** Akathisia, Dystonia, Extrapyramidal disease (frequently), Parkinsonism, Somnolence
- **Ophthalmic:** Blurred vision

Serious

- **Cardiovascular:** Prolonged QT interval, Torsades de pointes
- **Hematologic:** Agranulocytosis (rare)
- **Neurologic:** Seizure, Tardive dyskinesia
- **Reproductive:** Priapism
- **Respiratory:** Pulmonary embolism
- **Other:** Neuroleptic malignant syndrome (rare.)

Adverse Effects

檢視 DRUGDEX 中的詳細資訊

Common

- **Dermatologic:** Dermatitis, Pruritus, Urticaria
- **Neurologic:** Dizziness (4% to 7%)
- **Other:** Fatigue (5% to 7%)

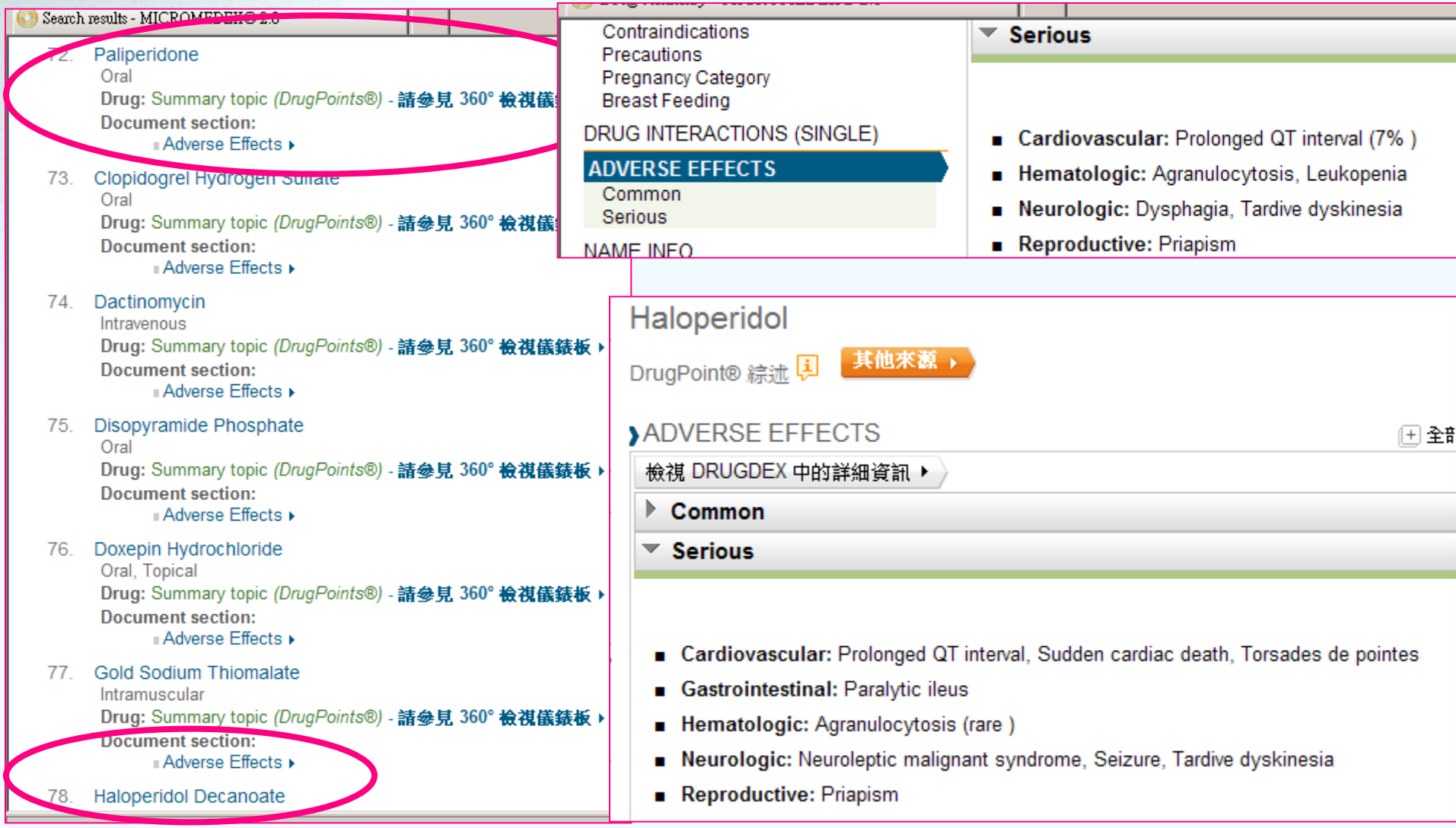
Serious

- **Cardiovascular:** Congestive heart failure, Heart block
- **Dermatologic:** Erythema multiforme, Stevens-Johnson syndrome, Toxic epidermal necrolysis
- **Immunologic:** Anaphylaxis
- **Respiratory:** Asthma, Bronchospasm
- **Other:** Withdrawal sign or symptom

Cause of agranulocytosis
DrugPoint

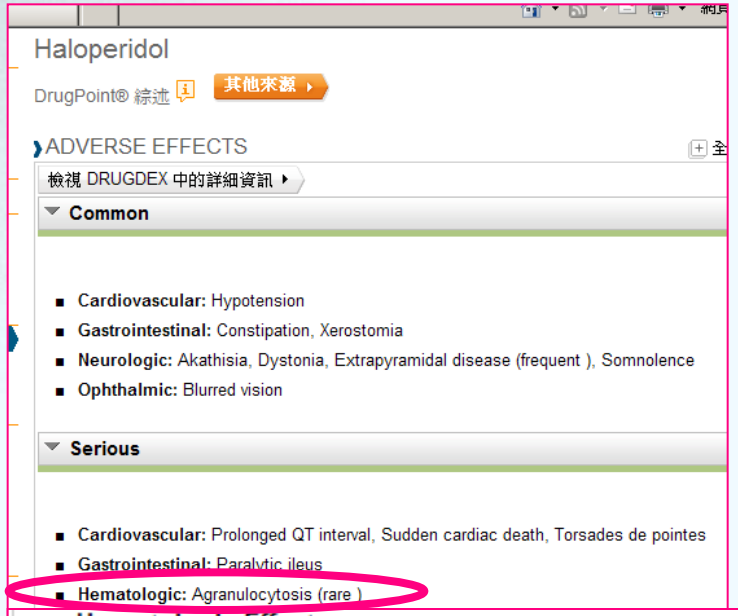
搜尋二

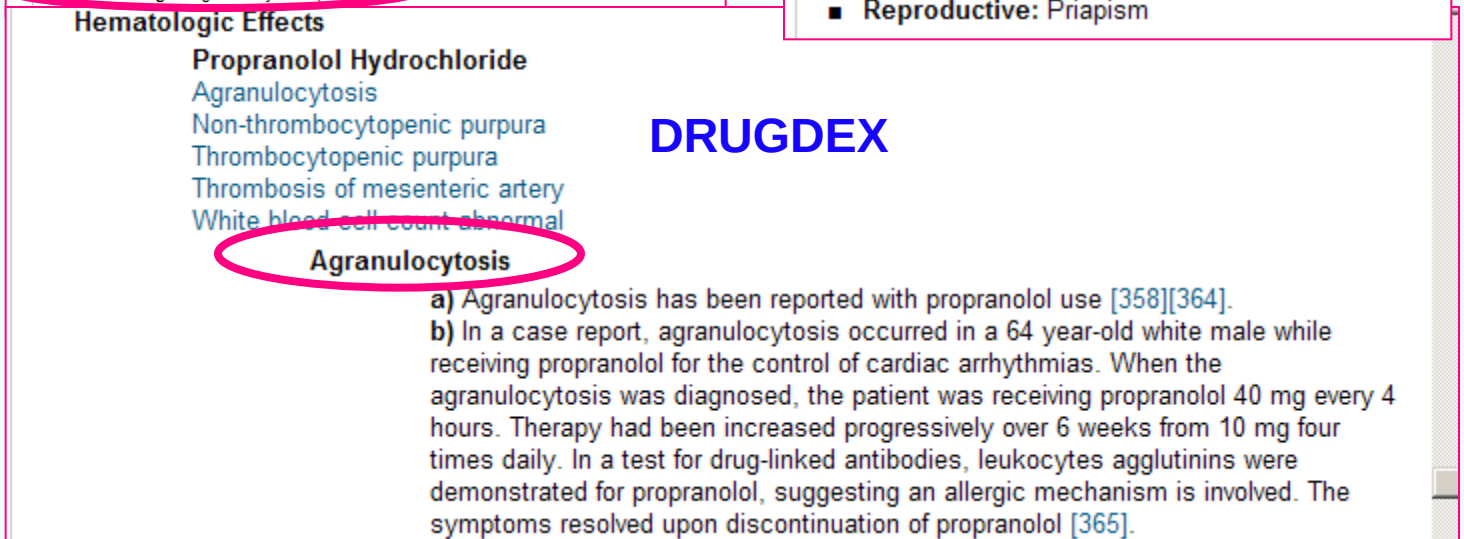
- Agranulocytosis – Clinical Points from DISEASEDEX



搜尋三 agranulocytosis

- **Drug information / 由以下導致**





DRUGDEX

缺藥處理 6-mercaptopurine

DRUGDEX

Dosage
atric Dosage
MACOKINETICS
t and Duration
Concentration Levels
E
ONS
raindications
autions
rse Reactions
togenicity/Effects in
nancy/Breastfeeding
Interactions
CAL APPLICATIONS
toring Parameters

CLINICAL APPLICATIONS

全部展開 | 全部折疊

Therapeutic Uses

Acute lymphoid leukemia, As induction and maintenance therapy
Acute myeloid leukemia
Autoimmune hepatitis
Chronic myeloid leukemia
Crohn's disease
Hypereosinophilic syndrome
Inflammatory bowel disease
Non-Hodgkin's lymphoma
Ulcerative colitis

6-thioguanine was as effective as 6-mercaptopurine in the continuing treatment of childhood lymphoblastic leukemia; however, 6-thioguanine was associated with increased risk of the development of acute hepatitis with veno-occlusive disease

Acute lymphoid leukemia, As induction and maintenance therapy

atric Dosage
MACOKINETICS
t and Duration
Concentration Levels
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Interactions
CAL APPLICATIONS
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hanism of Action / Pharmacology
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parative Efficacy / Evaluation With
r Therapies

Comparative Efficacy / Evaluation With Other Therapies

Treatment for acute lymphoblastic leukemia

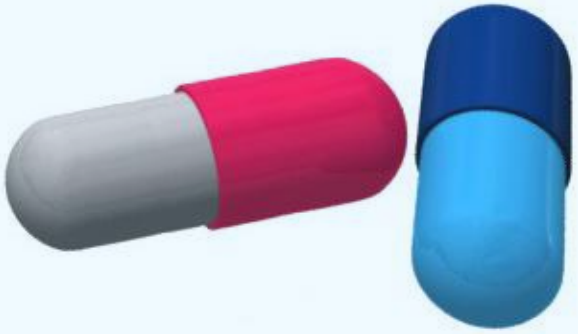
Thioguanine

Common acute lymphoblastic leukemia, Childhood

a) Therapy with 6-thioguanine was as effective as 6-mercaptopurine in the continuing treatment of childhood lymphoblastic leukemia; however, 6-thioguanine was associated with increased risk of the development of acute hepatitis with veno-occlusive disease. A multicenter, randomized, intention-to-treat study (ALL97) was performed on children aged 1 to 18 years with lymphoblastic leukemia to compare the efficacy and toxicity of 6-mercaptopurine and 6-thioguanine. Patients were randomized to 6-mercaptopurine 75 milligrams/square meter (mg/m (2)) once daily (n=744) or 6-thioguanine 40 mg/m(2) once daily (n=748) during interim maintenance and continuing therapy with a median follow-up duration of 6 years. During intensification courses, all patients received 6-thioguanine. Primary outcomes were event-free survival (defined as time to relapse or death) and overall survival. Secondary outcomes were death in remission, isolated CNS relapse, any CNS relapse and non-CNS relapse. At 5 years, no difference was seen between the groups for total event-free survival (6-mercaptopurine 81% vs 6-thioguanine 80%) or overall survival (6-mercaptopurine 90% vs 6-thioguanine 88%);

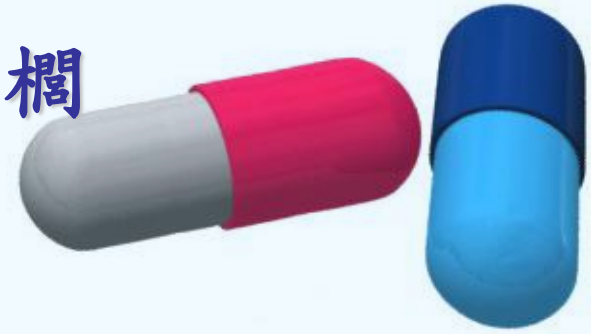
用藥諮詢－保健品

- 李先生是一位62 歲的已婚男士，育有一男一女，最近醫師告訴他有攝護腺肥大。
- 醫師處方 finasteride (proscar*) 5mg/day 建議至少給3－6個月 就能改善尿流量 急尿及排尿困難。
- 朋友介紹他吃保健食品proseren，請問藥師的意見。
- Q:保健品 Proseren的BPH症狀改善的情形?



Saw Palmetto (Sabal) (*Serenoa repens; Serenoa serrulata*). Saw palmetto extract is a popular remedy for enlarged prostate (benign prostatic hypertrophy—BPH)

鋸棕櫚



Proseren, Saw palmetto

3 替代藥物 找到以下項的結果： "Proseren Saw Palmetto"

顯示： 全部 (6) | 藥物 (1) | 毒理學 (2) | 替代藥物 (3)

頁面 1: 以下項的結果： 1-3

1. SAW PALMETTO
   Alternative Medicine: Summary topic *(AltMedDex Points®)* - **請參見 360° 檢視儀錶板**
   1 to 2 g daily **saw palmetto** berry or 320 mg daily lipophilic extract Indications Indications benign...
   Document section:
   Dosing & Indications

2. SAW PALMETTO
   Alternative Medicine: Detailed evidence-based information *(AltMedDex®)*
   0.0 OVERVIEW OVERVIEW A **SAW PALMETTO** : B CLASS: GENITOURINARY AGENT C DOSAGE: 1 IMPORTANT NOTE: Dosing...
   Document section:
   OVERVIEW

3. Saw Palmetto
   Alternative Medicine: International herbal information *(Herbal Medicines)*
   PHARMACEUTICAL COMMENT The chemistry of **saw palmetto** is well-documented. Several pharmacological activities have been described for...

Proseren, Saw palmetto

PLACE IN THERAPY

A) SUMMARY OF SCIENTIFIC EVIDENCE: Numerous controlled clinical trials have documented the effectiveness of saw palmetto in the treatment of benign prostatic hypertrophy (BPH) symptoms such as urine flow, dysuria, nocturia, residual urine, urgency, prostate volume, and subjective complaints. However, conflicting data indicate saw palmetto fruit extract was no more effective than placebo in reducing lower urinary tract symptoms in BPH in a double-blind, multicenter, randomized trial. In comparison studies, saw palmetto and alfuzosin were equally efficacious and a combination of saw palmetto and cyproterone produced a significant decrease in prostate volume. Results were inconclusive when comparing finasteride and saw palmetto, whereas prazosin was slightly more efficacious than saw palmetto.

B) COMMON USES IN COMPLEMENTARY AND ALTERNATIVE MEDICINE: The main clinical use of saw palmetto is for a variety of urinary tract conditions in men including benign prostatic hyperplasia and urinary tract infection. Topical saw palmetto ointment has been used for androgen-induced acne.

C) HISTORICAL USES: Saw palmetto has been historically used as a treatment for prostate enlargement and chronic cystitis as well as a mild diuretic.

D) TOUTED USES: Saw palmetto has been touted as an aphrodisiac, to increase sperm production, and to produce breast enlargement; however, no clinical evidence has been presented.

E) REGULATORY/SAFETY INFORMATION: Saw palmetto is approved by the German Commission E for the treatment of urinary problems of benign prostatic hyperplasia stage I (abnormal frequent urination, nocturia, delayed onset of urination, and weak urinary stream and stage II (urge to urinate and residual urine) (Blumenthal et al, 1998). The American Herbal Products Association rated saw palmetto as class I (can be safely consumed if used appropriately) (McGuffin et al, 1997). Saw palmetto is available as a dietary supplement in the United States under the Dietary Supplement Health and Education Act of 1994 (DSHEA).

See Drug Consult reference:" HERBAL SUPPLEMENTS - SAFETY"
See Drug Consult reference:" GERMAN COMMISSION E - APPROVED HERBS"
See Drug Consult reference:" BOTANICAL SAFETY HANDBOOK TERMS - DEFINITIONS"
See Drug Consult reference:" THE DIETARY SUPPLEMENT HEALTH AND EDUCATION ACT OF 1994"

Proseren, Saw palmetto May 2011

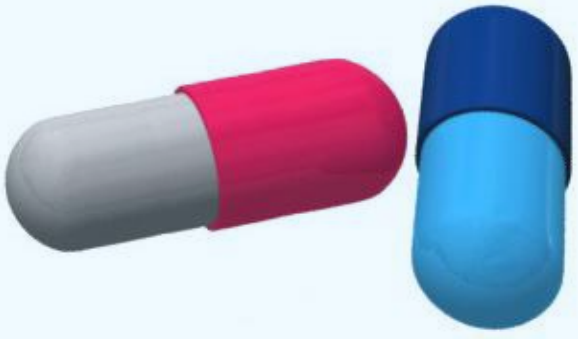
- 許多臨床試驗指出在BPH治療可改善尿流量、排尿困難、夜尿、 餘尿、急尿、攝護腺容積 、主訴的症狀，但並未比安慰劑更有效
- Barry等之試驗指出，在BPH未比安慰劑更能減緩下尿道症狀
- Wilt 等之systematic review 指出可控制下尿道症狀及尿流測量
- German Commission E 核准用於BPH stage I, II
- Am. Herbal Products Association列為class I (適當使用是安全的)
- 美國在 Dietary Supplement Health and Education Act of 1994 (DSHEA) 管理，列為dietary supplement

Saw palmetto – UpToDate 2011.10.14, 2012.05

- German Commission E核准用於輕中度, FDA未核准
- Overall, large high-quality studies have not shown saw palmetto to be effective for the treatment of BPH. We suggest not treating men with saw palmetto for BPH symptoms (**Grade 1A**).
- Saw palmetto appears to be well tolerated; serious side effects appear to be rare.
- Variability in the quality and purity of available products limits the ability of the clinician to provide sound advice to the patient. If patients do choose to take saw palmetto, a product should be chosen that meets specific quality criteria

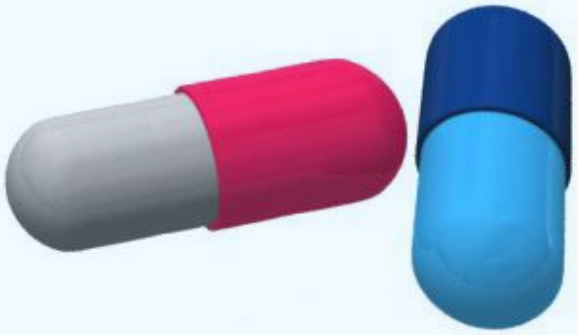
Examples of Saw palmetto products and brands meeting specified quality criteria*

Product name (manufacturer or distributor)
Doctor's Best Saw Palmetto Extract (Doctor's Best)
Solaray® Saw Palmetto Berry Extract (Nutraceutical Corp.)
Standardized Extract Origin® Saw Palmetto (Target Corporation)
Sundown® Standardized Saw Palmetto (Sundown Vitamins)
Vitamin World® Select Herbals Natural Whole Herb Saw Palmetto (Vitamin World, Inc.)
Examples of products passing testing. Full report at www.consumerlabs.com. *** To pass testing, products had to meet all of the following criteria:**
1. A labeled daily dosage that would provide daily dosage of at least 320 mg of saw palmetto berry extract or 1 to 2 grams of saw palmetto berry powder and standardized to include 85 to 95 percenttotal fatty acids and 0.2 percent total sterols.
2. Products must contain 100 to 150 percent of the claimed amounts of total fatty acids and total sterols.
3. Individual fatty acids must be present as follows: caproicacid (0.3 to 0.8 percent), caprylic acid (1.0 to 3.0 percent), capricacid (1.0 to 3.0 percent), lauric acid (25.0 to 32.0 percent), myristicacid (10.0 to 15.0 percent), palmitic acid (7.0 to 11.0 percent), stearic acid (1.0 to 2.0 percent), oleic acid (26.0 to 35.0 percent), cislinoleic acid (3.0 to 5.0 percent), lineolic acid (0.5 to 1.5 percent).
4. Individual sterols must be present as follows: campesterol (0.01 to 0.1 percent), stigmasterol (0.01 to 0.1 percent), and beta-sitosterol (0.1 to 0.4 percent).
5. USP parameters for disintegration of vitamin supplements.



保健品 Proseren的BPH症狀改善的情形?

- German Commission E 使用於輕中度BPH
  FDA未核准
- 長期療效、安全性未知
- 需醫師診治使用，以免延遲就醫
- 產品品質不一，建議使用臨床試驗之產品



用藥諮詢 –請問famciclovir是否可用於哺乳婦女

ADME

CAUTIONS

- Contraindications
- Precautions
- Adverse Reactions
- Teratogenicity/Effects in Pregnancy/Breastfeeding

CLINICAL APPLICATIONS

- Monitoring Parameters
- Patient Instructions
- Place In Therapy
- Mechanism of Action / Pharmacology
- Therapeutic Uses
- Comparative Efficacy / Evaluation With Other Therapies

REFERENCES

Reprotox®
懷孕資訊

1) Thomson Lactation Rating: Infant risk cannot be ruled out.

a) Available evidence and/or expert consensus is inconclusive or is inadequate for determining infant risk when used during breastfeeding. Weigh the potential benefits of drug treatment against potential risks before prescribing this drug during breastfeeding.

2) Clinical Management

a) Data on the use of famciclovir and/or penciclovir during lactation is lacking and caution is advised. Alternatively, acyclovir has been better studied and may be an appropriate alternative until additional data is available to confirm famciclovir and penciclovir safety. Acyclovir is considered compatible with breastfeeding by the American Academy of Pediatrics. Acyclovir has been used frequently in nursing mothers with no adverse effects observed in their infants [50].

3) Literature Reports

a) Although acyclovir is concentrated in breast milk, amounts are considered clinically unimportant and activity of any amount is further minimized by the moderate oral bioavailability [47][48]. In addition, amounts that appear in breast milk are less that those used in therapeutic dosing of neonates, which has been reported in the literature as intravenous doses of 30-60 mg/kg/day and oral doses of 40-80 mg/kg/day [49].

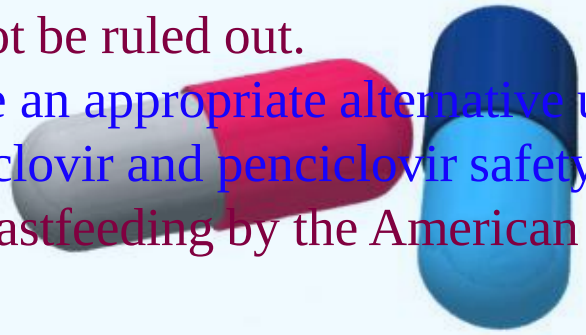
b) Penciclovir was present in the milk of lactating rats following oral administration of famciclovir. Penciclovir concentrations were higher in milk than in plasma. It is unknown if this similarly occurs in humans [43].

4) Drug Levels in Breastmilk

a) Active Metabolites

1) penciclovir [52]

Thomson Lactation Rating: Infant risk cannot be ruled out.
acyclovir has been better studied and may be an appropriate alternative until additional data is available to confirm famciclovir and penciclovir safety.
Acyclovir is considered compatible with breastfeeding by the American Academy of Pediatrics



用藥諮詢 –請問肌肉注射adrenaline治療anaphylaxis，較佳的注射部位為何？原因為何

DrugPoint® 綜述

ADMINISTRATION/MONITORING

Administration

檢視 DRUGDEX 中的詳細資訊

Inhalation

- use of inhalational form should be discontinued if asthmatic symptoms become worse or failure to relieve within 20 min [14]

Intramuscular

- (auto-injector) administer IM or subQ; do not give IV or into buttock [13][3]
- (auto-injector) administer into the anterolateral aspect of the thigh, through clothing if needed [13][3]
- administer in the lateral thigh muscle when administering by IM injection [5]
- do not administer if solution develops a pinkish color or is otherwise discolored or if a precipitate is present [13][3]
- the presence of sodium metabisulfite in the injectable product should not deter administration of the drug for serious allergic or emergency situations [13][3]

Intravenous

- Dilute epinephrine 1 mg (1 mL of 1:1000 solution) in 250 mL D5W (4 mcg/mL) or dilute epinephrine 1 mg (1 mL of 1:1000 solution) in 100 mL of NS (1:100,000) [5]

Subcutaneous

- (auto-injector) administer IM or subQ; do not give IV or into buttock [13][3]
- (auto-injector) administer into the anterolateral aspect of the thigh, through clothing if needed [13][3]
- do not administer if solution develops a pinkish color or is otherwise discolored or if a precipitate is present [13][3]
- the presence of sodium metabisulfite in the injectable product should not deter administration of the drug for serious allergic or emergency situations [13][3]

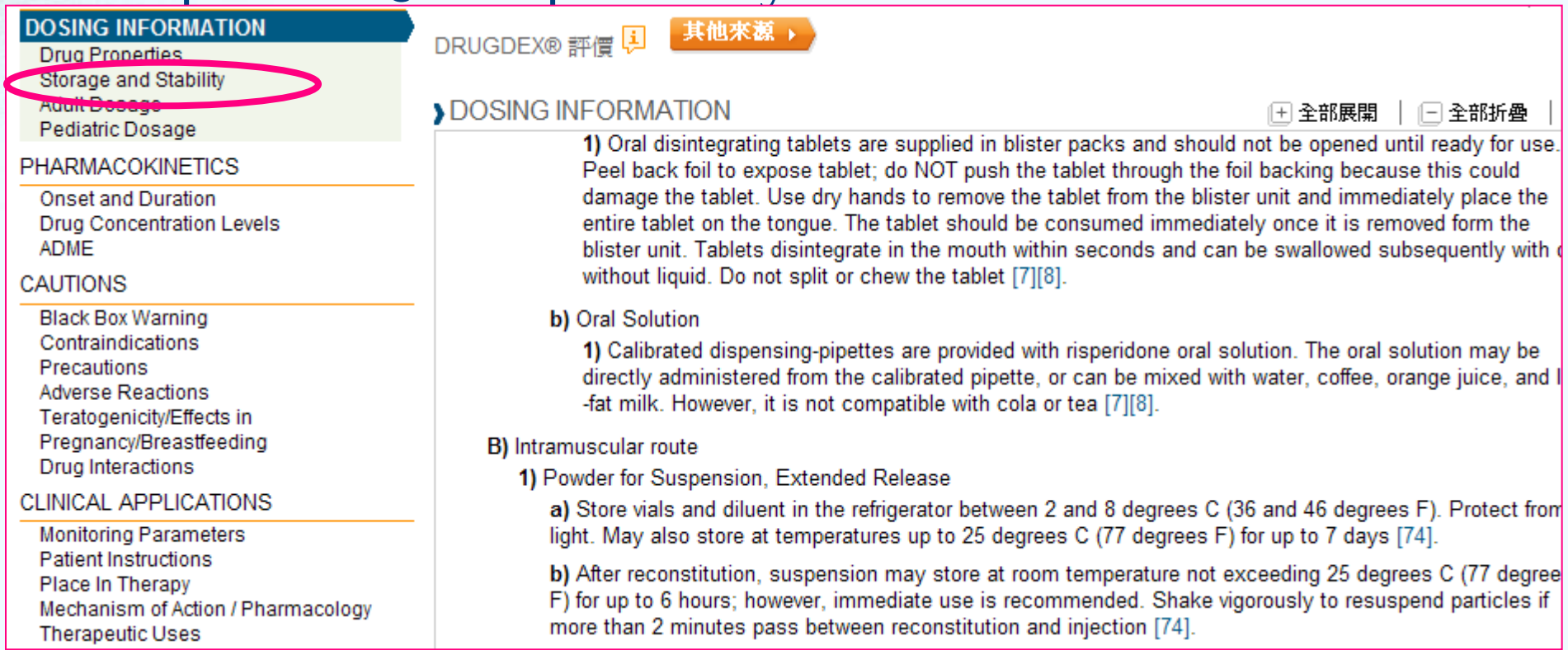
Time to peak concentration is shorter when epinephrine is administered IM in the vastus lateralis (lateral thigh) muscle compared with subQ administration or IM injection in the deltoid arm muscle. There are no data comparing IM and subQ routes of administration during anaphylaxis nor is there any data indicating lack of efficacy when epinephrine is administered IM or subQ in the deltoid muscle

Dosing information / Adult dosing / IM

PK - adsorption

用藥諮詢 –請問Risperidone注射劑(RISPERDAL CONSTA*)若放置於室溫，其安定性為何

- Powder for Suspension, Extended Release
  Store vials and diluent in the refrigerator 2 ~ 8 ℃Protect from light. May also store at temperatures up to 25 ℃for up to 7 days



DOSING INFORMATION
Drug Properties
Storage and Stability
Adult Dosage
Pediatric Dosage
PHARMACOKINETICS
Onset and Duration
Drug Concentration Levels
ADME
CAUTIONS
Black Box Warning
Contraindications
Precautions
Adverse Reactions
Teratogenicity/Effects in Pregnancy/Breastfeeding
Drug Interactions
CLINICAL APPLICATIONS
Monitoring Parameters
Patient Instructions
Place In Therapy
Mechanism of Action / Pharmacology
Therapeutic Uses

DRUGDEX® 評價 其他來源

DOSING INFORMATION 全部展開 | 全部折疊

1) Oral disintegrating tablets are supplied in blister packs and should not be opened until ready for use. Peel back foil to expose tablet; do NOT push the tablet through the foil backing because this could damage the tablet. Use dry hands to remove the tablet from the blister unit and immediately place the entire tablet on the tongue. The tablet should be consumed immediately once it is removed form the blister unit. Tablets disintegrate in the mouth within seconds and can be swallowed subsequently with without liquid. Do not split or chew the tablet [7][8].

b) Oral Solution

1) Calibrated dispensing-pipettes are provided with risperidone oral solution. The oral solution may be directly administered from the calibrated pipette, or can be mixed with water, coffee, orange juice, and -fat milk. However, it is not compatible with cola or tea [7][8].

B) Intramuscular route

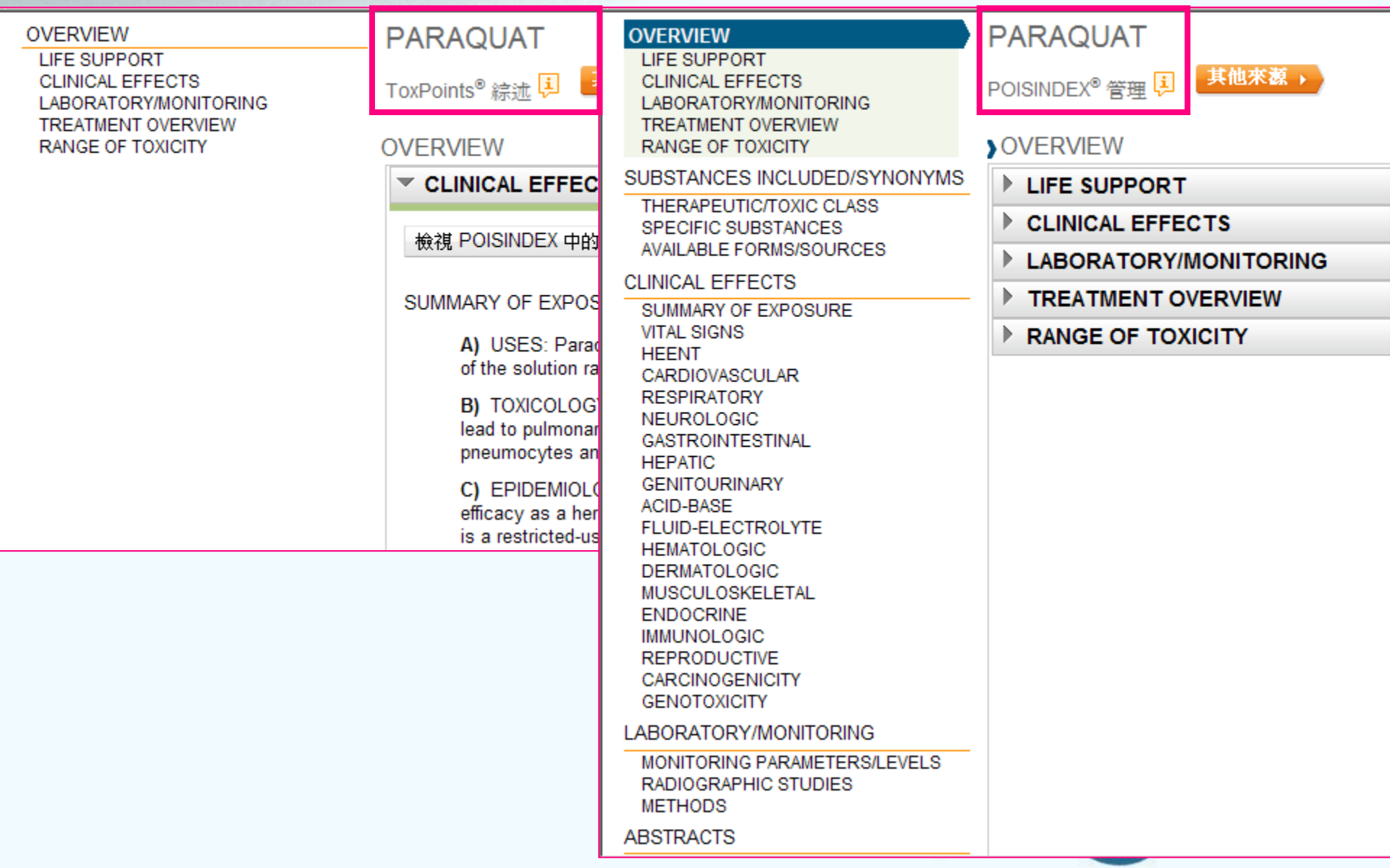
1) Powder for Suspension, Extended Release

a) Store vials and diluent in the refrigerator between 2 and 8 degrees C (36 and 46 degrees F). Protect from light. May also store at temperatures up to 25 degrees C (77 degrees F) for up to 7 days [74].

b) After reconstitution, suspension may store at room temperature not exceeding 25 degrees C (77 degree F) for up to 6 hours; however, immediate use is recommended. Shake vigorously to resuspend particles if more than 2 minutes pass between reconstitution and injection [74].

用藥諮詢 –請問Risperidone注射劑(RISPERDAL CONSTA*)若放置於室溫，其安定性為何

Paraquate 中毒處理



Neofax - dopamine

DOPamine

Dose - DOPamine

2 to 20 mcg/kg per minute continuous IV infusion. Begin at a low dose and titrate by monitoring effects. Use a large vein for IV.

Solution Preparation Calculations
To calculate the AMOUNT of drug needed per defined final fluid volume:
Desired final concentration (mg/mL) x defined final fluid volume (mL) = AMOUNT of drug to add to final infusion solution (mg).
To calculate the VOLUME of drug needed per defined final fluid volume:
*AMOUNT of drug to add (mg) ÷ drug (vial) concentration (mg/mL) = VOLUME of drug to add (mL)
Example (for Dopamine): Mix 30 mL of 800 mcg/mL solution using dopamine concentration of 40 mg/mL.
800 mcg/mL = 0.8 mg/mL
0.8 mg/mL x 30 mL = 24 mg dopamine
***24 mg ÷ 40 mg/mL = 0.6 mL of dopamine**
Add 0.6 mL of dopamine (40 mg/mL) to 29.4 mL of compatible solution (eg, D_5W) to yield 30 mL of infusion solution with a concentration of 800 mcg/mL.

Dopamine Titration Chart

Concentration (mcg/mL)	Dose (mcg/kg/min)	IV Rate (mL/kg/hour)
500	2.5 5 7.5 10	0.3 0.6 0.9 1.2
800	2.5 5 7.5 10	0.19 0.38 0.56 0.75
1000	2.5 5 7.5 10	0.15 0.3 0.45 0.6
1600	2.5 5	0.094 0.19

結語

- 搜尋輸入不得有錯誤，否則查詢結果”0”，但會有提示正確詞彙
- 多搜尋，且同一主題可嘗試不同的工具與資料庫介面，就會得到最佳答案，並增加使用經驗
- 透過搜尋可發現寶貴的藥物資訊，提升專業服務
- 向圖館員討教搜尋策略
- 可讓學生學習藥品的monograph，及問題類型該在monograph的何種類項找尋