"Ship, Shipmate, Self"

MAXOR National Pharmacy Services Corp.

PHARMACY HORIZONS

A CDCR PHARMACY INFORMATION NEWSLETTER

November 30, 2008 | Lucy Michael, MS, PharmD, Editor | Volume 2, Number 11

In This Issue

- Two Years Before the Mast
- Drug Consult: Flomax
- Welcome Aboard
- Maxor/CPR Pharmacy Program News
- CDCR Pharmacy & Therapeutics Committee
- Policy and Procedures Update
- Formulary Update

Contact Us

LMichael@Maxorcorrections.com (916) 441-1089

Two Years Before the Mast...

~ Gene Roth, Pharm D
CDCR Pharmacy Services Manager

Well, the title seems to fit our nautical theme but that is where the parallel ends. Dana's tale is of the hardships of common sailors in the 1830s. I, however, do not see these past two years as a continuation of the hardship of unsuccessfully trying to bring about improvements in the CDCR pharmacy system. Rather I see these last two years as an exciting and rewarding movement towards a vision that CDCR pharmacists have held for a long time. That is, the vision of how things could and should be. Surprisingly, the speed and progress of change within these 2 years exceeded what any of us could have predicted. In addition the system we are moving towards is far more comprehensive than any system we could have imagined possible.

The factors that altered the CDCR's old course is the appointment of the Receiver and the subsequent hiring of MAXOR National Pharmacy Services Corp. to plan, direct and implement the change to CDCR pharmacy. The California Project Team brought several items that, historically, had been missing. First is a team of consultants who have the required clinical, operational and managerial knowledge. Additionally they have a proven history of successfully implementing similar programs. There is a Court approved strategic plan and timeline. This includes current era pharmacy software system and a support group handling medication purchasing and contracting. With this foundation in place, previously unavailable lines of communication and training have been instituted. In the 17 pharmacies where the GuardianRx® pharmacy system has been implemented, the result has been a standardization of work flow, an enhancement in pharmacy processes and improvements in pharmacy working conditions.

Credit for success and improvements thus far goes to the whole team. From the Directors, Managers and trainers who facilitate the change to the facility pharmacist and technicians who actually make the change. In the movie "The Right Stuff" a sailing term "keep a constant strain" was used. This term refers to maintaining a steady pressure on the rigging. Sailors have observed that quick starts and stops usually cause the rigging to fail. In my opinion this analogy fits. We are in a continuous quality improvement process not a "let's fix it and we're done" mode.

Drug Consult...

~ Melanie Roberts, PharmD
Maxor/CPR Clinical Consultant

Flomax versus Non-Selective Alpha Blockers for BPH

Of the available alpha-1 adrenergic blockers, doxazosin and terazosin are listed on the CDCR Formulary. Tamsulosin (Flomax) and alfuzosin (Uroxatral) are considered to be clinically uroselective alpha blockers and may be considered on a non-formulary basis for patients under selected circumstances. The use of alfuzosin, doxazosin, tamsulosin, and terazosin has been extensively investigated for the treatment of lower urinary tract symptoms (LUTS) and have demonstrated comparable efficacy for the treatment of symptomatic BPH. Meta-analyzed data from an American Urological Association's (AUA) evidence-based review suggests that alfuzosin, doxazosin, tamsulosin, and terazosin are similarly effective in partially relieving symptoms, producing on average a 4-to-6 point improvement in the AUA Symptom Index.

According to the AUA's Guideline on the Management of Benign Prostatic Hyperplasia, alfuzosin, doxazosin, tamsulosin and terazosin are appropriate treatment options for patients with LUTS secondary to BPH. Although there are slight differences in the adverse-event profiles of these agents, the Panel believes that all four agents have equal clinical effectiveness. Data are insufficient to support a recommendation for the use of prazosin.

Due to its selective nature, tamsulosin offers the advantage of requiring no dose titration and has a lower probability of causing orthostatic hypotension; however, it is associated with a higher incidence of sexual dysfunction than traditional alpha blockers. Regarding effects on blood pressure, the AUA's analysis demonstrated no clear advantage of one alpha blocker over another with respect to hypotension related adverse events. Their meta-analyses did show alfuzosin and tamsulosin to be associated with significantly less dizziness than terazosin but not doxazosin. There is no evidence that alfuzosin or tamsulosin provide any benefit in patients who have not responded to an adequate trial of doxazosin or terazosin. Tamsulosin costs an addition $990-$1998 (alfuzosin $894) per patient per year over doxazosin or terazosin.

Uroselective alpha blockers may be preferred in a select group of patients who develop the following symptoms despite adequate titration of a nonselective agent: symptomatic hypotension, significant orthostatic or postural symptoms, syncope or near syncope, or significant adverse events. Initiation of a uroselective agent may also be preferred in patients with significant pre-treatment postural symptoms.

Monotherapy with alpha-blockers for HTN is not recommended. HTN should be treated with a first line agent according to JNC VII and the CDCR HTN guideline. Alpha-blockers may be added to an appropriate hypertensive regimen for LUTS. If symptomatic hypotension develops, the antihypertensive regimen should be adjusted. If hypotensive symptoms persist despite adequate titration, then a uroselective agent should be considered.

Drug	Dosing	$ Per Month
tamsulosin	1 cap (0.4mg) daily, may increase to 2 caps per day although doses greater than 0.4mg have not been found to be consistently more effective and may result in increased adverse effects (e.g., dizziness, orthostatic hypotension, abnormal ejaculation). Patients tried on 2 caps daily should be reevaluated for efficacy (e.g., per AUA/IPSS) and tolerability, and the dose lowered if appropriate.	$84
alfuzosin	1 tab (10mg) daily with food	$76
doxazosin	Starting dose 1mg QHS. Titrate to 2mg, 4mg, 8mg at 1-2 week intervals.	$1.25
terazosin	Starting dose 1mg QHS. Titrate to 2mg, 5mg, 10mg at 1-2 week intervals.	$1.95

Treatment at therapeutic doses for a minimum of 4-6 weeks may be required to assess whether a beneficial response has been achieved.

References

1. Clinical Pharmacology [database online]. Tampa, FL: Gold Standard, Inc.; 2008. URL: http://www.clinicalpharmacology.com.
2. Flomax® (tamsulosin) package insert. Ridgefield, CT: Boehringer Ingelheim Pharmaceuticals, Inc.; 2007 Feb.
3. American Urological Association. Guideline on the management of benign prostatic hyperplasia (BPH)(2003/updated 2006). Available at: http://www.auanet.org/content/guidelines-and-quality-care/clinical-guidelines.cfm?sub=bph Accessed October 2008.
4. Lepor, Herbert. The Evolution of Alpha Blockers for BPH. Reviews in Urology. 2006; 8:S3-9.
5. Buzelin JM et al. Comparison of tamsulosin vs. alfuzosin in the treatment of patients with lower urinary tract symptoms suggestive of bladder outlet obstruction (symptomatic benign prostatic hyperplasia). The European Tamsulosin Study Group. British Journal of Urology. 1997 Oct; 80(4): 597-60.
6. Lipitan MC, et al. A comparative study on the safety and efficacy of tamsulosin and alfuzosin in the management of symptomatic benign prostatic hyperplasia: a randomized controlled clinical trial. J. Int Med Res. 2005 Sep-Oct; 33(5): 562-573.
7. Tsujii, T. Comparison of prazosin, terazosin, and tamsulosin in the treatment of symptomatic benign prostatic hyperplasia: a short-term open, randomized multicenter study. BPH Medical Therapy Study Group. Benign Prostatic Hyperplasia. Int. J Urol. 2000 Jun; 7(6):199-205.
8. Lee, E. and Lee, C. Clinical comparison of selective and non-selective alpha-1a adrenoreceptor antagonists in benign prostatic hyperplasia: studies on tamsulosin in a fixed dose and terazosin in increasing doses. Br J Urol, 80: 606, 1997.
9. de Mey, C. Orthostatic effects of alfuzosin twice daily vs. tamsulosin once daily in the morning. J Urol, 163: 220, 2000.
10. deReijke, T. M. and Klarskov, P. Doxazosin versus alfuzosin in benign prostatic hyperplasia: results of a multinational, randomized, double-blind European trial. Eur Urol, 37: 473, 2000.
11. Djavan B et al. A meta-analysis on the efficacy and tolerability of alpha 1-adrenoceptor antagonists in patients with lower urinary tract symptoms suggestive of benign prostatic obstruction. Eur Urol 1999;36:1-12.

12. Lowe F et al. Prospective, randomized, multicenter trial to evaluate the rapidity of onset and side effect profile of tamsulosin vs terazosin in men with benign prostatic hyperplasia. Eur Urol Suppl 2002;1:108 (abstract).
13. Okada H et al. A comparative study of terazosin and tamsulosin for symptomatic benign prostatic hyperplasia in Japanese patients. BJU Internat 2000;85:676-81.
14. Lepor H, for the Tamsulosin Investigator Group. Phase III multicenter placebo-controlled study of tamsulosin in benign prostatic hyperplasia. Urology. 1998;51:892-900.

≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈

Welcome Aboard...

New shipmates at the facility level include **Tony Kieu** (Pharm I) at ASP; **Caleb Kim** (Pharm I), **Lori Zills** (Pharm Tech) at CEN; **T. Pappas** (Pharm I) and **J. Guss** (Pharm I) at CMC; **Kristi Hensley** (Pharm Tech) at CMC; **Leonor Guzman** (Pharm Tech), **Heidi Huckelberry** (Pharm Tech) at COR; **Minh Tran** (Pharm I) at CRC; **Srey Neak** (Pharm Tech) at DVI; **Von Moua** (Pharm I) at LAC; **Oleg Kozyrevskiy** (Pharm Tech), **Diane Stoffan** (Pharm Tech) at MCSP; **Adam Fosdick** (Pharm Tech) at PVSP; **Porfirio "Phil" Ramos** (Pharm I) at SATF; **Tony Mazukka** (Pharm I), **Sakar Rahimun** (Pharm Tech) at SOL; **Terri Coleman** (Pharm I) at SQ; **Adriana Sandoval** (Pharm Tech) at WSP.

Let us know if there are other new shipmates at your facility.

Maxor/CPR Pharmacy Program News...

Onsite Pharmaceutical Reverse Distribution Services Available ...

Guaranteed Returns®, the contractor for Reverse Distribution and Destruction of Pharmaceuticals is now approved to come on-site to process pharmaceutical returns. Facility pharmacies may contact Fredy Kadva, Regional Manager, at (800) 473-2138 x 155 to arrange for services as needed.

Multiple Locations for CDCR Formulary ...

The CDCR formulary is now available and can be viewed or downloaded from several sources:

1) A PDA version is available on Epocrates for PDA download free of charge.
2) A desktop version is also available from Epocrates. Both versions may be accessed through the Epocrates website at www.epocrates.com by anyone with a log in (free) for Epocrates.
3) An up-to-date copy is also available on the CPR website at

http://www.cphcs.ca.gov/project_pharm.aspx

CDCR Pharmacy & Therapeutics Committee...

The **CDCR System-wide Pharmacy & Therapeutics (P&T) Committee** met on November 13, 2008. The Committee discussed the pharmacy dashboard and reviewed facilities compliance with CDCR Pharmaceutical contracts. In addition, The CDCR P&T Committee approved revisions to two pharmacy policies and reviewed several formulary addition requests.

Policy & Procedure Update...

The **CDCR System-wide Pharmacy & Therapeutics (P&T) Committee** approved revisions to the following system-wide Pharmacy Policies and Procedures in the November 2008 meeting:

Pharmacy Policy & Procedure Revisions

- Chapter 8, CDCR Drug Formulary, the policy and the forms have been significantly revised. Providers and healthcare staff are encouraged to review the changes and begin to use the new forms and process.
- Chapter 34, Heat Risk Medications

Changes to both policies should be fully implemented by no later than January 28, 2009.

Formulary Update...

The CDCR system-wide P&T Committee reviewed several formulary addition requests. No changes were made in CDCR formulary.