

Family Physician Airways Group of Canada

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Report from the Chair

The FPAGC executive have been busy, here and abroad in working towards best care for respiratory disease in Primary Care. A meeting in Las Vegas in June on "Advances in treating and managing the cost of respiratory disease" had a presentation on the Canadian perspective. This meeting will be reviewed later in the issue. The ERS was in Copenhagen in September, and I believe that at least one of our executive attended. Dr. Hauptman went to Belgium in September to assist in their production of a spirometry course for Family Physicians. Dr. Lowry and myself will again be going to the American Academy of Family Physicians to teach spirometry as well as other respiratory devices.

We have also been invited to present at the Ontario College of Family Physicians annual scientific meeting in Toronto in November. Members of our Executive (Tony Ciavarella and myself) will be presenting at ASED 7 in Calgary in November 2005 (more on this later).

This issue will focus also on a number of articles regarding infectious diseases. One on the relationship of opportunistic

infections with the use of TNF alpha antagonists highlights the risks of immune system manipulation.

A review of a common drug Erythromycin will also be included.

In the same breath, we will review the newest asthma medication Omalizumab. This is an Anti-IgE molecule to be added to our add-on therapies for management of moderate to severe allergic asthma.

Our Annual general meeting will be held in conjunction with the ASED 7 meeting in Calgary. We would love to see you there on November 18; please call me or email us at www.fpagc.com by November 8th if you would like to come for dinner and some respiratory education.

ALAN KAPLAN, MD CCFP(EM)
CHAIR, FPAGC

The FPAGC partners with the International Primary Care Respiratory Group and the IPCRG invites you to consider attending the third world congress by Primary Care Physicians for Primary Care Physicians around the world. Executive of your FPAGC are heavily involved in the presentation of this meeting, and someday we hope to bring this meeting to Canada. Please find the link below, or contact us directly at the FPAGC if you require assistance.

The IPCRG is pleased to announce a new website for the IPCRG's 3rd World Conference 8-11 June 2006 in Oslo, Norway on the theme "Respiratory Disease in Primary Care – Quality of care".

Bookmark www.theipcr.org/oslo2006 where you will find the latest information on the conference programme and committees, online registration, sponsorship opportunities and contact details.

Omalizumab (Xolair)

Alan Kaplan, MD CCFP(EM)

This is the first biotechnology drug created for the treatment of allergy induced asthma. It is a recombinant monoclonal antibody (rhuMAB-E25) which works by binding IgE to its receptor. This action blocks the interaction between IgE and the receptors on mast cells and basophils and by doing this, prevents the release of the mediators of the immune response (histamine, leukotrienes, and cytokines), thus preventing bronchospasm. It is produced by a Chinese Hamster Ovary cell suspension culture.

It is given by subcutaneous injection, once or twice per month depending on the dose which is calculated based on weight and serum IgE level pretreatment. Side effects include injection site reactions (up to 45 percent), viral and upper respiratory tract infections (~20%), headaches (15%), sinusitis (16%), pharyngitis (11%), and urticaria (all except the urticaria being equal in the placebo groups). The injection site reactions usually occur within one hour of injection and may last up to eight days, but they do decrease in frequency with repeat injections. Urticaria will respond to antihistamines. Drop out rate in studies were 2.8% vs. 4.8% in placebo treated patients.

Safety issues are really twofold.

Anaphylactic reactions including urticaria and angioedema (anaphylaxis in only 3 of 3854 patients) may occur within two hours of the injection, and as such, the patient must be in a physician monitored area with appropriate treatments available. Use of other biologic

agents have been related to malignancies, and this is a concern. The evidence is currently thin, with the rate of any malignancy being 0.5 percent of patients cf. 0.2 percent of controls.

There are no known drug interactions. It is a pregnancy category B drug, IgG does cross the placental barrier and is also excreted in human milk. It is metabolized by IgG clearance processes, ie., it is bound to IgG and eliminated through the liver. It is very rare to develop antibodies to this medication (1 of 1723 patients).

Studies have shown that the use of this medication can allow the reduction of the total daily corticosteroid dose by at least 50% and in some, stop it entirely! Improvements in Quality of Life as well as decreased unscheduled outpatient (NNT = 7) and ER visits (NNT = 50) and hospitalizations (NNT = 50) were shown.

To qualify for this medication, one must have at least a history of positive skin tests, a measurable IgE level, and uncontrolled asthma with inhaled corticosteroids. The dose is calculated by patient weight and IgE levels, and given subcutaneously every 2-4 weeks depending on volume (no more than 150 mg per injection site).

This product is provided as a single use preparation that has to be reconstituted with 1.4 ml of sterile water, taking 15-20 minutes to dissolve. There are no preservatives, and should be used within 4 hours (or stored at 2-8 degrees C for up to 8 hours if necessary).

Reduction of steroids should be done gradually under physician supervision, and not stopped suddenly.

Cost:

Each vial which delivers 150 mg/1.2 ml after reconstitution is \$600 Canadian. The company assists the physician with a program called the XHALE program

which will assist in dealings with insurance companies, education, dispensing, local XHALE clinics, and reports to physicians on compliance.

Summary:

Omalizumab or Xolair (Novartis) is a novel immunomodulatory therapy for control of symptoms in patients (aged 12 and up) with moderate to severe asthma as add on therapy whose symptoms are not controlled with conventional therapy, or in whom a dose reduction in steroids is required/desired. It is quite costly and must be given in a physician's office due to the risk of anaphylaxis, thus likely limiting it currently to only a small percentage of our asthma patients. It is not currently approved for any other allergic condition like rhinitis (although studies have shown its benefit in seasonal allergic rhinitis).

References:

1. Milgrom H, Fick RB et al. Treatment of allergic asthma with monoclonal anti-IgE antibody RhuMAB-E25 Study group. *NEJM* 1999;341:1966-73
2. Walker S, Monteil M et al. Anti IgE for chronic asthma (Cochrane Review) Cochrane Library Issue 1, 2004
3. Finn A, Gross G et al, Omializumab improves asthma-related quality of life in patients with severe allergic asthma, *J Allergy and Clin Immunol* 2003;111:278-84
4. Corren J, Casale T, et al. Omalizumab reduces asthma related emergency room visits and hospitalizations in patients with allergic asthma. *J All Clin Immunol* 2003;111:87-90
5. Current Drug Topics, May 2005, Volume 24, Number 5
6. Holgate ST et al. *Clin Exp Allergy* 2004;34(4):632-38

TNF antagonists

Wallis RS et al. *Granulomatous infectious diseases associated with tumor necrosis factor antagonists. Clin Infect Dis* May 1, 2004;38:1261-5

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TNF antagonists are being used much more routinely and with great success and improvement in quality of life for patients with chronic inflammatory conditions. TNF is needed for the formation of granulomae, which is the key defense mechanism for intracellular pathogens. Use of TNF antagonists

is associated with an increased risk of granulomatous infections.

TB was the most commonly found granulomatous infection, followed by histoplasmosis, candidiasis, listeriosis, non-tuberculous mycobacterial infections and aspergillosis. These can happen within the first 90 days of treatment, which would suggest the reactivation of latent infections.

The use of TNF antagonists (Infliximab, Etanercept, Adalimumab) are increasing. You may see your patients before the treatment is started and may want to consider doing some screening for latent infections such as a CXR or TB test. Be alert also, after treatment commences, for unusual presentations of respiratory infections with less common organisms.

ALAN KAPLAN, MD CCFP(EM)

Safety of Inhaled steroids in children

Bacharier LB, et al. Long term effect of budesonide on hypothalamic-pituitary-adrenal axis function in children with mild to moderate asthma. *Pediatrics* June 2004;113:1693-9

Concerns continue regarding the safety of inhaled steroids in children. This study looked at the long term effects of budesonide in a subset of children enrolled in the CAMP program. Serum cortisol before and after ACTH administration and urinary cortisol were measured at baseline, 12 months and 36 months. Three groups were randomized; placebo, Nedocromil 16 mg per day, or Budesonide 400 mcg daily.

Results showed no suppression of the HPA axis response to ACTH.

Once again we have a study reassuring us that inhaled steroids are safe for long term administration in children. Remember, however, that we still strive for the lowest dose long term to attain control.

ALAN KAPLAN, MD CCFP(EM)

Erythromycin: Be careful!!

Ray WA, et al. *Oral erythromycin and the risk of sudden death from cardiac causes. NEJM* September 9, 2004;351:1089-96

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Erythromycin and other macrolides are primarily metabolized by the Cytochrome P450 3a pathway which can be inhibited by a number of commonly used medications, thus potentially increasing its toxicity. Erythromycin has been known to prolong cardiac repolarization and has been implicated in causing Torsade de Pointes, a fatal arrhythmia. Medications that inhibit the CYP3A include ketoconazole, itraconazole, fluconazole, diltiazem, and verapamil.

A study of patients in Tennessee Medicaid patients reviewed the risk of sudden death in current users of Erythromycin vs. Amoxicillin. The overall risk of sudden

cardiac death was higher for Erythromycin vs. Amoxicillin users (incident rate ratio 2.01, 95% confidence interval 1.1-3.8), ie., one additional sudden cardiac death per 1,000 person-years use.

Bottom line:

This interaction and potential arrhythmogenic issue cost us the use of, in my opinion, an important medication in Prepsid. Our profession, and the pharmacists, should have been more vigilant in our medication combinations. Most pharmacies have automatic physician notifications for drug interactions now, so you will likely get a phone call about this if you prescribe Erythromycin or Clarithromycin (the same does NOT hold true for Azithromycin or Telethromycin however) to a patient on Verapamil or Cardizem, so do not ignore it. Increasing your risk of a rare but lethal event by five fold is something to be avoided.

ALAN KAPLAN, MD CCFP(EM)

Case Study

Jack,

55 years old with a history of hypertension, and angina. Cardiac catheterization revealed a single vessel lesion which was amenable to angioplasty and he has been pain free since. He was maintained on ECASA 81 mg daily, Metoprolol 100 mg BID, and Simvastatin 40 mg qhs. He is a non smoker.

He complains of nasal congestion that has been constant for the last 18 months and is bothering him more recently. There have been no recent changes in his environment at home or work, no pets, no seasonal changes, no eye symptoms, no asthma or family history of asthma or atopy. He has occasional cough in the morning upon arising associated with nasal congestion. There is no itching or sneezing. His smell is normal.

On exam his chest is clear, his nasal turbinates are swollen a little. Spirometry is normal.

What would you do next?

He was given nasal steroids which gave him a little relief, but he was still congested.

We discussed allergy testing and realized that this was **contraindicated while on B blockers**, so we debated between specific IgE serology, which is expensive or the gradual reduction of his B blockers to allow conventional skin testing, which he chose.

What happened?

He was tapered off his B blocker and replaced with a non-dihydropyridine calcium channel blocker. ACE inhibitors were considered, but held under the circumstances. He had no recurrence of his angina, his blood pressure was controlled and when he returned a few weeks later for his allergy tests, his congestion was better. His allergy tests were negative, indicating that the nasal congestion was caused by the B blocker.

Teaching point:

Just as in wheezing, where not all that wheezes is asthma, all that is nasal congestion is not allergic rhinitis. Remember that B blockers and vasodilating antihypertensives can cause or exacerbate nasal congestion.

ALAN KAPLAN, MD CCFP(EM)

Exhaled Nitric Oxide, is this our measurement with which to follow Asthma?

Smith AD, et al. Use of exhaled Nitric Oxide measurements to guide treatment in chronic asthma. NEJM 2005 May 26;352:2163-73

We continue to struggle with the decision as to when to titrate the dose of inhaled steroids. We use symptoms, peak flow, spirometry and have heard of induced sputum analysis. We are looking for an easy and reliable tool. This study from New Zealand looked at almost 100 patients with persistent asthma and adjusted their dose of inhaled steroid

(fluticasone propionate) based on either conventional guidelines (symptoms and lung function) or by exhaled nitric oxide. After a run in phase, they were seen every two months for adjustment of their dose of fluticasone.

At the end of the study, it was found that those patients using Nitric Oxide for adjustments ended up on a significantly lower dose of ICS (370 µg/day vs 641 µg/day) without compromising asthma control (night wakening, pulmonary function, bronchodilator use, or Prednisone use). Exacerbations were 46% less also, but this did not meet statistical significance.

Comment:

A non-invasive accurate measurement of lung inflammation that will allow accurate titration of ICS to the lowest effective dose; no longer a pipe-dream!

ALAN KAPLAN, MD CCFP(EM)

What about LTRAs for acute asthma?

Silverman RA, Nowak RM, et al. Zafirlukast Treatment for Acute Asthma; Evaluation in a randomized double-blind multicenter trial. *Chest* 2004;126(November):1480-9

There has been work done on the value of IV Montelukast by Dr. Cammargo out of Harvard. This study looks at the addition of oral Zafirlukast when started in the ER on both time in the ER and relapse rates.

This study enrolled patients from 12-65 years old who presented with acute asthma and who were discharged after a four hour ER stay. Three arms included placebo, Zafirlukast at the normal dose of 20 mg and at the higher dose of 160 mg. The non-placebo patients were continued on Zafirlukast at 20 mg BID for the next 28 days.

The study revealed that those receiving Zafirlukast had fewer relapses than those treated with placebo (23.6% vs. 28.9%). Patients treated with Zafirlukast 160 mg had significant improvement in their FEV₁ and dyspnea in the ER as well as during the outpatient period.

Study conclusions:

One dose of Zafirlukast 160 mg po in the ER decreased the rate of extended care in the ER and Zafirlukast 20 mg BID decreased the risk of relapse over a 28 day outpatient management system.

Review:

Currently the ER protocols for acute asthma management do not include the use of an LTRA. This study adds interest to the idea, especially in those who are clearly not controlled on their current regimen.

HELIOX, does it work in COPD?

Andrews R, Lynch M., Heliox in the treatment of chronic obstructive lung disease. *Emerg Med J* 2004 (November):670-5

Heliox has the ability to change turbulent flow to laminar flow, allowing the traversal of flow through narrowed airways; this has been proven with children with narrowing airways (especially upper airways). The data according to a Cochrane analysis is not great for asthma. This study looked at severe COPD exacerbations in those approaching the need for mechanical ventilation.

This study is a meta-analysis of studies of patients greater than 18 years with a COPD exacerbation and a rising PaCO₂ as inclusion and with a final clinical outcome of intubation indicating failure of therapy.

The authors found that there was a paucity of studies, but few indicated a reduction as high as of 82% in intubation for exacerbations of COPD. They felt, however, that the studies were not well done and that more information and better studies are needed.

Comment:

So, just as in acute asthma, the studies are not great, but facing an intubation, it may well be something to consider including in your armamentarium for acute respiratory distress as a last ditch resort to keep the patient off the ventilator.

Does treating the environment work?

Morgan WJ et al. Results of a home-based environmental intervention among urban children with asthma *NEJM* 2004 Sept 9;351:1068-80

Sheffer AL. Allergen avoidance to reduce asthma-related morbidity. *NEJM* 2004 Sept 9;351:1134-6

Two studies below in seven US cities looked at an aggressive home intervention including five mandatory and two optional home visits during which families were taught how to avoid environmental exposure to allergens. This included cockroach education, impermeable covers to bedding and the provision of vacuum cleaners fitted with particulate air filters.

All measures were better in the treatment group including asthma symptoms, missed school days, ER visits in the two years (of the two studies) although there was no difference in hospitalization rates.

Comment:

This was expensive, but perhaps worth a look in the high risk recurrent ER visiting child. I think the greatest value of this study is to show us that controlling the environment WORKS, and we should spend a little more time emphasizing it, or referring on to a Certified Asthma Educator to allow counseling on the topic.

Asthma Awareness & Screening Program for Canadian Schools

Dr. Anthony L. Ciavarella B.A., M.A., M.D.

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This program is an academic experiment using both active and passive asthma screening methods for students in Canadian Schools.

The Asthma Awareness & Screening Program for Canadian Schools has been going through development since 2000. The revisions have been based on the lessons learned from field-testing over 2500 students from 8 schools in 2 Canadian Provinces (British Columbia and Ontario). This program is in fact just a special class in the present Physical Education (PE) curriculum. This program uses the PE class to increase asthma awareness via both didactic and hands-on learning processes. The students are also given an opportunity for Asthma self-discovery using a 7-minute run as the Asthma trigger and Peak Expiratory Flow as the measured parameter.

The Adult Asthma Consensus Guidelines Update 2003¹ lists education as a foundation in the 'continuum of asthma management'.

The Canadian branch of ISAAC² reported that the prevalence of asthma in the adolescent (ages 13-14) population in the cities of Hamilton Ontario and Saskatoon Saskatchewan as 19.2% and 12.2% respectively. Asthma is very prevalent in Canada.

As the main function of the student population, is to spend about 10 months of their time in school each year, why not conduct an asthma educational program as part of the school curriculum? Exercise is a known trigger for asthma. It is also an integral part of the physical education (PE) class. The established PE class can be used to both teach and test for asthma. All of the teaching is done in Power Point format using mostly pictures. The learning format is didactic and interactive with hands-on student self-awareness.

The asthma testing is done both actively (using exercise as a trigger i.e. the Free Running Asthma Screening Test) and passively with a questionnaire (the American College of Asthma Allergy and Immunology Student Questionnaire). With a computer, a projector, a screen and a microphone, the asthma educator turns the gym into a classroom and the PE class into an asthma teaching and testing laboratory.

This Asthma Awareness & Screening Program for Canadian Schools has the following format:

1. Asthma is first de-mystified. Measuring breathing is considered equivalent to measuring or scoring any athletic activity. Olympic Caliber athletes are used as examples of athletes with exercise induced asthma (prevalence among winter Olympic athletes is 23%). They excel in sports despite having asthma. Students are asked to consider their breathing and lungs as part of the athletic equipment. 'Taking care of yourself' is taught to be just as important as taking care of any other piece of gear.
2. Asthma is defined as a genetic predisposition to develop hypersensitivity (bronchial hyper-reactivity) to environmental triggers and irritants that can cause problems with breathing when re-exposed to environmental triggers and irritants. Over time (according to P.J. Barnes) asthma symptoms & severity are variable depending on these triggers and irritants (think of the old amusement park wooden roller coasters). We do not choose to have asthma. It is something that happens to us. It is NOT some kind of psychological character flaw.
3. Respiration anatomy and physiology is taught with specific application to asthma pathology under the following topics:
 - a. respiratory system anatomy including the air delivery system, the air exchange surface, the lung cleaning system (mucociliary escalator).
 - b. respiratory physiology showing how all these systems work together.
 - c. respiratory asthma pathology of the air delivery system.
 - d. describing asthma as inflammation in the mucociliary escalator using the 'grass fire' analogy for inflammation to describe the pathology in the respiratory epithelium.
 - e. describe asthma symptoms in terms of air flow limitation using bronchospasm symptoms as the 'fire alarm' analogy being set from the 'grass fire'.
 - f. describe treatment as 'putting out the fire' (ICS controllers) not just 'turning off the alarm' (β_2 -agonist reliever).
4. All students are taught to use a simple Peak Expiratory Flow (PEF) meter.
5. All the students then measure and discover their own personal best PEF.
6. An organized 7-minute run is used as the activity for the Physical Education class of the day.
7. After running, PEF is measured and recorded at specific intervals for up to 15 minutes.³

8. While waiting for post running measurement and recording of PEF, the asthma directed questionnaires are fill out.⁴
9. Everything can be scored by the students with results being seen immediately.
10. Anyone with a positive asthma screen could be offered an extended opportunity for self asthma awareness and encouraged to visit their family doctor for any asthma directed needs.
11. Take care not to use the word 'test' in any of the above. No student likes to be tested on anything, especially something that you might fail if you have asthma.

The results of the 2003 version of this program were presented at the Canadian Pediatric Society meeting in Montreal in June, 2004. Our findings show that Asthma Screening in Canadian schools is feasible.⁵

If anyone would like to conduct this program in your community, please let me know.

Asthma in Pregnancy: a review

Busse WW; National Heart, Lung, and Blood Institute; National Asthma Education and Prevention Program Asthma and Pregnancy Working Group. NAEP expert Panel report. Managing asthma during pregnancy: recommendations for pharmacologic treatment—2004 Update. J Allergy Clin Immunol. 2005;115:34-46.

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The recently updated National Institutes of Health (NIH) guidelines for the management of asthma during pregnancy are very similar to the 2002 update for the management of adults and children. The treatment goal for the pregnant asthmatic patient is to provide optimal therapy to maintain control of asthma for maternal health and normal fetal maturation. It is safer for pregnant women with asthma to be treated with asthma medications than to have asthma symptoms and exacerbations. Asthma that is poorly controlled leads to SGA, premature labour, toxemia and other undesired outcomes. This article is by Bill Busse, a US respirologist whom I have had the pleasure of presenting with on a number of occasions.

References:

1. C Lemière, T Bai, M Balter, et al, on behalf of the Canadian Adult Consensus Group of the Canadian Thoracic Society. Adult Asthma Consensus Guidelines Update 2003. *Can Respir J* 2004;11(Suppl A):9A-18A.
2. Brian F. Habbick, et. al.; Prevalence of asthma, rhinitis and eczema among children in 2 Canadian cities: the International Study of Asthma and Allergies in Childhood (ISAAC); *CMAJ* 1999;160:1824-8
3. Randolph, C; The Free Running Athletic Screening Test; *Annals Of Allergy, Asthma, & Immunology*; Volume 81, October, 1998, page 275a - 275g
4. Student Questionnaire; ACAAI: Ann Allergy, Asthma Immunol. 2004;93:36-48.
5. Poynter A.J. and Ciavarella A. L. "Free Running Asthma Screening Test in Canadian Schoolchildren"; Abstract: Canadian Pediatric Society, 81st general meeting, Montreal Que. June 2004.

Recommendations:

Short-acting inhaled beta₂-agonists (SABA) are safe and effective in pregnancy and are recommended as quick-relief medication for treating symptoms as needed in patients with intermittent asthma. Salbutamol (Albuterol is the name in the USA) is the preferred SABA because it has been extensively studied.

The preferred treatment for long-term control medication is daily inhaled corticosteroids (ICS). These drugs have proven effectiveness and safety in pregnant women with no increased risk of adverse perinatal outcomes. Budesonide is the preferred ICS because it has been the most studied in pregnancy.

Cromolyn, leukotriene-receptor antagonists, and theophylline are listed as alternative but not preferred therapies.

There are limited safety and efficacy data in pregnant women for combination therapy (ICS plus long-acting beta₂-agonist [LABA]), but extensive studies show safety and superior efficacy in nonpregnant patients.

Thus, either moderate-dose ICS or combination ICS plus LABA is recommended for moderate persistent asthma.

Family Physicians must work in concert with the obstetric care provider in asthma care, including monitoring of asthma status during prenatal visits.

Due to the potential to lead to severe problems for the fetus, asthma exacerbations during pregnancy should be managed aggressively. Remember that the Oxygen dissociation curve gets shifted to the right, causing a decrease in fetal Oxygen with small drops in maternal Oxygen!

The complete update can be obtained at <http://www.nhlbi.nih.gov/health/prof/lung/asthma/astpreg.htm>

CNAC Meeting May 6/05 Toronto, Ontario

Alan Kaplan, MD
CCFP(EM)

Certified Asthma Educators

Many of the outpatient asthma educators seem to be:

- a) unavailable
- b) unknown to Primary Care
- c) unlisted
- d) underutilized

A recent Google search for Canadian Asthma Educators revealed how difficult it was to actually access a current list of Asthma Educators (including CAEs) for a practitioner or a patient. The best currently is by the Asthma Society (www.asthma.ca). We are currently still somewhat behind the times as the list is not up to date. CNAC Board has recognized this as a priority and the education committee will partner with the Asthma Society to work on a process to update the list. CAE websites and newsletters will hopefully facilitate the process. There are currently 653 CAEs in the data base. We continue to provide the CAE exam; 75 people took the exam last year with a pass rate of 77%.

Family Physicians recognize the need for Asthma Education which has been supported by the recent Asthma Guideline update. Do they know where the closest clinic is? Do they want or feel they need the help in the first place (they probably do need the help!!)? It is quite clear from recent studies that less than 11% of patients have written asthma action plans, and this has been proven to be effective to prevent morbidity.

Stats have shown that there has been a plethora of 'firings' of educators in hospitals as budgets tighten and outpatient programs are often the first to go.

CNAC will attempt to facilitate the creation of a link which is up to date for allowing the ease of finding a local educator.

CNAC has created a certification examination to ensure the consistent high level of education for our asthmatic patients, to be done uniformly across the country. There has been discussion with the COPD Alliance to align and create a **Certified Respiratory Educator** to include COPD

education. We will do it as the exam process has already been established.

Dr. Felix Li of Health Canada presented data from up to 2001 showing the continued fall of both hospitalizations and mortality. We seem to be doing better than our US colleagues with the mortality rates being 0.84 per 100,000 in Canada and 1.5 per 100,000 in the USA.

Pediatric asthma guideline document to be published soon in the CMAJ and dissemination plans are being worked on. Issues around this were reviewed and debated. Respiratory guidelines, as a whole, have also been considered for the process.

ASED 8 will be in Halifax in 2007.

ASED 7

This meeting will be held in November from the 17-19th at the Hyatt Regency Calgary in Calgary, Alberta. The FPAGC Executive will be involved in a number of the presentations and currently I am booked to debate Dr. Fitzgerald on GOAL vs. SiT therapies. Mark is a respirologist from Vancouver who has been the principal investigator on studies on both of these molecules and a Canadian respiratory leader. It is a challenge that I am looking forward to. Feel free to look at the program; there is a lot of information for a Family Physician interested in Asthma. You can register at www.cnac.net.

The FPAGC is having its annual general meeting on the Friday night (November 18) and any or all of you are welcome to join us for dinner, a presentation, and the meeting. I ask only that you pre-register with Glyn Smith at admin@fpagc.com.

See you there!

Asthma 1 2 3 Control Kit

Dr. Anthony L. Ciavarella B.A., M.A., M.D.

It seems that far too many asthma patients use their asthma meds for a few days and then stop when the symptoms are not so bad, only to start up again and stop again according to their own ideas of asthma control.

Could we improve on patient compliance and asthma control with a patient directed Self Assessment Monitor (SAM) of PEF and a physician directed Asthma Control Kit?

There is a lot of data on controlling asthma and a lot of advice on treating asthma with the lowest possible dose of medicine. There is little data on the time frame for dose reduction and few tools available for safely guiding our dose reduction decisions.

Would a Guideline Directed Asthma Control Kit help us to reduce asthma meds to a minimum while still maintaining control? Would a patient controlled Self Assessment Monitor (SAM) charting PEF, with Guideline directed symptom scoring, producing a physician directed Asthma Action Plan, be much more feasible if all of this was in one compact kit?

The proposed kit is called the "Asthma 1 2 3 Control Kit" and is based on the Canadian Asthma Consensus Guidelines 2003. It contains the following sections:

A. Materials

- 1 small 5 1/2" X 8" 3-ring binder
- 1 'Personal Best' PEF Meter
- 2 1-way-valve mouth pieces
- 1 calculator
- 1 pen

B. SAM is a patient controlled Self Assessment Monitor, charting home am PEF over 30 days.

C. Asthma 1 2 3

1. Asthma 1:

Asthma Action Plan based on SAM and Guideline based symptom assessment.

2. Asthma 2:

a. A **Treatment** Chart listing interventions over time as generated by the Action Plan.

b. Guideline based Asthma **Symptom** Assessment over the past week: (day symptoms, night symptoms and exercise tolerance).

c. Guideline based Asthma **Events** over the past year: (absenteeism, asthma exacerbations & health services utilization).

3. Asthma 3:

Triggers and Co-morbidity assessment based on the acronym **AIR WE Breathe**. Allergen, Irritants, Respiratory tract infections, Weather changes, Exercise emotion, esophageal reflux, and Beta blockers (you can also throw in ASA, Allergic Rhinitis and ACE under 'A', along with Rhinosinusitis under 'R')

The "Asthma 1 2 3 Control Kit", and 'SAM' are in β version and are set for debut with my Journal Club on 15 September 2005 in Langley, British Columbia. An updated version will be presented at our FPAGC meeting at Calgary in November 2005. Your feedback and suggestions will be very helpful in moving this project forward.

In 2006, there will be upcoming clinical trials under the auspices of FPAGC. We hope to validate the Asthma 1 2 3 Control Kit and measure its efficacy in helping both the patient and the physician in achieving and maintaining asthma control with minimum medication.

Antibiotic choice makes little difference in CAP

I received the following description of a study from POEMs, an online database. I reproduce it for you here and will comment below,

Clinical question:

In the treatment of patients with community-acquired pneumonia, is there a difference among antibiotics?

Bottom line:

Strange, but true: Oral beta-lactam antibiotics—moxicillin, amoxicillin/clavulanate (Augmentin), or a cephalosporin—are as effective in the treatment of community-acquired pneumonia as antibiotics active against atypical pathogens, even in patients infected with *Mycoplasma pneumoniae* or *Chlamydia pneumoniae*. These old standbys can be used instead of the more expensive drugs for most patients. *Legionella* infection still requires treatment with an antibiotic effective against atypical pathogens, but in these studies only 1.1% of the patients with nonsevere pneumonia had *Legionella*. These results are backed up by similar findings from clinical practice (Hedlund J, et al. *Scand J Infect Dis* 2002; 34:887-92). (LOE = 1b)

Reference:

Mills GD, Oehley MR, Arrol B. Effectiveness of beta lactam antibiotics compared with antibiotics active against atypical pathogens in non-severe community acquired pneumonia: meta-analysis. *BMJ* 2005; 330:456-60.

Study design:

Meta-analysis (randomized controlled trials)

Setting:

Various (meta-analysis)

Synopsis:

We have to treat some patients with community-acquired pneumonia for atypical bacteria, just in case, don't we? This

question was answered by the authors of this meta-analysis. They identified 18 studies comparing a beta-lactam antibiotic with an antibiotic active against the atypical pathogens *Mycoplasma pneumoniae*, *Legionella* species, and *Chlamydia pneumoniae*: macrolides, fluoroquinolones, or ketolides (eg, telithromycin [Ketek]). They used rigorous methods to identify the studies, searching 3 databases for articles published in any language, searching the reference lists of review articles and retrieved studies, and including unpublished research conducted by pharmaceutical companies. Two reviewers independently screened the studies for inclusion. On average, the 6749 patients in the clinical trials were younger than the typical patient with pneumonia (in most studies the average age was between 40 and 55 years) and had a better risk profile. Neither macrolides, ketolides, or fluoroquinolones were superior to beta-lactam antibiotics. When analyzed separately by type of antibiotic, neither macrolides nor fluoroquinolones were superior, either with regard to cure or mortality rates at the time specified in the study, usually end of treatment or at 10 days. The speed of response, relapse, or length of stay were not compared. Here's a surprising outcome: There was no difference between beta-lactams and the other drugs in patients who had *M. pneumoniae* or *C. pneumoniae*. The numbers of patients in these subgroups was small: 211 patients had *Mycoplasma* infections and 115 had *Chlamydia* infections. The antibiotics active against atypical pathogens were significantly better at producing clinical cures in the treatment of 75 patients with *Legionella* (relative risk = 0.4; 95% CI, 0.19 - 0.85).

Comment:

I still remember the last patient who died unexpectedly with pneumonia. He was elderly with co-morbidities who was treated with Cephalosporins alone as we thought it would be terribly unlikely for him to have *Mycoplasma* etc. It made me stop and realize that it is really hard to know for sure. I do not trust Meta-Analyses, as the data going in must be very rigid and reproducible from each study to be able to give us an answer. Also, the numbers studied are quite small.

I do not believe that this meta-analysis does that, and I do not believe their conclusion.

ALAN KAPLAN, MD CCFP(EM)

The Committee

CHAIR

ALAN KAPLAN
17 Bedford Park Avenue
Richmond Hill, ON L4C 2N9
Bus: 905-883-1100
Fax: 905-884-1195
FOR4KIDS@sympatico.ca

VICE CHAIR

STEVE COYLE
59 Ramsgate Bay
Winnipeg, MB R3P 0V3
Bus: 204-831-5205
Fax: 204-889-4093
smoncoy@shaw.ca

SECRETARY/TREASURER

ROBERT HAUPTMAN
Salvus Family Medical Clinic
62 -143 Liberton Drive
St. Albert, AB T8N 6A7
Bus: 780-460-4562
Fax: 780-460-4550
docrob@telusplanet.net

DIRECTORS

JACQUES BOUCHARD
Clinique de medecine familiale
de la Malbaie
515 rue St-Erienne
La Malbaie, PQ G5A 1WT
Bus: 418-683-8393
Fax: 418-687-9024
jacques.bouchard@videotron.ca

ANTHONY CIAVARELLA
27107 Fraser Highway
Aldergrove, BC V4W 3R2
Bus: 604-856-3321
Fax: 604-857-2231
ciavarella@medscape.com

ALAIN COUET
128 Mayburry
Gatineau, QC J9A 2B8
Bus: 819-685-9110
Fax: 819-685-0406
acouet@magma.ca

GORDON DYCK

Clearspring Medical Clinic
8-178 PTH 12N
Steinbach, MB R5G 1T7
Bus: 204-326-6111
Fax: 204-326-6952
gdyck4boys@hotmail.com

JOHN LI

1789 Mountain Road, Suite 207
Moncton, NB E1G 1A7
Bus: 506-859-8696
Fax: 506-383-8224
drjohn.li@nb.aibn.com

JOSIAH LOWRY

333 Mary St.
Orillia, ON L3V 3E9
Bus: 705-327-3330
Fax: 705-327-7675
jblowrt@rogers.com

JOHN REA

104-348 Muskoka Rd 3 N
Huntsville, ON P1H 1H8
Bus: 705-789-2355
Fax: 705-789-1051
reajc2@hotmail.com

DOUGLAS TWEEL

199 Grafton St
Charlottetown, PEI C1A 1L2
Bus: 902-629-8843
Fax: 902-628-6024
dt_gcric@hotmail.com

ROBERT WOODLAND

Woodland Medical Clinic,
15 Rowan St.
St. John's, NL A1B 2X2
Bus: 709-579-2324
Fax: 709-579-3419
woodlandclinic@nfld.net

ADMINISTRATION

GLYN SMITH
132 Warwick Road
Edmonton, AB T5X 4P8
Bus: 866-406-4345
Fax: 780-475-7968
admin@fpagc.com
www.fpagc.com

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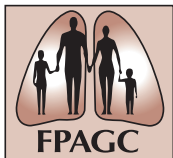
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The Family Physicians Airways Group of Canada is committed to helping those with airway diseases lead a full life. The group is dedicated to helping all family physicians maintain and increase their skill in assisting those with asthma and COPD. The strategy of the Group is to maintain a speaker bank, a data base, and practical tools to help physicians attain in these skills.

The opinions expressed in this newsletter are those of the authors, and not necessarily those of the Family Physicians Airway Group of Canada.

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Return Undeliverable Canadian Addresses to:

Family Physician Airways
Group of Canada
132 Warwick Road
Edmonton, AB T5X 4P8