The Renal Pharmacist

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Chair:
Jennifer Brick
Grand River Hospital
PH: (519)749-4300
ext 2465
Fax(519)749-4228
Jennifer_brick@grhosp.on.ca

Vice Chair:
Brenda Bruinooge
York Central Hospital
PH: (905) 780-4278
Fax: (905) 883-8122
bbruinooge@yorkcentral.on.ca

Secretary/Treasurer
Andrea Fox
St. Michael's Hospital
PH: (416)864-6060
ext 4077
Fax: (416) 864-6058
Foxa@smh.toronto.on.ca

Education Coordinator:
Roza Berkowitz
Credit Valley Hospital
PH: (905)813-1614
Fax: (905) 813-4091
Rberkowitz@cvh.on.ca

Communications Coordinator:
Lisa Sever
York Central Hospital
PH: (905) 780-4278
Fax: (905) 883-8122
L.Sever@aci.on.ca

Past Chair:
Laura Hunter
Lakeridge Health Corp.
PH: (905)576-8711
ext.3502
FAX: (905) 721-4767
Lhunter@lakeridgehealth.on.ca

www.Renalpharmacists.net

It's here!!!

The website is up and running (but still under construction of course). Brenda Bruinooge (with the RPN executive) has spearheaded the initiation of the website alongside with Dave Numan of Guided Vision and the financial support of Ortho-Biotech. It was premiered at the February 4th Renal Pharmacist's Network meeting held during the PPC's in Toronto.

Currently there are the Drafts of our Renal Pharmacists Standards of Care, Links to Professional Resources and Patient information sites. Our Missions and Goals are posted too.

Under the members only section there is a:

- Discussion Forum (to post and answer questions)
- Newsletters (both current and back issues)
- Executive Committee descriptions
- Questionnaire results
- Call for Volunteers
- Articles of Interest (with links to the abstracts)
- and much more to come.

Additions to expect in the near future include:

- C. E. presentations (from RPN meetings)
- Presentations to share (why reinvent the wheel?)
- Patient Education material
- Standardized Section 8 template (Ontario)
- Forms sharing (Assessment tools, Monitoring forms etc).
- Product News
- "Headaches"

We welcome all feedback from our members. We want this site to be helpful for all Nephrology Pharmacists across Canada and beyond!

We are still looking for more volunteers to help with maintenance of the website (no experience is necessary). Either show your interest through the website or e-mail Brenda directly at bbruinooge@yorkcentral.on.ca.

Visit now and visit often. Please take the time to register if you haven't already. See you on-line! –L.S.

From your RPN Chair……

As the year flies by, our network continues to progress and make changes for the advancement of this group. This brought about our Executive making revisions to the executive committee membership and their responsibilities and to the RPN's mission at our last meeting.

The most exciting accomplishment is getting the webpage up and running. The forum where members can interact via question, answers and comments is in action. I feel like a proud mother being able to announce this. Our last executive meeting was spent brainstorming about how to improve the website and make it more user friendly. With member feedback we expect this site to flourish. Great big thanks to Brenda Bruinooge for her initiative.

Nationalization of the RPN was a former goal of past executives. With the website now up this can only make that goal more easily achieved. I extended invitations to pharmacists' nation-wide before our last educational meeting and our plans are to continue to advocate this with the advertisement of the website. I also ask any current members to promote the RPN when crossing paths with other Renal Pharmacists. Remember membership is free and they can enroll on the website or by e-mailing Andrea Fox, RPN secretary.

In October of 1999 there was a proposal for a national multidisciplinary Nephrology conference presented to the CANNT Board of Directors. *Cont. on page 6*

In This Issue

Plus lots more – look inside and enjoy!

See the new Member Profile column on page 2. We will be highlighting a different member of our group each Newsletter so we can get to know everyone better. (This idea was stolen from the Renal Dietitians!) –L.S.

Type II diabetes mellitus in the "real world"

By Dr. Mike Evans, University Health Network, Toronto, ON
Paraphrased by Carmen Ma, University Health Network, Toronto, ON

- Currently 5-10% of the Canadian population has type II diabetes
- 1.5 million people are diagnosed, the remainder don't know they have it
- numbers will increase exponentially in the future
- For people with diabetes, they have a two-fold increased risk of mortality due to renal dysfunction, strokes, heart disease; also hospitalization rates are doubled

Modifiable risk factors:

- Obesity
- Inactivity
- Hypertension
- High cholesterol

UKPDS trial shows that for long term glucose control, neither intensive nor conventional treatment made any difference, eventually it still worsened. This negative result was found even though microvascular endpoints had a relative risk reduction of 25% with intensive treatment. This study also found that a low HDL will decrease risk for worsening glucose control and smoking will increase the risk.

Diabetes should be seen as a risk factor instead of a disease. Maintaining good blood glucose level is only 1 target for diabetics. Diabetes should be regarded as a multi-factorial problem, which requires multiple treatments (e.g. lipid levels, BP control). Dr. Evans feels that this multiple approach to treating diabetes needs to be "better packaged" for patient to receive better care. Dr. Evans and a multidisciplinary team have developed a "diabetes care tool" for family doctors to achieve this goal.

This package should take into consideration the following:

- Environment/setting (e.g. urban MD versus small community)
- Caregiver
- Consumer (family MD's)
- Evaluation (continuous quality improvement component)
- Technology (will make "doing the right thing" easier; e.g. www.epocrates.com provides drug information for hand-held computers)

The barriers hindering MD's from delivering optimal diabetes care are:

- Time constraints (major barrier for evidence-based medicine)
- Insulin start up (MD's not feeling comfortable about starting insulin)
- Too much information to explain to patient (management issue)
- Information overload for patient
- Difficult to treat to target
- Patient's understanding of diabetes (or denial of having diabetes)
- Cultural differences
- Difficult to access health services/resources
- Lack of reimbursement for overhead (not team oriented)
- Time consuming for patients
- Lack of money or resources

Conclusion: Diabetes is a complex chronic disease where effective clinical management requires a systems and team approach.

Logo !!

See the back page for information on our Logo contest!

Member Profile

Sean Albanese

Sean is a well- known renal pharmacist with numerous credentials. Too many credentials to even name, but I will highlight a few.

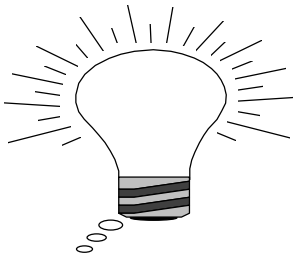
Sean graduated from U of T in 8T8 from pharmacy (he really wanted to be a Computer Science nerd, lucky for us the University didn't accept him!). His reasons for going into pharmacy were that he liked the Health Sciences and his sister said he was guaranteed a job.

Sean completed his residency at The Hospital for Sick Children in Toronto. His residency project "Aminoglycoside dosing in Children with Renal Impairment" illustrated his early desire to be a Renal Pharmacist. He then moved back home to Thunder Bay (TB) and started his renal career (11 years now!) What Sean likes best about his job is order entry – just kidding, of course it is the patients and the daily learning experience. His daily challenge is reconciling differences of opinions with his physicians.

Sean has been active both professionally and socially. Former CSHP TB chapter Chair, secretary, treasurer, Former RPN Chair (98-99), Board Member for the Kidney Foundation, "Run for Life" (an Organ Donor Awareness annual run) organizer, Photography Club Board Member. He has received a Community Hero Award, Co-presented a workshop on PRI at the PPC 2000, was nominated for the Commitment to Care Award and the TB regional hospitals "Walk the Talk" Award. He is a recognized McDonald's Employee of the Month.

He enjoys cross country skiing, camping, backpacking and running (he actually ran and completed the Boston Marathon).

Sean, we thank you for your wisdom and expertise, not to mention your sense of humour. We are glad you are one of us. -L.S.



ASK THE GROUP

The question presented in the last newsletter was " Is anyone working with pharmacy technicians to help the nephrology pharmacist better utilize their time for direct patient – care?" We wanted to know what activities the technicians were doing?

Nobody responded to the question (which thus far has always been the case for this column). However, I do know from talking with many colleagues that there are some programs fortunate enough to have pharmacy technicians (PT) working with them.

Most of the programs I know have the PT doing the outpatient order entry (i.e. maintaining profiles), ward stock for the dialysis unit and some Eprex® dispensing. At York Central Hospital, we have recently hired a full-time PT. She will be responsible for the above duties as well as TPA preparation, dosette filling and self-medication dispensing (for some inpatients), WLM statistics, Unit drug billing, Eprex billing and transferring discharged medication information to the outpatient chart (co-signed by a pharmacist). She will also be an integral part of the quarterly medication reviews in ensuring that the medication lists are current and up to date (brown bag days), thus making our assessments go faster by having correct information at the onset. Projects will be assigned as well.

As this column has not been getting the support it needs to continue, we will retire it. Perhaps we can use this space to discuss hot topics that are occurring on the website in future issues. – L.S.

Hypertension and Anemia – Getting to the Heart of the Matter

Dr. Louise Moist, Nephrologist, London Health Sciences Centre, London, ON
Paraphrased by Lisa Sever, York Central Hospital, Richmond Hill, ON

At the February 4th, 2001 RPN dinner meeting, sponsored by Ortho Biotech, we were fortunate enough to have Dr. Louise Moist speak to us on the topic of Cardiac disease and its relationship to kidney disease and in particular to anemia.

Her talk focused on the important relationship between progressive kidney disease and the progression of cardiac disease. Cardiac disease is very prevalent in the dialysis and transplant population. 75% have LVH, 15-40% have history of MI, angina or PVD and there is ~ 50% morbidity and mortality due to CV events. What we are finding is that CV disease is prevalent in patients prior to the initiation of dialysis. A study by Foley RN et al showed only 16% of patient at initiation had normal echocardiograms. In fact Jungers et al showed that CV events increase 3 times vs. the general population in patients with renal dysfunction prior to renal replacement therapy. Chertow showed outcomes in ESRD post MI with a 1 year mortality of 53% vs. 25% if creatinine was > 1.5 mg/dL.

Dr. Moist illustrated the cumulative risk factors of CVD in kidney disease using a triangular pictograph (see website soon www.renalpharmacists.net for slides). She defined the non-modifiable risk factors as age, sex, family history and diabetes. Those that are modifiable are hypertension, dyslipidemia, smoking and homocysteine. Renal related factors include anemia, increased PTH, elevated phosphates, GFR and C-reactive protein.

A Canadian Mulitcentre Study by Levin et al demonstrated an association only between anemia and CV outcomes (i.e. LVH, cardiac symptoms and hospitalizations). Looking at their data, we could only see an association between a decreased hemoglobin and LVH. Decreased Hgb alone was not causative of LVH.

She reviewed that blood pressure control is the most important variable for the progression of renal insufficiency. Multiple studies show the benefit of blood pressure control in reducing mortality, CV endpoints and renal progression.

To discuss the issue of whether administering erythropoietin could reduce the risk of LVH and LV dilatation, Dr. Moist summarized the literature available. A study by Besarab et al (NEJM 1998) illustrated that normalizing the hematocrit (42%) with EPO in HD dialysis with a history of CHF or IHD led to a higher mortality, not to mention clotted vascular accesses. The Canadian Normalization of Hemoglobin Study showed that in low risk HD patients, normalization of Hbg to 130-140g/L was safe with no difference in incidences of arteriovenous access thrombosis, cardiac events or death. One of the secondary outcomes however did show that for each 10g/L fall in Hgb there seemed to be an associated 8ml/m2 increase in LV cavity volume. So we could speculate that normalization of Hgb might prevent the progression to dilatation.

The chronic renal insufficiency (CRI) population (i.e. not yet being dialyzed) is still being studied to see if correcting anemia at an early stage will prevent LVH. CSN suggests treating if Hgb < 100g/L, but no evidence to support this yet.

In conclusion she reiterated that cardiac disease is the leading cause of death among people with CRI and ESRD. We must always be assessing their cardiac risk and ensuring appropriate interventions are done (i.e. antiplatelet therapy if indicated, cholesterol screening and therapy, strict blood pressure control, smoking cessation etc.)Slides of her presentation are to be posted on the website www.renalpharmacists.net in the near future.

Why Talk About Renal Osteodystrophy/ ROD?

By Dr. Gavril Hercz, Humber River Regional Hospital, Weston, ON
Paraphrased by Patricia Sinnott, York Central Hospital, Richmond Hill, ON

So began Dr. Gavril Hercz' discussion of the limitations of calcium and non-calcium phosphate binders and the role of calcimimetics in the management of secondary hyperparathyroidism at the Amgen-sponsored lunch held February 4, 2001 in conjunction with the CSHP Professional Practice Conference. Dr. Hercz stated that there are two reasons to talk about ROD; we can broaden our understanding of normal renal physiology and we can intervene to reduce both morbidity and mortality in the renal population.

In people with CRF, calcium, phosphate and PTH interactions are disrupted. Trying to adjust them becomes a "juggling" act. Hypocalcemia in patients with renal insufficiency occurs because less Vitamin D is available or activated by the kidneys. The set-up point for calcium is shifted so that bone becomes resistant to PTH such that a higher PTH level is needed to release calcium from bone; this leads to elevated PTH levels. High-turnover bone disease can be diagnosed by examining the iliac crest and the rates of breakdown/ rebuilding and remodeling. Patients with high-turnover bone disease are vulnerable to fractures and muscle weakness. Low-turnover bone disease, on the other hand, was more common in the 1970s and 1980s when aluminum was commonly used to bind phosphate and osteomalacia developed in children deficient in Vitamin D.

Historically, looking at the cross-section of patients on dialysis, the incidence of fibrosis due to hyperparathyroidism is similar now. Osteomalacia occurs less often since we no longer use aluminum phosphate binders to the point of intoxication but aplastic lesions are increasing. Adynamic lesions are associated with low PTH. Proximal myopathy occurs with aluminum intoxication or fibrosis as do pathologic fractures. Fibrotic bones are less readily calcified because the bone cross-linking is not well organized.

Patients with higher PTH levels (i.e. over 40pmol/L) are more often symptomatic (e.g. myopathy, bone pain and fractures). So we must be aggressive and intervene early because it gets harder to turn off PTH if we wait! Bone biopsy of the iliac crest provides a definitive diagnosis, showing poorly organized collagen which is not well calcified in people with high PTH fibrotic bone disease.

Hyperparathyroidism is associated with hypocalcemia, phosphate retention, low calcitriol, a shift of the set-point, PTH hyperplasia and skeletal resistance to PTH. Mortality rates rise in those with phosphate levels over 2mmol/L. A high calciumX phosphate product leads to deposition of calcium phosphate in bones and soft tissue. Calcification of the coronary arteries leads to arrhythmias, left ventricular dysfunction, CHF and death. Half of all deaths of patients on dialysis are due to this cardiac calcification!

In an effort to reduce phosphate levels, dietitians teach dialysis patients to reduce their dietary intake, since hemodialysis is unable to remove enough phosphate. Only nocturnal hemodialysis 6 nights weekly has been shown to control phosphate levels effectively, such that most patients don't need binders. As mentioned earlier, phosphate-binding practices have moved from the aluminum to the calcium based binders. Calcium citrate is not used because it increases aluminum absorption. Both calcium carbonate and calcium acetate, commonly used as phosphate binders, carry the risk of developing hypercalcemia. Sevelamer (Renagel®) is an expensive but effective way to reduce phosphate without contributing either calcium or aluminum. Incidentally, sevelamer also binds bile acids and lowers LDL.

Pulse Vitamin D(1,25) (Calcitriol) may be used to suppress PTH release before calcification begins but there is a risk of hypercalcemia. High dose pulse oral (3 times weekly) provides the same outcome as IV therapy although the IV route is more often used in the USA. The newer agents (e.g. paracalcitol) need to be compared with (1,25) Vitamin D.

Vitamin D resistance may be predicted by the size of the parathyroid gland, its nodularity and monoclonality as well as elevated serum phosphate and calcium X phosphate product. PTH draws phosphate out of bone regardless of dietary intake; parathyroidectomy or removal of half of the gland is the only remedy.

In attempting to control PTH, a calcium-sensing receptor was cloned in 1993. This receptor sits on the brain, kidney, thyroid and parathyroid cells, reducing PTH release when there is high serum calcium. It is a G-protein coupled receptor (GPCR) and cross connects to many other diseases in many other parts of the body.

Calcimimetics act as agonists at calcium receptors. On binding, they increase sensitivity to calcium and reduce PTH production. Calcimimetics provide better control in cancers than pamidronate, etc.

Cont. on page 5

ROD cont.

Calcitonin reduces serum calcium while PTH goes up; AMG073 (in Stage II clincical trials at the moment – see J.Am.Soc.Neph. 2000) reduces phosphate, the calcium X phosphate product and PTH.

The relationships between PTH, calcium, phosphate and Vitamin D are dynamic. Without oscillations in PTH levels, we cannot produce dense bone. Bone disease also swings in the same patients over several months, requiring "constant monitoring on the part of the pharmacist to bug the physician so they do the right thing!"

Calciphylaxis results in skin sloughing, bone pain, muscle aches and PTH levels of 70, 80, 90 pmol/L. At this point, surgical intervention (parathyroidectomy) is required before the bones turn to jelly!

So if the phosphate is high, get it down below 2mmol/L (aluminum for 1 to 3 months is quite effective without being toxic) then use calcitriol to lower the PTH. Long term use of aluminum in the past may have reduced PTH release but now we do more surgical interventions.

The incidence of ROD in pre-renal patients or those with renal insufficiency is 1 in 3. Anyone with a PTH level > 20 pmol/L should be treated, especially if they are not diabetic. People with diabetes have a higher incidence of low-turnover bone disease, so be less aggressive in diabetics.

New Products

NeedleAid – this is a Canadian invented device designed for people with diabetes. It helps people to guide the needle to the right spot. Great for the visually impaired, those with tremors or decreased motor skills, or for the needle-phobic. May work well for your Eprex® patients too! Available in drug stores soon. Available on-line now at www.needleaid.com. –L.S.

CLAIMING MEDICAL EXPENSES – MEDICATIONS

Submitted by Jennifer Brick, Grand River Hospital, Waterloo, ON
(Editors Note – Jennifer prepared this as a handout for her patients This is her interpretation of the regulation. What a great idea! –L.S.)

The tax season is upon us again, and you should know some important things about claiming medical expenses with respect to drugs.

1. To claim expenses remember you (or your spouse) must have paid for the expense. Any part of the expense reimbursed to you (by a private health plan) is not eligible to claim. For example, if your drug plan reimburses you for 80% of your drug costs you are only able to claim 20% of the cost towards your medical expenses.

2. Qualifying medical expenses include prescription drug costs, co-pays, deductibles for such prescription drugs, needles, catheters, catheter trays, and non-prescription medications as long as they are prescribed by your doctor. Drugs prescribed by a doctor but which a pharmacy may sell without a prescription must be accompanied by an official receipt written or typed from your pharmacist, and the prescription. A receipt for non-prescription drugs (e.g., Diavite®, Tums™, Calcium) should include
   i) purpose of the payment, i.e., drug name and quantity
   ii) date of purchase
   iii) patient's name
   iv) pharmacist's signature

3. Attach all original receipts/prescriptions for non-prescription required medications to your tax return or keep on file if you e-file your return. It is a good idea to keep a photocopy of everything for your own record in case the claim is misplaced. Remember to use your best 12 month period and ensure you claim the expenses on the spouse who will benefit the most.

4. If you have lost any prescription receipts, you are needing to claim most pharmacies will be able to provide you with duplicate copies. Keep in mind this takes valuable time to prepare, so think ahead before the end of April. This service is usually free of charge.

RESOURCES

1. www.ccra-adrc.gc.ca (website address)
2. Presentation by Sheila Matson, CA and Lydia Grubb, CA. January 16, 2001. The basics of claiming medical expenses.

Do you have anything to contribute to the next issue of The Renal Pharmacist? Send in your submissions today (big or small !!) to l.sever@aci.on.ca

Treatment Options for the Renal Anemias: the Next Generation

By Dr. E. Toffelmire, Chief of Division of Nephrology, Professor of Medicine and Pharmacology and Toxicology, Queen's University, Kingston, ON
Paraphrased by Ann-Marie Turner, Kingston General Hospital, Kingston, ON

For many years, the only treatment for anemia in patients with renal disease was blood transfusion. Hemoglobin was maintained at 45g/L. In 1987, the average hemoglobin of a dialysis patient in Canada was 72g/L. The multiple transfusions led to many problems with iron overload and transfusion reactions.

In 1983, erythropoietin was isolated and changed the face of anemia in renal failure patients. Human epoetin alpha (EPO) was being administered to patients in clinical trials in 1986. In 1989 the Food and Drug Administration approved Epogen® for human use in the United States and in 1990 Eprex® was approved in Canada.

Since the advent of EPO therapy, the following questions have been raised:

- How do we use EPO most efficiently?
- What are the etiologies and treatments of erythropoietin resistance?
- What is the target hemoglobin?

Managing iron deficiency seems to answer the first two of these questions and has become a focus of treatment.

Most renal failure patients take oral iron supplements as first line therapy. This treatment is controversial due to the high incidence of anorexia in these patients and the questionable absorption of these drugs when patients are on concomitant use of phosphate binders, H2 antagonists and proton pump inhibitors. There are many patients who remain iron deficient despite oral iron supplementation. The only intravenous (IV) iron preparation currently approved for use in Canada is iron dextran. Ferric hydroxysaccharide (Venofer®) and sodium ferric gluconate (Ferrlecit®) are available through the Special Access Program. The main differences between the IV iron preparations are the ease of dissociation, safety profile and cost.

The sodium ferric gluconate complex dissociates the fastest, resulting in the lowest dosage requirements of the three compounds. Iron dextran has the highest incidence of adverse effects with a reported 8.7 per million doses between 1976 and 1996. Sodium ferric gluconate has an adverse effect incidence of 3.3 per million doses and ferric hydroxysaccharide has an incidence of 0 per 160,000 doses.

The ongoing questions regarding iron therapy are:

- Which preparation is best?
- Should iron be given over minutes, hours or weeks?
- Should IV iron be replaced intermittently or on an ongoing basis?
- What are the long-term risks of IV iron?

Molecular changes have brought improvements to EPO. The human EPO molecule has 165 amino acids, 2 sulphur cross links and N- and O- linked carbohydrates with sialic acid residues. The sialic acid residues are crucial to maintain the biological stability and activity of EPO. It is hypothesized that adding more carbohydrates to the molecule would enhance in vivo activity. Darbepoetin alfa is a novel erythropoeitin stimulating protein (NESP) that has more carbohydrates than the EPO molecule.

Darbepoetin alfa has a three-fold longer half-life than EPO. The half-life of darbepoetin alfa given subcutaneously is twice as long as darbepoetin alfa given intravenously. Multiple dose studies have shown that darbepoetin alfa demonstrates linear kinetics and dose not accumulate. Darbepoetin alfa dosed once weekly maintained hemoglobin at a comparable level to EPO dosed twice or thrice weekly. The adverse effects profile was similar with both drugs.

The future of treating renal anemias lies in the development of safer parenteral iron preparations and reduced injections of erythropoietin. This will enable better care of our patients.

Cont from RPN Chair – Jennifer Brick

A conference will likely take place annually in March and involve pharmacists, social workers, dietitians, nurses, technologists and nephrologists. RPN has set up a task force to begin with the organization and planning for this conference. Roza Berkowitz is spearheading this task force and can be contacted if anyone is interested in helping to plan for the future of this conference.

Baby steps are major accomplishments. I've come to realize this in my latest endeavours. For all of you overworked, under appreciated pharmacists trying to make a difference in your programs, don't give up. Pat yourself on the back once in a while (or send yourself to Cancun like I'm doing). Share your experiences with us all and then we can all learn and gain encouragement. Tapping onto our forum on the webpage, submitting articles to this newsletter, e-mailing or attending our educational meetings are all perfect opportunities to network.

In the meantime, think up a catchy logo or symbol we can use to represent RPN and forward it to myself by fax or e-mail. The winner will be announced in the next newsletter. Jennifer Brick

Articles of Interest

This section is also featured on the website www.renalpharmacists.net with on-line links to the abstract. The website is updated monthly. - L.S.

Cardiovascular disease determinants in chronic renal failure: clinical approach and treatment Francesco Locatelli et al. Nephrol. Dial. Transplant. 16: 459-468.

Difference in the homocysteine-lowering effect of folic acid in haemodialysis patients with and without occlusive vascular disease. Eric Descombes et al. Nephrol. Dial. Transplant. 16: 585-589

TISSUE PLASMINOGEN ACTIVATOR USE IN MAINTAINING PATENCY IN HEMODIALYSIS ACCESS CATHETERS Ted Walton, Heather Eyrich, Pirouz Daeihagh, and Michael V. Rocco Am J Kidney Dis 2001 37: 453-454 (Correspondance)

Cardiac Risk Factors and the Use of Cardioprotective Medications in Patients With Chronic Renal Insufficiency Marcello Tonelli et al. Am J Kidney Dis 2001 37: 484-489.

Strict Volume Control Normalizes Hypertension in Peritoneal Dialysis Patients Ali Ihsan Günal, Soner Duman, Mehmet Özkahya, Hüseyin Töz, Gülay Asçi, Fehmi Akçiçek, and Ali Basçi Am J Kidney Dis 2001 37: 588-593.

Beneficial influence of recombinant human erythropoietin therapy on the rate of progression of chronic renal failure in predialysis patients. Paul Jungers et al. Nephrol. Dial. Transplant. 16: 307-312

Effect of grapefruit juice on Sandimmun Neoral® absorption among stable renal allograft recipients. Claus Bistrup, Finn Thomsen Nielsen, Unni Elmer Jeppesen, and Hans Dieperink. Nephrol. Dial. Transplant. 16: 373-377.

Effects of Fixed Low-Dose Warfarin on Hemostatic Factors in Continuous Ambulatory Peritoneal Dialysis Patients Soon Bae Kim et al. Am J Kidney Dis 2001 37: 343-347.

Use of Erythropoietin Before the Initiation of Dialysis and Its Impact on Mortality Jeffrey C. Fink, Steven A. Blahut, Manoj Reddy, and Paul D. Light Am J Kidney Dis 2001 37: 348-355.

Prokinetic Agents Increase Plasma Albumin in Hypoalbuminemic Chronic Dialysis Patients With Delayed Gastric Emptying Rieta Silang et al. Am J Kidney Dis 2001 37: 287-293.

Efficacy and Safety of Iron Sucrose for Iron Deficiency in Patients With Dialysis-Associated Anemia: North American Clinical Trial Chaim Charytan et al. Am J Kidney Dis 2001 37: 300-307.

Cardiovascular Risk Factors in Renal Transplant Patients: Cyclosporin A *Versus* Tacrolimus. GERRY LIGTENBERG et al .J Am Soc Nephrol 12: 368-373

Intravenous iron for CAPD populations: proactive or reactive strategies? Donald Richardson, Cherry Bartlett, Helen Jolly, and Eric J. Will. Nephrol. Dial. Transplant. 16: 115-119

Efficacy and drug interactions of the new HMG-CoA reductase inhibitors cerivastatin and atorvastatin in CsA-treated renal transplant recipients. Lutz Render et al. Nephrol. Dial. Transplant. 16: 141-146

Cyclo-oxygenase-2 and renal function. Bernhard K. Krämer. Nephrol. Dial. Transplant. 16: 180-183.

Insights Into Glucocorticoid-Associated Hypertension. Andrew S. Brem Am J Kidney Dis 2001 37: 1-10.

Staphylococcal Peritonitis in Continuous Ambulatory Peritoneal Dialysis: Colonization With Identical Strains at Exit Site, Nose, and Hands Dante Amato et al. Am J Kidney Dis 2001 37: 43-48

Initial Treatment of Peritoneal Dialysis Peritonitis Without Vancomycin With a Once-Daily Cefazolin-Based Regimen Lawrence Goldberg et al. Am J Kidney Dis 2001 37: 49-55

Successful Use of Recombinant Tissue Plasminogen Activator in a Patient With Relapsing Peritonitis John M. Duch and Jerry Yee Am J Kidney Dis 2001 37: 149-153.

Evidence-based medicine in nephrology: identifying and critically appraising the literature. Marion K. Campbell et al. Nephrol. Dial. Transplant. 15: 1950-1955.

The efficacy of once weekly compared with two or three times weekly subcutaneous epoetin ß: results from a randomized controlled multicentre trial. Lars G. Weiss et al. Nephrol. Dial. Transplant. 15: 2014-2019

Disease of the Month: IgA Nephropathy: Recent Developments. JÜRGEN FLOEGE and JOHN FEEHALLY. J Am Soc Nephrol 11: 2395-2403.

Effects of hormonal replacement therapy on lipid and haemostatic factors in post-menopausal ESRD patients. Jung Sik Park et al. Nephrol. Dial. Transplant. 15: 1835-1840.

Albumin-corrected calcium and ionized calcium in stable haemodialysis patients. Catherine M. Clase, Geoffrey L. Norman, Mary Louise Beecroft, and David N. Churchill. Nephrol. Dial. Transplant. 15: 1841-1846.

Upcoming Conferences

Clinical Nephrology Meeting 2001
National Kidney Foundation
Orlando, Florida
April 17 – 22, 2001
Visit for more information
www.kidney.org

The Perfect Storm
CPhA
Halifax, Nova Scotia
May 27 – 29, 2001
Call 1-800-917-9489 or e-mail meetings@cdnpharm.ca for more information
Visit www.cdnpharm.ca too!

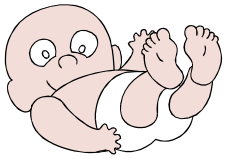
Diabetes Education for Health Care Professionals – Building Your Diabetes Knowledge
Kingston, ON
April 6 and 7, 2001
Contact Laura Hunter at lhunter@lakeridgehealth.on.ca or (905) 721-4767

Nephrology-Cardiology Annual Conference
Toronto, ON
May 26 and 27th, 2001
Contact Fran Paradiso-hardy via e-mail fran.paradiso-hardy@swchsc.on.ca or call (416)480- 6755. Invitations to be sent out soon.

Websites of Interest

www.uptodate.com

Most of us have heard of UpToDate from the nephrologists that we work with. It's a very resourceful reference with a CD version or on-line accessibility. Unfortunately it is quite expensive to become a subscriber. But take a look at their website. They have a few sample topic reviews that are helpful (i.e. Treatment of diabetic nephropathy, Angiotensin II receptor antagonists in the treatment of hypertension etc.) free of charge. If you also have a chance to check out the table of contents for the Journal of the American Society of Nephrologists you may be able to access other reviews through there.



Baby Boom!!

Congratulations to the following members on the safe delivery of their babies:

Gigi Wo (Lakeridge Health Centre, Oshawa, ON) had Joshua on January 25, 2001 at 4lbs 12oz, an early present for Mom and Dad.

Tessa Morris (St. Joseph's Hospital, Hamilton, ON) had Malcolm on February 8, 2001 weight 6lbs 11oz. Mom is a bit sleep deprived, but everyone is healthy.

Andrea Fox (our Secretary/Treasurer, St. Michael's Hospital, Toronto, ON) had a baby girl on February 27, 2001.

Classifieds

Logo Contest

Can you draw?? Are you creative?? If you are, we need your help!! RPN needs a LOGO!! We are having a contest. Please submit your design to Jennifer Brick by May 15,2001 (see contact information on the front of this newsletter). Let her know that you are interested in participating. There is a fabulous basket of Neutrogena products from Ortho-Biotech to be won!! (plus lots of recognition!)

Wanted

Articles for the next issue of The Renal Pharmacist!! Editorials, opinions, clinical cases etc. will be accepted. Do you have any new websites to share? Would you like to have a topic reviewed? Send in your submissions today. L.Sever@aci.on.ca or fax to (905)883-8122.

Notice – Address / Info Changes

Please forward any address / phone number changes to the Secretary / Treasurer, Andrea Fox. Her e-mail is foxa@smh.toronto.on.ca We are constantly updating our membership mailing list. Thank you.

A great big Thank You! To all of those who contributed (especially the new contributors!!) and to Ortho Biotech for printing and distributing the newsletter!

Deadline for submissions for next Newsletter is May 30,2001. Please e-mail or contact Lisa Sever, Communications Co-ordinator, using the contact information on the front of this Newsletter.