

BRANCH OUT

Volume 9, Issue 2
Fall 2008

BREAST FEEDING AND URINARY TRACT INFECTIONS: WHAT ARE YOUR OPTIONS?

Natasha Farrell

Over the years, many women have been wrongly told they had to stop breast feeding if they were taking antibiotics. Limited safety data exists for most of the commonly prescribed medications, and most references will suggest that if using certain medications “benefits to the mother must outweigh the risks to the infant”.

Many medications will appear in breast milk, but in variable amounts. Nearly all reported adverse effects in nursing infants have occurred in infants less than 6 months of age. Thus, balancing the benefits of breast feeding with the potential toxicities of antibiotics remains a difficult task. If a medication is not recommended in breast feeding mothers, choose a safer alternative. For the most part, treating a urinary tract infection (UTI) in a woman who is breast feeding presents a challenge.

About 90% of uncomplicated UTI’s are caused by E.coli. When selecting an antibiotic for a breast feeding mother there are a number of factors to consider:

(cont on page 3)

In This Issue

- Breast Feeding and Urinary Tract Infections
- Awards
- Membership Draws
- Upcoming events
- Student Corner
- 2008-09 Executive

AWARDS

Apotex/CSHP-NL Branch Travel Grant to PPC 2008

Congratulations to **Natasha Farrell**, Central Health. She was the winner of the Apotex/CSHP-NL Branch Travel Grant to PPC in January 2008.

Natasha's report from the Conference is in this issue of Branch Out.

Alfred G. Dawe Distinguished Service Award

Congratulations to **Dave Smith**, Eastern Health.

Leadership in Pharmacy Practice Award

Congratulations to **Ted Dawe**.

Bayer/CSHP-NL Branch Travel Grant to the 2008 National AGM.

Congratulations to **Kristi Parmiter**, Eastern Health. She was the winner of the Bayer/CSHP-NL Branch Travel Grant to the National AGM held in Saint John, NB in August.



APOTEX/CSHP-NL BRANCH TRAVEL GRANT PPC 2008

I would like to thank Apotex, and CSHP NL Branch for giving me the opportunity to attend the 2008 Professional Practice Conference (PPC) in Toronto in January. The education sessions and workshops covered a variety of relevant and current topics. I would definitely recommend anyone who is able, to attend this conference in the future.

This essay is based on a presentation given at the PPC conference by Kelly Mendham from Mount Sinai Hospital: "Breast Feeding with UTI- Which Antibiotics Are Safe"

Natasha Farrell

"I would definitely recommend anyone who is able, to attend this conference in the future."

UPCOMING EVENTS

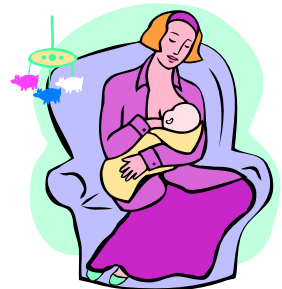
- Professional Practice Conference 2009
Toronto, Ontario
January 31–February 4, 2009
- CSHP NL Branch Strategic Planning Session
Spring, 2009
- CSHP AGM 2009
Winnipeg, Manitoba
August 8-11, 2009
- Professional Practice Conference 2010
Toronto, Ontario
January 30–February 3, 2010



BREAST FEEDING AND URINARY TRACT INFECTIONS (CON'T)

- Will the medication work?
- Does the medication pass into breast milk? If so, by how much?
- Is the medication safe for the infant?
- How much will be absorbed by the infant?
- Is the medication used to treat infants for any condition?

The different characteristics of each medication will determine how much will appear in the breast milk of a breast feeding mother. For example, the more lipophilic a drug is, the higher the concentration that will appear in breast milk. Also, if a drug is poorly protein bound the concentration will be higher. In addition, medications with lower molecular weight (< 300 daltons) will diffuse into breast milk much easier than those with a higher molecular weight.



(cont on page 4)

BREAST FEEDING AND URINARY TRACT INFECTIONS (CON'T)

Another factor that will influence how much medication will appear in breast milk is bioavailability. A medication with a low bioavailability will have a lower serum concentration, thus resulting in a lower concentration in the breast milk. In addition, medications with shorter half lives will circulate in the blood for shorter periods of time, and therefore will be in the breast milk for shorter periods of time. As a result, it is less likely to accumulate in the infant.

Once the medication gets in to the breast milk there are other things that may affect how much of the drug gets absorbed by the infant. An infant's stomach is very acidic. This acid can denature many medications. Also, some drugs are poorly absorbed when ingested with calcium rich foods, particularly milk (i.e. quinolones).

So, the questions remains : Which antibiotics are safe for the infant of a breast feeding mother?

Which antibiotics are safe for the infant of a breast feeding mother?

Three of the most commonly prescribed medications for a UTI are Nitrofurantoin, Trimethoprim/Sulfamethoxazole (TMP/SMX), and Ciprofloxacin.

(con't on page 5)

NL BRANCH EXECUTIVE 2008-2009

President: Leslie Phillips

President-Elect: Ashley Layden

National Delegate: Pamela Rudkin

Secretary: Amy Conway

Treasurer: Tanya O'Brien

Senior Advisor: Lisa Bishop

BREAST FEEDING AND URINARY TRACT INFECTIONS (CON'T)

Nitrofurantoin is classified by the American Academy of Pediatrics as usually compatible with breast feeding. One study showed a breast feeding mother taking 100 mg BID would result in an infant dose of 0.2 mg/kg. Although this exposure was thought to be low, some references state Nitrofurantoin should not be given in cases of G6PD deficiency due to the potential for hemolysis. It is also advised to avoid use in nursing infants less than 1 month of age due to higher chance of hemolysis. The risk of hemolysis in the absence of G6PD is extremely rare, however.

TMP/SMX is classified by the American Academy of Pediatrics as compatible with breast feeding. It is not, however, recommended for mothers of jaundiced, ill, or premature infants due to the risk of the medication displacing bilirubin causing kernicterus in the infant. It is also not recommended in patients with G6PD deficiency. One study showed a breast feeding infant would be expected to receive 0.45 mg/kg/day of TMP from a maternal dose of 1 TMP/SMX DS tablet BID. Trimethoprim is used as UTI prophylaxis in infants and is dosed at 2 mg/kg/day.

Ciprofloxacin is classified by the American Academy of Pediatrics as usually compatible with breast feeding. There have been concerns in the past over animal studies that have shown arthropathy in developing joints. Recent studies suggest little risk. One study showed that according to peak milk levels from a mother receiving Ciprofloxacin 750 mg BID, an exclusively breast fed infant would receive a maximum of 0.57 mg/kg/day (much less than the 10-40 mg/kg/day that would be used to treat a newborn). This does not consider the possibility of poor absorption of the Ciprofloxacin due to the calcium present in breast milk.

Ciprofloxacin is not, however, recommended as first line treatment of a UTI due to the potential for increasing the number of drug resistant organisms. It is used in patients who have allergies to other agents, or the UTI is susceptible to quinolones only.



B-Lactams is classified by the American Academy of Pediatrics as usually compatible with breast feeding. It is not used empirically due to the emergence of increased resistance. With a maternal dose of Amoxicillin 500 mg TID an infant would receive a maximum of 0.1 mg/kg/day. This dose is far below therapeutic doses used to treat infections in infants.

(con't on page 6)

BREAST FEEDING AND URINARY TRACT INFECTIONS (CON'T)

Summary

When trying to decide what antibiotic to use to treat a UTI in a breast feeding mother the following conclusions can be drawn:

- Antibiotics will enter breast milk in small quantities.
- Most antibiotics used to treat a UTI are also safe to use in breast feeding mothers.
- Avoid using TMP/SMX and Nitrofurantoin in patients with G6PD deficiency.
- Reserve Quinolones for cases of drug resistance or allergy.

Thanks to all those who renewed their CSHP memberships and welcome to new members

All members who renewed by the early bird deadline should have received their complimentary copy of The Sanford Guide to Antimicrobial Therapy 2008.

Book choices are now available. Please contact John Hawboldt at hawboldt@mun.ca or call 777-8777 on or before MONDAY, NOVEMBER 17, 2008. Choices are as follows:

2009 Drug Interaction Facts: The Authority on Drug Interactions
Antibiotic Basics for Clinicians: Choosing the Right Antibacterial Agent, 2007
Communication Skills in Pharmacy Practice: A Practical Guide for Students and Practitioners, 5th ed, 2007
Drug Information Handbook (by Lexi-comp), 2008
Drug Prescribing in Renal Failure: Dosing Guidelines for Adults and Children, 5th edition (paperback or electronic version)
Effective Grading: A Tool for Learning and Assessment, 1998
Focus on Safe Medication Practices (Published by Lippincott Williams & Wilkins), 2008
Interpreting the Medical Literature: Practical Epidemiology for Clinicians, 5th ed 2006
Mosby's Diagnostic and Laboratory Test Reference, 9th Edition, 2008
Pediatric Dosage Handbook (by Lexi-comp), 15th Edition
Pharmacotherapy Handbook 7th ed, 2008
Pocket Guide to Critical Care Pharmacotherapy, 2007
RxFiles - Drug Comparison Charts Book - 7th Edition, 2008
Taber's Cyclopedic Medical Dictionary
Tarascon Internal Medicine and Critical Care Pocketbook 2008
Tarascon Pocket Pharmacopoeia 2008
The Course Syllabus: A Learning-Centered Approach, 2008
The Future of Management (Published by McGraw-Hill Ryerson Agency) 2007
The Washington Manual(tm) of Medical Therapeutics, 2007

MEMBERSHIP COMMITTEE

2008 EARLY BIRD MEMBERSHIP DRAWS

THE MEMBERSHIP COMMITTEE IS PLEASED TO ANNOUNCE THE WINNERS OF THE 2008 EARLY-BIRD MEMBERSHIP DRAWS.

1 Complementary membership:

Shawn Layman

2 draws for \$150:

Linda Hensman

Denise O'Brien

3 draws for \$100:

Neil Curtis

Tanya O'Brien

John King

3 draws for \$50:

Kristi Parmiter

Michael LeBlanc

Brad Payne

The Membership Committee would like to congratulate all the winners. CSHP values every member of the society and we are looking forward to your continued support again next year. If you have any questions or comments, please contact us.

Membership Committee, CSHP NL Branch

Lisa Bishop: ldbishop@mun.ca

John Hawboldt: hawboldt@mun.ca

Nominating Committee

The nominating committee is pleased to announce the following:

- Ashley Layden of Eastern Health has accepted the position of President-Elect for the Branch.
- Amy Conway has accepted another 2-year term as secretary.
- Steven Byers was selected as the student representative for this year.

STUDENT CORNER

Ever wonder what you can do with your CSHP membership as a student? Well you've come to the right place. Here you will find out what benefits your membership will give you.

This year we are continuing with last year's successful hospital job shadowing program. As a participant from last year I can vouch for the benefit of this program. Whether you are interested in hospital pharmacy, or just want to see what a hospital pharmacist actually does day to day, this program will be a great learning experience. Not only are we looking for students who are interested in the program but also hospital pharmacists willing to be preceptors for the job shadowing program. If you are interested contact the CSHP student representative, Steven Byers.

This year student members will also be receiving a complementary text. The book for this year is *The RxFiles Drug Comparison Charts, 7th Edition*. This is a very useful handbook which contains charts of drug comparisons, which looks at effectiveness, safety and cost considerations.

Also, students in their final year of study who are members will be eligible for the annual CSHP student award. This award is given to a final year CSHP student member who demonstrates clinical excellence during both of their SPE IV rotations. The award consists of a complimentary CSHP membership and a cash prize, both of which total \$250.

Steven Byers
CSHP Student Representative

Email: mose_17@hotmail.com
Phone: (709) 764-0709

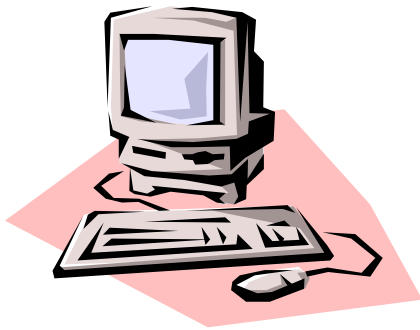


PEOPLE

Congratulations to Carla Dillon on the completion of her PharmD degree.

Congratulations to Shawn Layman for receiving the distinction of Preceptor of the Year from the MUN School of Pharmacy





Caption describing picture or graphic.

PEOPLE
Don't forget to send in any updates
on members like awards, births, etc!
Send to:
rebecca_mulcahy@yahoo.com

Websites to Check Out:
CSHP NL Branch
www.cshp-nl.com

CSHP
www.cshp.ca

To view the presentation by Dr. Douglas Doucette,
“CSHP 2015: Sharing Our Success”
presented at the Semi-Annual Meeting in May 2008, go to the CSHP NL
Branch website and follow the link on the homepage.

You will also find links to more information CSHP 2015 initiative on the CSHP
NL Branch website or go to <http://www.cshp.ca/programs/cshp2015>.



The Canadian Society of Hospital Pharmacists assumes no responsibility for the statements and
opinions advanced by contributors to Branch Out. Views expressed in the editorials are those of
the authors and do not necessarily represent the official position of the Canadian Society of Hospi-
tal Pharmacists.