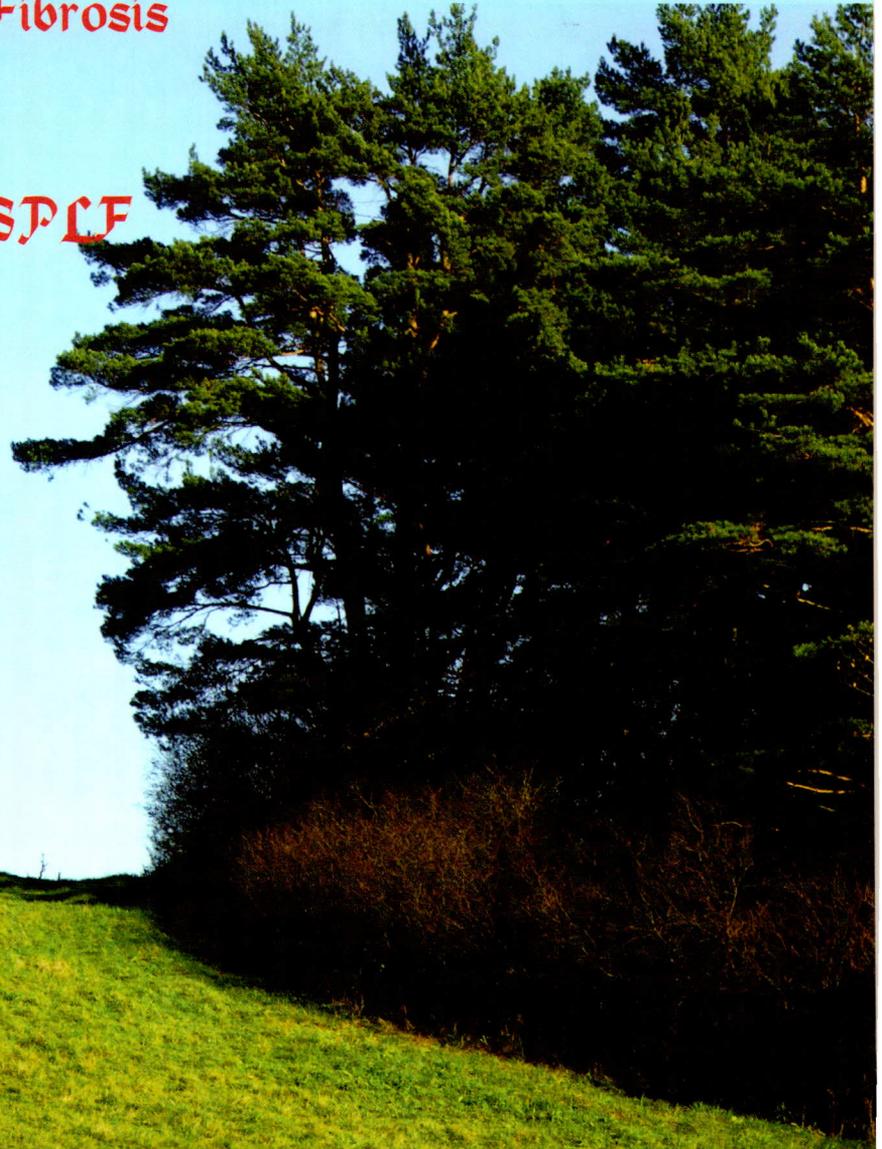




INSPIRE

الجمعية اللبنانية للأمراض الصدرية
عدد رقم ٥ - حزيران ٢٠٠٨

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Edito

LIFE MUST GO ON Our efforts will

Dear colleagues, though we went through some very difficult and grueling times, the sun is dawning once more on our beloved country. Once more our resolve is put to the test. A challenge I remain confident we will win, as we are now witnessing the rebirth of the phoenix from its ashes.

Our Annual Meeting was quite a success, despite the well known odds. Some 150 participants, of which 40 French colleagues, enriched the meeting with their valuable lecturers, comments and presence. This year we focused on smoking-related health problems and on ways to combat the most important and preventable cause of death. We have had numerous successful TV & paper interviews where we increased the public awareness of this health calamity. Our Gala Dinner was quite a success, as we listened to the fine tunes of Jihad Akl, while enjoying each other's company in an informal setting!

We have some great and ambitious plans for the future. Our next Annual Meeting will take place in April 2009 with a wider international contribution and a whole day workshop on interventional pulmonary. This workshop will comprise basic and advanced sessions on bronchial and pleural investigations and interventions. It is intended for chest physicians with all levels of expertise in Interventional Pulmonary. I expect to see a wider local and regional attendance. The work on the Lebanese Pulmonary Society website is advancing nicely; the final configuration is almost completed, and we are reviewing the first draft of the web content.

I hope you like the improved version of Inspire; I encourage you to submit your articles for publication. Hope to see you soon in Pine Land for our next regional meeting.

Dr. Wajdi Abi Saleh

President of the Lebanese Pulmonary Society

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LCC reports: case studies

The Lebanese Chest Club is a forum for all Lebanese chest doctors to share their experience and get exposed to the latest updates. One meeting has been organized so far (abstracts herein*, plus other contributions), and the next will take place in September 2008. So you are all invited to submit interesting cases (see details below).

Pneumonie interstitielle : Fibrose pulmonaire idiopathique ou fibrose non spécifique ?

C'est le cas d'une patiente de 37 ans qui se plaint d'une dyspnée de repos, d'une toux sèche traînante et d'un épisode fébrile traité par Tavanic. La première consultation en cabinet pneumologique remonte au mois d'avril 2007 et se situe un mois après la prise d'antibiotique.

Le tableau clinique et la radiographie thoracique évoquent le diagnostic d'une pneumopathie interstitielle infectieuse et une nouvelle cure d'antibiotique est débutée (Zithromax).

Vu l'absence d'amélioration, voire l'aggravation de la dyspnée et l'apparition d'une discrète cyanose et de palpitations, un bilan est réalisé. La numération formule sanguine ne montre pas d'hyperleucocytose, ni d'hyperéosinophilie, le bilan inflammatoire est négatif (CRP, VS) et la recherche d'anticorps antinucléaires et antimuscles lisses se révèle négative ainsi que le facteur rhumatoïde ; l'oxymétrie montre une saturation à 94% au repos et à 89% après la montée de 2 étages. La spirométrie montre un effondrement des débits respiratoires avec une capacité vitale à 45% de la normale ; le scanner tho-

racique objective un syndrome interstitiel sous forme de verre dépoli prédominant aux bases et en sous pleural ; pas d'image en rayon de miel ; la biopsie chirurgicale réalisée par thoracoscopie a permis de prendre deux prélèvements, l'un en région saine, l'autre en région atteinte. L'étude histologique sur les mêmes prélèvements, réalisée dans deux laboratoires différents, l'un sans coordination entre le clinicien et l'anatomopathologiste et l'autre avec coordination, a donné des résultats non similaires : la première conclut à une fibrose idiopathique diffuse et la seconde parle d'une fibrose pulmonaire non spécifique.

Un traitement par corticoïdes à la dose de 1mg/kg/jour est débutée et une amélioration clinique et fonctionnelle respiratoire est rapidement observée (2 semaines après le début du traitement). Au mois de février 2008, sous Predicor à la dose de 15 mg/jour, la capacité vitale est à 98% au repos et de 94% à la montée de deux étages ; l'image tomographique s'est améliorée et les effets secondaires des corticoïdes se sont résumés

Date + Status	PULSE /MNT	SAT
23/04/2007 – IN REST	126	95
23/05/2007 – IN REST	115	94
23/05/2007 – IN EXERCICE	148	89
21/06/2007 – IN REST	106	98
21/06/2007 – IN EXERCICE	144	99
24/06/2007 – IN REST	95	98
27/12/2007 – IN REST	87	98
08/02/2008 – IN REST	98	98

Date + Dose of Corticoids	FEV1	VC
23/05/2007 – 0	1.54 48%	1.72 48%
21/06/2007 – 75mg/day	2.12 70%	2.48 72%
24/08/2007 – 50mg/day	1.47 45%	3.09 84%
10/12/2007 – 35mg/day	1.64 54%	2.52 72%
08/02/2008 – 15mg/day	1.64 54%	3.37100%

en une prise pondérale de quelques kilos.

A posteriori, le diagnostic de fibrose pulmonaire non spécifique est le plus probable. Une revue de la littérature indique que cette pathologie survient chez des sujets jeunes (30-40 ans), de sexe féminin, non tabagiques, se manifeste par des images en verre dépoli à la tomographie et évolue bien sous corticoïdes avec une survie de 75% à cinq ans.

Dr. Marlène Ouad

(*) The abstract of Dr. Mustapha Itani was not available to Inspire by the time of printing. His topic was about a case of recurrent pneumonias due to an endobronchial adenoma, and its surgical treatment.

BPF following RU lobectomy

Broncho-pleural fistulas (BPFs) are communications between the pleural space and the bronchial tree. Although rare, they represent a challenging management problem and are associated with an important morbidity. Our case was a 79 year-old female patient, HTN, DL, Hypothyroid, and has DVT of LE on sintrom. She was diagnosed with rectosigmoid cancer with liver & lung metastasis. S/P LAR 8 years ago, S/P RU lobectomy 2/8/2007 for lung cancer. She presented on 13/12/2007 one week history of dyspnea, fever, dry cough and chills. Videobronchoscopy: RUL stump showed no visible leak, yet upon installing saline across the stump, loosening of a suture was visible, R/O micro-stump leak. BAW culture had no growth. CT chest revealed a large collection of air fluid level in the Rt upper

hemithorax at the level of lobectomy. A bronchial fistula should be excluded. Interventional procedures performed: An 8 F pigtail under CT guidance was placed in the RU cavity and drained 200cc of pus, a sample sent for culture. Videobronchoscopy under fluoroscopy; 5 F catheter was advanced through RUL bronchus stump across the bronchopleural fistula into the thoracotomy cavity. Contrast was injected and aspirated through the previously inserted pigtail documenting communication. 1cc of surgical glue (Glubran) was injected within the stump. Bronchography post glue application demonstrated closure of the fistula. Patient became febrile, received IV antibiotics and discharged home in a good condition to be followed up for possible recurrence.

Dr. Nadim Kanj

Submit and share your case

•The next "Lebanese Chest Club" meeting will take place during the 3rd week of September, 2008. Final date and venue will be announced later. But, in order to participate, you'll have to submit interesting cases to the appraising jury no later than the end of August 2008.

•The case submission form should include your name, your address and an abstract of about one page. For patient confidentiality issues, please don't mention his name in the abstract. This abstract should be submitted to the LPS via e-mail (lop_ips@yahoo.com), fax (+961 1 422582) or any other convenient mean for you.

•The appraising jury members are: Drs. Wajdy Abi-Saleh (CMC-LAU), Joudy Bahous (SGHUMC), Pierre Bou-Khail (AUH), Mustapha Itani (Beirut Governmental hospital) & Georges Khayat (HDF-USJ).

•Three selected cases will be presented and discussed with the main objective of sharing experience and widening scientific knowledge.

•CME credits will be granted for attendees of the event.

This Lebanese Chest Club, organized by LPS, is made possible thanks to the unrestricted support of  Schering-Plough

Rhinocerebral mucormycosis in association with tuberculosis

We report the case of a 52 year-old diabetic woman presented with rhinocerebral mucormycosis. The preoperative work-up highlighted a single pulmonary nodule.

Our patient received a surgical and medical treatment. She underwent surgical debridement of the sinuses twice and a right middle partial lobectomy. Biopsies and mycobacterium tuberculosis PCR lead to the diagnosis of a tuberculous

granuloma. She was treated with Amphotericin B for 5 weeks and was then placed on classical antituberculous therapy. The patient has been followed on a regular basis since 2002 and no relapses have been reported. The originality of this case is the rare association of rhinocerebral mucormycosis and pulmonary tuberculosis. In fact, this association has been described only once to our knowledge in the literature, and in this case

the patient died. The current case report shows also the interest of having a quick diagnosis of mucormycosis and the impact of starting an early combined, medical and surgical treatment.

Dr. Béatrice Chami Le Bon

"Our most valuable possessions are those which can be shared without lessing those which, when shared, multiply. Our least valuable possessions, on the other hand, are those which, when divided, are diminished".

William H. Danforth

Formation Médicale Continue

Le comité de Formation Médicale Continue a poursuivi son activité malgré les circonstances malheureuses que le pays a traversées. L'espace de formation continue (moodle.usj.edu.lb) s'enrichit grâce à la contribution des membres de notre comité et attend votre participation. Une évaluation anonyme aura lieu au cours du dernier trimestre 2008 et sera suivie d'une cérémonie de remise de prix de valeur et de certificats. Cette évaluation portera sur les documents et autoévaluations disponibles dans l'espace de formation. Les documents actuellement

disponibles sont les suivants (voir aussi le texte en Anglais ci-contre):

- Prévention et traitement de la maladie thromboembolique 05-2007;
- Traitement de la maladie thromboembolique 02-2007;
- Diagnostic de la maladie thromboembolique 03-2007 ;
- Maladie thromboembolique (NEJM 2008)

On note à ce propos qu'une session de discussion interactive autour d'un cas de pneumonie communautaire s'est tenue, et a

été dirigé par le soussigné, au cours de la réunion scientifique de Batroun il y a quelques mois. Cette séance a permis de présenter certains points essentiels des recommandations communes de la Société Thoracique Américaine et de la Société Américaine des Maladies Infectieuses, concernant les pneumonies communautaires de l'adulte. Ces recommandations ainsi que la discussion du cas sont disponibles justement dans l'espace Internet de formation médicale continue de la Société.

Continuous Medical Education

We kept the activities running despite the very discouraging situation in the country. The website of the Continuous Medical Education (moodle.usj.edu.lb) is getting richer thanks to the contribution of the CME board in LPS. It still waits for your participation. An anonymous evaluation for knowledge will be held end of 2008. The best performances will be rewarded in the context of a ceremony where the certificates will be distributed. The subjects currently available are the following:

- 2007 IDSA/ATS Consensus Guidelines on the Management for Community Acquired

Pneumonia in Adults;

- Prevention and treatment of thromboembolic disease – 05-2007;
- Treatment of thromboembolic disease – 02-2007;
- Thromboembolic disease diagnosis – 03-2007;
- Gina report 2007;
- Thromboembolic disease - NEJM 2008

It's worth noting in this regard that an interactive session about Community Acquired Pneumonia has been directed by the undersigned during the Batroun meeting, a few

months ago. This session was a good occasion to present some critical issues of the common recommendations issued earlier by the American Thoracic Society and the American Infectious Diseases Society, pertaining to Community Acquired Pneumonia in adults. These recommendations, as well as the case discussion, are also available on the website of the CME, mentioned above.

Dr. Georges Khayat
President of the CME Board
Président du Comité FMC

Faut-il entraîner les muscles respiratoires chez les malades atteints de BPCO ?

Arguments pour :

En matière de BPCO, l'objectif majeur d'un traitement est d'améliorer les symptômes. L'entraînement des muscles respiratoires a justement pour objectif d'améliorer la dyspnée des malades BPCO. Deux méthodes sont utilisées :

- Une résistance inspiratoire accrue ;
- L'hyperventilation volontaire prolongée.

De l'étude de 12 séries de la littérature portant sur des périodes de 14-12 semaines, il ressort que l'amélioration objective est très variable mais que l'amélioration subjective (dyspnée) est fréquente. Une étude personnelle des

auteurs de la présentation confirme l'amélioration de la dyspnée.

Arguments contre :

Peut-on vraiment entraîner les muscles respiratoires? Ce n'est pas certain. Avec la méthode de l'hyperventilation, on peut augmenter l'endurance des muscles respiratoire. Mais la force développée par les muscles respiratoires n'augmente pas régulièrement. La méthode résistive donne de moins bons résultats dans l'ensemble. Les muscles respiratoires limitent-ils les possibilités d'exercice dans les BPCO ? Ce n'est certainement pas le cas chez tous les malades. Il

n'est pas facile de déterminer lesquels vont bénéficier de ce traitement. De toute façon, l'entraînement des muscles respiratoires n'augmente généralement pas la capacité d'exercice (VO₂ masse puissance en watts) ainsi que l'indique la majorité des études.

Conclusion :

Il ne semble pas exister actuellement d'arguments emportant la conviction en faveur de l'entraînement spécifique des muscles respiratoires. L'entraînement musculaire général est préférable.

Dr. Hilmi Darwiche

Field Survey

Symptoms, severity and asthma control in children



Dr. Mirna Waked

We know that asthma still represents a heavy burden for the patients and their families, despite the progress in the diagnosis and treatment. Prevalence of asthma in childhood may have reached a plateau, but recommended treatment guidelines are constantly changed and revised. Here is a contribution to better comprehend these issues through a survey among 5-14 year-old Lebanese school children*.

The Global Initiative for Asthma (GINA) guidelines have been recently updated to allow better asthma control. Asthma in these guidelines is no longer classified in classes of severity but in classes of control: controlled, partly controlled and uncontrolled.

Nevertheless, international surveys provide direct evidence for suboptimal asthma control in many

countries, despite the availability of effective therapies. Defining severity and control of asthma has always been a matter of challenge because of

the lack of ideal criteria, reflecting the "real world", and broad enough to include both objective and subjective measures, knowing that relying only on the guidelines can be insufficiently representative.

The treatment targets two features of asthma: airways' acute obstruction, which is the apparent part of the disease, and the underlying inflammation which is not perceived by the patient. Relievers are recommended as bronchodilators in asthma patients, whereas controllers, mainly inhaled corticosteroids (ICS), are the cornerstone of the treatment of the underlying inflammation in the airways. Patients' adherence to ICS is generally poor, and many rely alternatively on short-action beta2-agonists because of their fast relief of dyspnea. Determinants of poor adherence are believed to include poor perception by patients of their asthma severity, concerns about the safety and efficacy of medication and low treatment expectations.

The asthma prevalence in Lebanon in

2006 was estimated at 5.2% for Physician Diagnosed Asthma (PDA) in 13-14 years school children, which is on the medium range worldwide [1]. An earlier prevalence study done in Beirut only showed a PDA prevalence of 12% [2]. In another type of study, addressing the profile of asthmatic children in Beirut, Torbey and al. [3] found in 1999 that the perception of childhood asthma by

Lebanese physicians and parents was still suboptimal.

The aim of this study was to further examine symptoms' profile, index of severity,

determinants of asthma control and treatment in school-aged physician-diagnosed asthmatic patients (5-14 y) across Lebanon.

MATERIAL AND METHODS

This cross-sectional study was conducted on schoolchildren in Lebanon. In children with PDA, data about asthma symptoms, treatment and severity were collected.

Thirty schools were randomly selected from a list of schools provided by the Ministry of Education, to allow the distribution of 6,000 questionnaires. Out of 5,544 returned questionnaires, 275 (4.96%) revealed PDA children. A subgroup analysis was conducted on this category of individuals.

Questions from the standardized International Study of Asthma and Allergies in Childhood (ISAAC) written core questionnaire were used to characterize symptoms in children who

References

1. Waked M, Salameh P. Asthma, Allergic Rhinitis and Eczema in 13-14-year-old school children across Lebanon. *Leb Med J* 2006 ; 54 (4) : 181-90.
2. Ramadan FM, Mroueh SM, Khoury MN, Hajjar TA, Khogali M. Prevalence of asthma and asthma symptoms in children in urban Lebanon. *Saudi Medical J* 1999; 20 : 453-7.
3. Torbey PH, Majdalani P, Hejjaoui A. Profile of the asthmatic child in Lebanon. *Pediatric Pulmonol* 1999; Suppl 18 : 225S-227S.

suffered from PDA. Those children were further divided into two groups: those who were taking controllers (C+) and those who were not (NC). Inhaled steroids, oral steroids, or leukotriene receptor antagonists (LTRA) were considered controllers of asthma, while short acting beta agonists (SABA), long acting beta agonists (LABA), or theophyllin were considered relievers (R).

A severity index was created, composed of three items, adapted from previous studies. These were: the number of times the SABA was used, the number of times the patient could not perform daily activities and the number of times he could not practice his preferred sport, all in the week preceding the survey.

Independent variables used were: gender, public or private schools (as a surrogate for socioeconomic status), father and mother education level (illiterate or < 8 years of school, school for 8 years and more, and university education), father and mother smoking status (current regular smoker of cigarettes or narghile).

RESULTS

Treatment information was not available for 59 patients (21.5%), while treatment comparison was performed on 216

(*) This text is an excerpt from a much more developed article published recently: Waked M, Salameh P. Symptoms, severity and asthma control in 5-14 y-old Lebanon school children. *J Med Liban* 2007; 55 (3): 145-151.

patients. There was no difference between the C+ (32.7%) and the NC (45.9%) groups regarding gender and age distributions, smoking habits of the mother and father, and father's education. However, the C+ group had a significantly higher maternal education than the NC group ($p = 0.037$). Interestingly enough, patients with PDA taking no controllers were significantly more frequent in public schools versus private schools ($p < 0.01$).

Symptoms did not differ in PDA children in either treatment groups. The most frequently reported symptoms were 12 months wheezing (66.5%), followed by night cough (64.6%). Significantly higher treatment rates during the last 12 months and regular visits to the doctor were found in the C+ compared to NC group. No differences were found in the use of SABA, theophylline or antihistamine. LABA were not used at all in the NC group and this was a significant difference compared to C+ group (see chart).

DISCUSSION

This epidemiologic research conducted on school aged patients (5-14 years old) across Lebanon found a PDA prevalence of 4.96%. Age classes and sex ratio were the same in those taking and those not taking controllers. There were clear indications in this study which confirmed



that asthma control is affected by lower socio-economic status, as indicated by use of public schools or by lower maternal education.

Symptoms that define asthma diagnosed by a physician had the same distribution in the two groups of treatment, but 12 months wheezing was the most frequent symptom that served as a basis for the diagnosis of asthma, followed by allergic rhinitis and night cough. This emphasizes the pathognomonic value of wheezing for asthma. It suggests that asthma may be underdiagnosed if wheezing is not clinically predominant.

PDA patients on C+ visited more frequently their doctors, probably reflecting the higher severity of their disease and, as a consequence, an adjusted prescribed treatment. This severity in the C+ group is also reflected by the use in 12% of the cases of oral steroids and by the use in 90% of the cases of combined therapy. The difference between the types of therapy was probably due to the fact that this population was a pediatric one. If the recommendations for the use of LABA as add-on therapy to ICS for adults are rather clear, it remains sparse concerning pediatric population.

Defining severity and control of asthma has always been a matter of challenge.

The difference in severity in both treatment groups might reflect that the treatment was adapted to each category. However, it was not meeting their demand or matching adequately their stages of severity. The goal of total control was not reached as it is recommended in the guidelines: 40% of the C+ group versus 34% in the NC group reported an impact of their asthma on daily activities and only 28% of the patients on combined therapy reported being totally controlled. These results highlight the complexity of defining asthma control

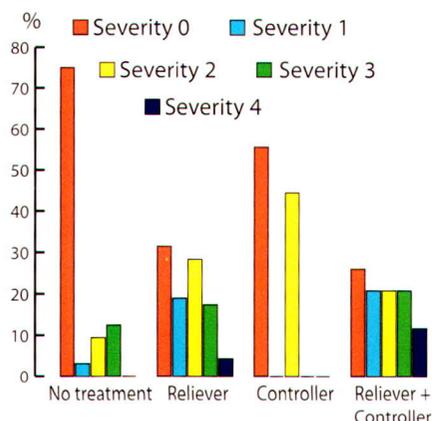
and the difficulty in assessing asthma severity.

In the multivariate analysis, age, the use of SABA, oral steroids, were independent determinants of asthma severity. This was shown in previous studies.

The cross-sectional nature of the study makes it difficult to assess temporality between asthma severity and treatment. It is also difficult to rule out information bias, particularly when parents are surrogate responders of their children. However, we have no reason to believe that this bias is differential between the two groups of comparison.

Moreover, our methodology is that of cross-sectional studies, including ISAAC ones, necessary for international comparisons. Although PDA was low in this population compared to the symptoms suggestive of asthma, the treatment was generally well adapted and in conformity with the recommendations. As indicated by severity scores, the use of controllers was done in moderate to severe cases and relievers or no treatment in mild cases. However, there was this universal discrepancy between the recommended treatments and their results in real life, because total control was reported in relatively low percentages of diagnosed patients.

The distribution of the severity index according to each detailed treatment



Get-together Batroun Medical Meeting

The LPS held a provincial scientific meeting in Batroun on January 13th, 2008, gathering about 60 members, with their families, plus invited outside lecturers: Dr. Abdel-Rahman Anani from Jordan, and Dr. Rebecca Farah. Four hours of medical presentations and debate (abstracts herein) were followed by a social gathering and an informal lunch at the delightful country club.

Pulmonary Rehab

Pulmonary Rehabilitation Program (PRP) has gradually become the "gold standard" for patients with severe lung disease, and it may be defined as an art of medical practice. This multidisciplinary program is formulated through accurate diagnostic, therapeutic, emotional support and education, attempts to

move patients to the highest possible functional capacity, improve Health Related Quality Of Life (HRQOL), and most important improve the symptom of dyspnea. The eligible patients are COPD with stage II, III & IV, with exercise de-conditioning, relative social isolation, altered mood states (depression), muscle wasting & weight



loss. PRP increased peak workload by 18%, peak oxygen consumption by 11% and endurance time by 87% of baseline. This translates into a 49m improvement in the 6 minutes walk test (MWT) (Evidence A). PRP has been shown to be additive to others forms of treatments, like bronchodilators. Pulmonary rehabilitation is also beneficial for some patients with chronic respiratory diseases other than COPD.

Rebecca Farah
PT, DES in Chest PT, ULB Brussels



Stop Smoking in COPD Patients*

Cigarette smoking is by far the main risk factor in the development of chronic obstructive pulmonary disease (COPD), as 15-20% of smokers develop COPD. Almost 50% of smokers develop chronic bronchitis, i.e. chronic respiratory symptoms without airway obstruction. Smoking cessation is the only effective treatment for avoiding or reducing the progression of COPD. It's one of the most important ways to improve the prognosis of patients with respiratory disease.

The Task Force on guidelines for smoking cessation in patients with respiratory

diseases was convened to provide evidence-based recommendations on smoking cessation interventions in respiratory patients.

Respiratory physicians must take a proactive and continuing role with all smokers in motivating them to stop and in providing treatment to aid smoking cessation. Smoking cessation treatment should be integrated into the management of the patient's respiratory condition.

Therapies should include pharmacological treatment (i.e. nicotine replacement therapy, bupropion or



varenicline) combined with behavioral support.

Zeina Aoun Bacha
MD, FCCP

(*) Reference: Eur Respir J 2007;29: 390-417

Case presentation of acute idiopathic BOOP (= COP = IOP)*

This is the case of a 66 years old female, who presented the following features of fever, chills, anemia, hypoxemia increased ESR, and bilateral fleeting = migratory = levitating lung lesions. The diagnosis was confirmed by open lung biopsy after 3 recurrences. The pathological features were: Presence of small buds of granulation tissue in alveoli and alveolar ducts =

Masson bodies;
Infiltration of alveolar walls with chronic inflammatory cells;
Preservation of alveolar architecture. The treatment was high dose steroids = 1-2 mg/kg/day. And the patient is still actually corticodépendant after 4 years of the onset of the disease and despite many trials of cessation of the steroid therapy.



Dr. Zahia Chahine

(*) BOOP = Bronchiolitis Obliterans Organizing Pneumonia; COP = Cryptogenic Organizing Pneumonitis; IOP = Intraluminal Organizing Pneumonia

BPCO : Enquête à l'occasion de la campagne de sensibilisation

Les résultats de la campagne de spirométrie pratiquée dans le cadre de la campagne de sensibilisation du grand public à la

Bronchopathie Chronique Obstructive, dans plusieurs régions libanaises au cours de l'année 2005, ont été présentés par le

Dr Georges Khayat. Quelque 612 hommes et 719 femmes ont répondu au questionnaire. Leur répartition est détaillée

Tableau 1. Répartition des réponders selon l'âge, la consommation tabagique et l'exposition au tabagisme passif

	Non Fumeurs N= 512	Fumeurs actuels de cigarette N=612	Anciens fumeurs de cigarette N=136	Fumeurs actuels de narghilé N=138	Anciens fumeurs de narghilé N=13	Total N= 1332
Hommes	197	297	76	70	5	612
Femmes	315	315	60	68	8	719
Age<40 ans	138	114	9	48	2	286
Age>40 ans	374	498	125	90	11	1043
Tabagisme passif à domicile	126	253	45	61	7	458
Tabagisme passif au travail	110	197	37	59	0	360

Tableau 2. Taux de consommation de cigarettes, en paquets-années selon l'âge et le sexe.

	Consommation moyenne de cigarettes en paquet-année	Valeur de p
Hommes	34,50	<10 ⁻⁴
Femmes	22,90	
Age<40 ans	5,99	<10 ⁻⁴
Age≥40 ans	20,86	

Tableau 4. Facteurs associés à un syndrome obstructif

Facteurs	Rapports de cotes ajusté [95% CI]	Valeur de p
Sexe masculin	1,79[1,31-2,45]	<10 ⁻⁴
Age > 40 ans	1,96[1,26 -3,06]	0,003
Consommation de cigarettes	1,53[1,07-2,20]	0,02
Consommation de narghilé	1,60[0,81-3,17]	0,18

dans le tableau 1. Leur consommation tabagique est précisée dans le tableau 2. La proportion des personnes porteuses de syndrome obstructif selon l'âge, le sexe et la consommation tabagique est signalée dans le tableau 3. Il ressort qu'il existe une relation entre le sexe masculin, l'âge >40 ans et la consommation de cigarettes, et la présence d'un syndrome obstructif (tableau 4).

Tableau 3. Proportions de personnes porteuses d'un syndrome obstructif (VEMS/CV inférieur à 0,7) selon l'âge, le sexe et la consommation tabagique

	Obstruction chez les non fumeurs N=512 (38,4%)	Obstruction chez les fumeurs de cigarettes N=749 (56,2%)	Obstruction chez les fumeurs de narghilé N=71 (5,3%)	Valeur p ¹	Total N=1332 (100%) ²
Hommes	32/196 (16,3%)	91/370 (24,6%)	5/42 (11,9%)	0,02	128/608 (21,1%)
OR[95%CI]	1,00	1,67[1,07-2,61]	0,69 [0,25-1,90]		
Femmes	30/314 (9,6%)	46/372 (12,4%)	8/29 (27,6%)	0,03	84/715 (11,7%)
OR[95%CI]	1,00	1,34[0,82-2,17]	3,61[1,47- 8,84]		
Age<40 ans	14/138 (10,1%)	14/122 (11,5%)	2/25 (8,0%)	0,85	30/285 (10,5%)
OR [95%CI]	1,00	1,15[0,52-2,52]	0,77[0,16-3,62]		
Age≥40 ans	48/372 (12,9%)	123/618 (19,9%)	11/46 (23,9%)	0,01	182/1036 (17,6%)
OR[95%CI]	1,00	1,68[1,17-2,41]	2,12[1,01-4,46]		
Total	62/510 (12,2%)	137/743 (18,4%)	13/71 (18,3%)	0,01	212/1324 (16,0%)
OR[95%CI]	1,00	1,63[1,18-2,26]	1,62[0,84-3,13]		

(1) La valeur de p est pour les différences entre les fumeurs de cigarettes, les fumeurs de narghilé et les non-fumeurs dans les sous-groupes et le total.

(2) La valeur de p est <10⁻⁴ pour les différences entre hommes et femmes, la valeur de p est <10⁻² pour les différences entre les personnes de moins de 40 ans et celles de plus de 40 ans.

Clinical controversy

Acute Exacerbations of Idiopathic Pulmonary Fibrosis*

Idiopathic pulmonary fibrosis (IPF) has traditionally been described as a steadily progressive disease. [1, 2] It is now recognized that some patients with IPF experience acute respiratory deteriorations, [3–5] suggesting that the clinical course in these patients may be more step-like, with periods of relative stability punctuated by rapid declines.

Many of these acute respiratory deteriorations are idiopathic, without clinically apparent infection, heart failure or pulmonary embolism, and have been termed “acute exacerbations” of IPF. [4] Acute exacerbations of IPF are defined as acute, clinically significant deteriorations of an unidentifiable cause in patients with underlying IPF. [6]

EPIDEMIOLOGY

Acute exacerbations of IPF may occur at any time during the course of the disease. There is no clear association with demographic or clinical factors. Furthermore, several reports suggest that surgical lung biopsy may be a risk factor, but this remains controversial. [8–11] Recent studies of IPF suggest that the annual incidence of acute exacerbations in IPF is between 10% and 20%. [7, 12, 13] Mortality is high, with most studies suggesting that more than 50% of patients die from the event. [7, 12]

ETIOLOGY

The etiology of acute exacerbations of IPF is unknown; there are several competing hypotheses. Acute exacerbations of IPF may represent distinct, pathobiological manifestations of the primary disease process (i.e. acute exacerbations are part of the natural history of IPF). Alternatively, acute exacerbations of IPF may represent clinically occult conditions such as infection and aspiration that cause acute respiratory declines. Lastly, acute exacerbations of IPF may be due to a combination of the above two mechanisms, with acceleration of the primary fibroproliferative disease process in IPF due to an otherwise innocuous acute pulmonary event. [14] Clearly, further research into the etiology of acute exacerbations is needed.

CLINICAL FEATURES

In acute exacerbations of IPF, worsening

dyspnoea generally occurs within days to weeks, although a few subjects have reported longer time courses. [15,16] Cough, fever, and flu-like symptoms are variable findings. [7,17,18] Gas exchange abnormalities are significant. [7,12,13,17–23].

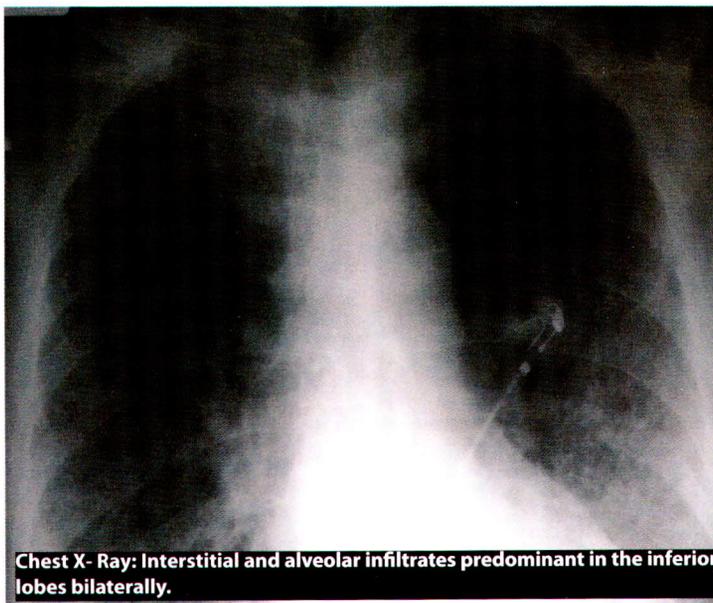
Systematic studies of serum and bronchoalveolar lavage (BAL) fluid from patients with acute exacerbations of IPF are not available, but increases in BAL neutrophils and serum KL-6 have been reported. [7,17,18,24]

High-resolution computed tomography (HRCT) demonstrates bilateral ground-glass abnormality with or without areas of consolidation. [7,15,17] The ground glass may be peripheral, multi-focal, or diffuse in its distribution, with survival likely to be related to the degree of CT involvement. [7,15,17]

Diffuse alveolar damage (DAD) superimposed on underlying usual interstitial pneumonia is the most commonly described finding when surgical lung biopsy is performed. [7,15–19,25]

DIAGNOSIS

Recently, consensus criteria have been proposed for the diagnosis of acute exacerbation of IPF, with the hopes of



standardizing future investigations in this area. [6] The diagnosis requires that all of the following five criteria be met:

- Previous or concurrent diagnosis of IPF (if the diagnosis of IPF is not previously established according to American Thoracic Society / European Respiratory Society Consensus Criteria, [26] this criterion can be met by the presence of radiological and/or histopathological changes consistent with usual interstitial pneumonia UIP pattern on the current evaluation).
- Unexplained worsening or development of dyspnoea within 30 days.
- High-resolution computed tomography with new bilateral ground glass abnormality and/or consolidation superimposed on a background reticular or honeycomb pattern consistent with underlying IPF (if no previous HRCT is available, the qualifier “new” can be

Acute exacerbations of IPF may occur at any time during the course of the disease.

(*) From Harold R. Collard, MD, Department of Medicine, San Francisco General Hospital, University of California, San Francisco, CA, USA. Apr 03, 2008 (Ref : www.AZ-AIR.com). (<http://pulmonary.ucsf.edu/activities/ild.html>)

dropped).

•No evidence of pulmonary infection by endotracheal aspirate or bronchoalveolar lavage (evaluation of samples should include studies for routine bacterial organisms and opportunistic pathogens, as well as common viral pathogens).

•Exclusion of alternative causes, including left-heart failure, pulmonary embolism, and identifiable cause of acute lung injury.

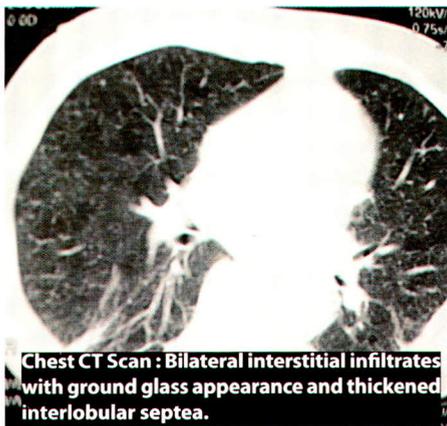
MANAGEMENT

There are limited data to guide the management of acute exacerbations of IPF. Treatment has generally consisted of high-dose intravenous corticosteroids (ranging from 1.0 mg/kg/day up to 1.0 gram/day), but there are no data from controlled trials to prove their efficacy. [6] Cyclosporin A has been studied but hasn't revealed any clear benefit. [21,23] In a recent randomized trial by Kubo, 2005, chronic administration of the anticoagulant therapy was associated with reduced mortality from acute exacerbation, but significant design issues question the study's validity. [12, 27]

Another recent randomized trial by Azuma, 2005, involving pirfenidone therapy demonstrated a significant decrease in the risk of acute exacerbation of IPF. [13] However, this analysis was based on only five acute exacerbation events; there are larger studies underway that will evaluate this finding more rigorously.

CONCLUSION

Acute exacerbations are an increasingly recognized manifestation of IPF and appear to have a high



References

1. Carrington CB, Gaensler EA, Coutu RE, et al. Natural history and treated course of usual and desquamative interstitial pneumonia. *N Engl J Med* 1978; 298:801-9.
2. Stack BH, Choo-Kang YF and Heard BE. The prognosis of cryptogenic fibrosing alveolitis. *Thorax* 1972; 27:535-42.
3. Johnston ID, Prescott RJ, Chalmers JC and Rudd RM. British Thoracic Society study of cryptogenic fibrosing alveolitis: current presentation and initial management. *Fibrosing Alveolitis Subcommittee of the Research Committee of the British Thoracic Society. Thorax* 1997; 52:38-44.
4. Kondo A, and Saiki S. 1989. Acute exacerbation in idiopathic interstitial pneumonia (IIP). In M. Harasawa, Y. Fukuchi and H. Morinari, editors. *Interstitial Pneumonia of Unknown Etiology. Japan Intractable Diseases Research Foundation Publication No. 27. University of Tokyo Press, Tokyo.* 33-42.
5. Kondoh Y, Taniguchi H, Kawabata Y, et al. Acute exacerbation in idiopathic pulmonary fibrosis. Analysis of clinical and pathologic findings in three cases. *Chest* 1993; 103:1808-12.
6. Collard HR, Moore BB, Flaherty KR, et al. Acute Exacerbations of Idiopathic Pulmonary Fibrosis. *Am J Respir Crit Care Med* 2007; 176:636-43.
7. Kim DS, Park JH, Park BK, et al. Acute exacerbation of idiopathic pulmonary fibrosis: frequency and clinical features. *Eur Respir J* 2006; 27:143-50.
8. Hoshikawa Y and Kondo T. [Perioperative lung injury: acute exacerbation of idiopathic pulmonary fibrosis and acute interstitial pneumonia after pulmonary resection]. *Nippon Geka Gakkai Zasshi* 2004; 105:757-62.
9. Kumar P, Goldstraw P, Yamada K, et al. Pulmonary fibrosis and lung cancer: risk and benefit analysis of pulmonary resection. *J Thorac Cardiovasc Surg* 2003; 125:1321-7.
10. Sakamoto S, Homma S, Kawabata M, et al. [Fatal acute exacerbation of idiopathic pulmonary fibrosis/usual interstitial pneumonia initially in the right lung after surgery lobectomy for left lung cancer]. *Nihon Kokyuki Gakkai Zasshi* 2004; 42:760-6.
11. Yüksel M, Ozyurtkan MO, Bostanci K, et al. Acute exacerbation of interstitial fibrosis after pulmonary resection. *Ann Thorac Surg* 2006; 82:336-8.
12. Kubo H, Nakayama K, Yanai M, et al. Anticoagulant therapy for idiopathic pulmonary fibrosis. *Chest* 2005; 128:1475-82.
13. Azuma A, Nukiwa T, Tsuboi E, et al. Double-blind, placebo-controlled trial of pirfenidone in patients with idiopathic pulmonary fibrosis. *Am J Respir Crit Care Med* 2005; 171:1040-7.
14. Selman M, King TE and Pardo A. Idiopathic pulmonary fibrosis: prevailing and evolving hypotheses about its pathogenesis and implications for therapy. *Ann Intern Med* 2001; 134:136-51.
15. Akira M, Hamada H, Sakatani M, et al. CT findings during phase of accelerated deterioration in patients with idiopathic pulmonary fibrosis. *AJR Am J Roentgenol* 1997; 168:79-83.
16. Rice AJ, Wells AU, Bours D, et al. Terminal diffuse alveolar damage in relation to interstitial pneumonias. An autopsy study. *Am J Clin Pathol* 2003; 119:709-14.
17. Ambrosini V, Cancellieri A, Chilosi M, et al. Acute exacerbation of idiopathic pulmonary fibrosis: report of a series. *Eur Respir J* 2003; 22:821-6.
18. Parambil J, Myers JL and Ryu JH. Histopathologic features and outcome of patients with acute exacerbation of idiopathic pulmonary fibrosis undergoing surgical lung biopsy. *Chest* 2005; 128:3310-5.
19. Kondoh Y, Taniguchi H, Kawabata Y, et al. Acute exacerbation in idiopathic pulmonary fibrosis. Analysis of clinical and pathologic findings in three cases. *Chest* 1993; 103:1808-12.
20. Kondoh Y, Taniguchi H, Yokoi T, et al. Cyclophosphamide and low-dose prednisolone in idiopathic pulmonary fibrosis and fibrosing nonspecific interstitial pneumonia. *Eur Respir J* 2005; 25:528-33.
21. Okamoto T, Ichiyasu H, Ichikado K, et al. [Clinical analysis of the acute exacerbation in patients with idiopathic pulmonary fibrosis]. *Nihon Kokyuki Gakkai Zasshi* 2006; 44:359-67.
22. Tiitto L, Bloigu R, Heiskanen U, et al. Relationship between histopathological features and the course of idiopathic pulmonary fibrosis/usual interstitial pneumonia. *Thorax* 2006; 61:1091-5.
23. Homma S, Sakamoto S, Kawabata M, et al. Cyclosporin treatment in steroid-resistant and acutely exacerbated interstitial pneumonia. *Intern Med* 2005; 44:1144-50.
24. Yokoyama A, Kohno N, Hamada H, et al. Circulating KL-6 predicts the outcome of rapidly progressive idiopathic pulmonary fibrosis. *Am J Respir Crit Care Med* 1998; 158:1680-4.
25. Churg A, Muller NL, Silva CI and Wright JL. Acute Exacerbation (acute lung injury of unknown cause) in UIP and Other Forms of Fibrotic Interstitial Pneumonias. *Am J Surg Pathol* 2007; 31:277-84.
26. American Thoracic Society. Idiopathic pulmonary fibrosis: diagnosis and treatment. International consensus statement. American Thoracic Society (ATS), and the European Respiratory Society (ERS). *Am J Respir Crit Care Med* 2000; 161:646-64.
27. Kinder BW, Collard HR and King TE Jr. Anticoagulant therapy for idiopathic pulmonary fibrosis. *Chest* 2006; 130:302-3.

mortality rate. It is essential for the treating physician to look carefully for alternative etiologies (e.g. infection) that could explain any acute worsening, reserving the diagnosis of acute exacerbation for idiopathic cases.

Future research should focus on further clinical characterization of acute exacerbations, investigation of the underlying pathobiology of this condition, and identification of potential prophylactic or treatment modalities through well-designed clinical trials.

Tuberculosis (TB), Part II*

From Hollywood to Siberia, the captain sails resistive



In the first part of the trilogy, we tackled the historical dimensions of tuberculosis, the tubercle bacillus and other landmarks regarding initial therapies. In this part, we'll be discussing other aspects of TB, such as epidemiology, classification, pathogenesis, clinical manifestations and radiographic features. A whole world of one of the most "ancient" plagues.

Andrew Speaker was infected with MDR-TB. Issued warnings from the Fulton County Health Department in Georgia that he should not fly. However, he and his fiancée flew to Europe on May 12, 2007. Once there, the CDC said test results back in Georgia indicated he had a rare, more serious strain of the tuberculosis bacilli called Extensively Drug-Resistant TB, or XDR-TB. Because Andrew was told he was not infectious, could not afford to hire a private plane, and was afraid that, if he were to remain in Italy, he would not be able to get the cutting-edge treatment available in the United States, he returned to North America on a commercial flight from Prague to Montreal. Speaker was allowed on May 24 to cross from Canada into the United States at Champlain, New York, despite a warning from the CDC to border agents that he posed a public health threat and that a CDC doctor should be alerted if Speaker were to seek entry. The Customs and Border Protection officer said he let Speaker enter the country because the man did not appear sick! The officer was suspended and later retired.

So where wasn't Andrew? He flew to Paris on May 12 aboard Air France Flight 385, also listed as Delta Airlines code share Flight 8517. He and his bride then took four more flights within Europe, flying from Paris to Athens on May 14; from Athens to Thira Island on May 16; from Mykonos Island to Athens on May 21; and from Athens to Rome also on May 21. On May 24, Andrew flew from Rome to Prague on Czech Air Flight 0727. From Prague, the couple left for Montreal that day aboard Czech Air Flight 0104. From Montreal, they grabbed a rental car and headed across the border back into the United States.

TB patient Andrew Speaker set off an international health scare when he traveled to Europe for his wedding in May. And I picked some funny

comments:

. Killer TB victim will be sent To Guantanamo!

. We've disciplined the border agent who let it happen and sent his ass to Guantanamo. Somebody has to pay for this general screw up.

. Being on the 'no-fly' list classifies him the same as any other terrorist. We believe he's a damned Democrat too!

. "We're taking steps to shut him up - in the interests of national security of course - and arranging his transportation to Cuba where he will be isolated." said the official. And,

. "With his dread disease we don't expect him to survive for long".

And finally lawsuit! Montreal – Eight fellow passengers of tuberculosis patient Andrew Speaker are suing him for \$1.3 million as a result of their possible exposure to the disease on a commercial flight from Prague to Montreal in late May. Montreal lawyer Anlac Nguyen filed the motion in Quebec Superior Court on behalf of seven Canadians and two natives of the Czech Republic. Nguyen said his clients do not have tuberculosis, "but nobody can say that they won't have tuberculosis, either." The nine plaintiffs are seeking damages mostly for pain and suffering, and "loss of opportunities".

I elected to start part II with the above incident to shed light on the magnitude of TB and mostly MDR TB. I would like also to mention some further historical aspects that weren't mentioned in the last issue of Inspire (see box herein).

Further to my exposing the problem, TB spreads from Hollywood where Billy Wilder (1906-2002), Hollywood writer/director of Austrian/Hungarian origin, "Sunset Boulevard", died of pneumonia...to Siberia where Médecins Sans Frontières (MSF)

Famous figures who died of TB

EMILY BRONTE 1848
CARDINAL RICHELIEU 1642
JOHN KEATS 1821
VIVIAN LEIGH 1967
EDGAR ALAN POE 1849
EL EANOR ROOSEVELT 1962
GEORGE ORWELL 1950
SIR WALTER SCOTT 1832

And some of those who had TB

ALEXANDER GRAHAM BELL
HONORE DE BALZAC
FREDERIC CHOPIN
MARIE CURIE
RENE DESCARTES
FYODOR DOSTOYEVSKY
MAHATMA GANDHI
JOHANN GOETHE
ADOLF HITLER
JEAN MOLIERE
NAPOLEON
FLAURENCE NIGHTINGALE
H VAN RUNREMERANDT
JEAN-JACQUES ROUSSEAU
ROBERT LOUIS STEVENSON
FRANCOIS VOLTAIRE
H.G.WELLS

started work in Siberian prisons in 1996, and has treated 10,500 patients. Substantial number of patients (22% of new cases and 40% of retreatment cases) with multidrug-resistant tuberculosis was found. MSF were asked to implement a treatment strategy for multidrug-resistant tuberculosis that contradicts the basic treatment principles outlined by WHO. In September 2003, MSF therefore made the difficult decision to pull field teams out of Siberia and to close down their programmes. We like to certify that it is imperative that urgent action needs to be taken by WHO and the World Bank to rectify the inconsistencies between the Ministry of Health's ordinance and the drug legislative

(* NB: part III of our TB report will finish with laboratory diagnosis and treatment.

authorities in Russia. Future control of tuberculosis in Russia is in the balance, and the donor community runs a high risk of doing more harm than good.

TB is among the 10 leading causes of life-years lost to disability and premature death. Tuberculosis has plagued mankind throughout history with evidence of the organism being present in skeletons over 6000 years old. It is caused by *Mycobacterium tuberculosis* (or less commonly by *Mycobacterium bovis*) and can manifest in a broad range of clinical diseases. It is an enormous global burden: one-third of the world population, 9 million new cases, and 2 million deaths annually worldwide. It is second only to HIV as a cause of death resulting from a single infectious agent.

Epidemiology

The prevalence of TB is highly variable; it depends on geographic location and the disease resistance of the population. Crowded living conditions and populations with limited resistance favor effective disease spread. TB in the elderly is generally due to reactivation of infection acquired in the past whereas TB in young children indicates ongoing active transmission in a community.

Active disease

Tb has a worldwide distribution, an incidence of 8.9 million new cases in 2004 (140/100,000 population) and an estimated 1.7 million deaths (27/100,000), many of which were co-infected with HIV (248,000). 14.6 million prevalent cases (229/100,000) were reported by the WHO in 2004. It is known that more than 80% of all new TB patients in 2004 were in sub-Saharan African, South-East Asian, and Western Pacific regions. With 22 high-burden countries, 12 of which accounted for approximately 70% of all cases of tuberculosis worldwide (1997). The largest number of cases found in India, China, and Indonesia and the highest per capita case rates were found in South Africa, the Philippines, and Indonesia.

In the U.S.

Declines occurred in all age groups; however TB cases have not declined

among foreign-born persons, who now account for approximately one-half of all reported cases in the U.S. Significant TB clusters include:

- Medically underserved
- Crowding homeless
- Intravenous drug-users
- Urban poor
- Alcoholics
- Migrant farm workers
- Prison inmates

In WHO Fact Sheet No.104 on March 2006, it is stated that someone in the world is newly infected with TB every second.

HIV is a significant risk factor for TB in both the U.S. and worldwide. TB is more frequently found in geographic and demographic groups in which AIDS is most prevalent. Higher risk of progression or reactivation from infection to active disease as a function of waning cellular immunity in conjunction with decreased CD4 counts.

Classification

ATS and CDC (1999)

Joint statement endorsed by the Infectious Disease Society of America providing a TB classification system, gives 3 distinct parameters:

- (1) Exposure history: recency and immunity,
- (2) Evidence of infection as supported by tuberculin skin testing (TST) : millimeters induration, &
- (3) Evidence that infection resulted in disease, prior or active, as supported by clinical, bacteriologic (microscopy, nucleic acid amplification, or culture) or radiographic criteria.

ATS

0. No TB exposure, not infected
1. TB exposure, no evidence of infection
2. Latent TB infection (LTBI), no disease
3. Tuberculosis, clinically active
4. Tuberculosis, not clinically active
5. Tuberculosis suspect (diagnosis pending)

Persons should not remain in class 5 for more than 3 months.

Pathogenesis

Mycobacterium tuberculosis is a slow growing microbe with generation times of between 12 and 24 hours. It is an acid-fast bacillus which, when stained, the dye applied to the waxy cell membrane of these bacilli does not readily come off when exposed to acidic media. It is an obligate aerobe. The propensity for reactivation

tuberculosis to appear in the upper lung zones where higher mean oxygen tension prevails.

Transmission is thru airborne route.

Coughing, sneezing, or speaking might emit tiny droplets of less than 25 μm in diameter, which evaporate instantly, leaving particulate organisms, which once inhaled by the human host, the droplet nuclei, if small enough, deposit into alveoli. Even a single organism may initiate infection.

Immunologic response

TB bacilli multiply within the accumulated macrophages. The caseous center develops within 2 to 4 weeks and the tuberculin positivity within 1 to 2 months. The caseous lesion may do one of three things: heal or stabilize, enlarge and shed bacilli into the bloodstream or lymph channels, or liquefy and form a cavity. And one of four potential outcomes: immediate clearance of the pathogen, chronic or latent infection, rapidly progressive disease or reactivation disease, which occurs many years after the initial exposure.

Reactivation tuberculosis occurs many years after initial exposure mostly due to a decline in immune function. It occurs in the subapical region. Miliary tuberculosis occurs when tuberculous bacilli are released into the bloodstream among immunodeficient hosts, e.g.: the very young, the very old, or the immunocompromised, e.g. HIV patients.

Clinical Manifestations

Pulmonary TB has quite nonspecific symptoms: cough with varying degrees

TB is among the 10 leading causes of life-years lost to disability and premature death

of mucus production, malaise, fever, weight loss, night sweats and hemoptysis are among the most. Moreover it has nonspecific physical findings. This follows on the laboratory studies: anemia, elevated ESR in the 40 to 80 mm/h range, mild hyponatremia (43%), hypercalcemia (27%), abnormal liver function tests, moderate leukocytosis with neutrophilia (40%), and often monocytosis (50%).

Radiographic Features

Primary tuberculosis constitutes parenchymal disease, lymphadenopathy, miliary disease & pleural effusion. Postprimary tuberculosis includes parenchymal disease, airway involvement & pleural extension. In "primary" TB, the radiograph often shows a lower or middle lobe predominant infiltrate and associated ipsilateral hilar adenopathy (no cavitation). In adults, reactivation of TB is common and presents with the classic radiographic findings of upper lobe cavitary lesions. TB cavities tend to be thick walled and irregular. Fungal balls (mycetomas aspergillus) are noted also. TB in the lower lobes (Wang JY, Int J Tuberc Lung Dis 2006 and Smith LS, Chest 1987) is characteristic for less cavitation, more atelectasis, smaller main bronchi diameter, longer time to diagnosis and treatment, more endobronchial involvement, and higher mortality. Radiographic features of endobronchial TB are illustrated in "Chang SC, Arch Intern Med 1991" and "Chang SC, Chest 1988", where it is stated that endobronchial TB is not common and is usually identified during diagnostic bronchoscopy as ulcerations, submucosal infiltration, or fibrotic stenosis.

It is clear, from the above, that we are dealing with extremely variable clinical manifestations of TB depending upon several factors: host factors (age, immune status, nutrition, other diseases, etc.), pathogen factors (including the virulence of the TB strain, drug resistance, etc. & the interaction between

these two).

Special populations worth of being noted in TB include: HIV and immunocompromised individuals, elderly and children.

Tuberculous pleural effusion (TPE)

It is noted to occur in primary Tuberculosis, reactivation Tuberculosis, acquired Immune Deficiency Syndrome (AIDS) and tuberculous empyema. Symptoms comprise cough, pleuritic chest pain, and dyspnea, fever, weight loss, and anorexia. Chest radiography reveals: small to moderate-size pleural effusion, often unilateral. Tuberculous pericardial effusion may be associated with TPE. Diagnosis is made by: pleural fluid analysis along with smear and culture, normal to low PH, the cell count range is usually 500 to 2500, with blood cells/mm³ with lymphocyte predominance of 80% or higher in two-thirds of TPE cases. Initial polymorphonuclear cell predominance is a rare event. Eosinophil levels over 10% suggest nontuberculous etiology and presence of mesothelial cells are rare in TPE except in HIV-positive

patients. Chyliform pleural have been reported in TPE. Adenosine deaminase (ADA) and polymerase chain reaction of pleural fluid are shown to increase the sensitivity and specificity of diagnosis. The sensitivity of PCR testing of pleural biopsy for TB is similar to that of pleural tissue culture. Rapid diagnosis of TPE: PCR, ADA, and interferon-gamma in an appropriate clinical setting. This, however, does not replace the need for culture and sensitivity studies for M. tuberculosis. Smears of pleural fluid in TPE are positive for M. tuberculosis in 5 to 20% in immunocompetent hosts; they are higher in AIDS (50%) with CD4 counts of less than 100. Positive PCR and presence of granulomata on histology of pleural tissue obtained via transcutaneous approach or video pleuroscopy are highly suggestive of TPE. Confirmation of tuberculosis is made by culture of pleural fluid and/or tissue. TPE

is not free of complications: pleural thickening, bronchopleural fistulas, fibrothorax which necessitates surgical correction, and residual pleural thickening of over 2 mm is reported in 10 to 72%. Only 10% of TPE results in mild to modest restrictive functional impairment, which correlates poorly with the degree of thickness.

Sites of TB

These include:

- . Miliary
- . Central Nervous System,
- . Genitourinary TB,
- . Abdominal TB,
- . TB Lymphadenitis,
- . Musculoskeletal TB,
- . Pericardium,
- . Larynx, &
- . Uncommon Sites: Aural, Ocular, Mastitis...

Tuberculosis & HIV Infection

The resurgence of tuberculosis (TB) in the United States (U.S.), peaking in the early 1990s, coincided with the growing human immunodeficiency virus (HIV) epidemic. The worldwide rates remain impressively high with approximately one-third of the 40 million HIV-infected persons co-infected with TB. It is reported that advanced HIV infection increases the risk of reactivation of latent tuberculosis infection and exogenous reinfection, leads to more rapid progression to active disease, is less likely to cavitate, has higher death rates, atypical clinical presentations, reduced sensitivity of the tuberculin skin test (TST), characterized by lack of compliance with and toxicity of chemotherapy, inadequate infection control, and the emergence of drug-resistant strains.

TB is unique in that it may be readily transmitted to immunocompetent individuals via the respiratory route, can occur at any stage of HIV infection, and maintenance therapy is not necessary after an adequate course of therapy. Physicians should be aware that the epidemiology, clinical manifestations, and management of tuberculosis are altered in HIV-infected patients and HIV testing is recommended for all suspected or confirmed cases of TB.

Crowded living conditions and populations with limited resistance favor effective disease spread

Communication

To the Lebanese members of the ERS

Now that 2008 is well underway, I would like to introduce my role as the National Delegate for Lebanon in the ERS. I already sent by mail to new ERS members, and to the well established ones, a welcome letter. New members must have also received a Welcome Pack. Since the ERS started this initiative in 2006, such packs have been sent to a total of 3005 new members worldwide. An electronic version thereof will also be developed during this year.

These packs will introduce you to the European Respiratory Society, as well as

to your benefits as members. You will also find my contact details in the letter accompanying the Welcome Pack.

The role of the National Delegate is to develop, among members, a sense of belonging to the ERS, ensure they feel a part of the Society, as well as to help the ERS understand the members' needs.

I hope that my contribution will improve communication between members and the ERS Headquarters, enable members to feel welcomed and, hopefully, to

actively participate in some activities of the Society.

Exceptionally, my mandate as a National Delegate officially started on February 1st, 2008. So, please feel free to contact me if you need assistance with any matters regarding the Society, rather than contacting directly the HQ.

Finally, I strongly encourage members to submit abstracts for the Conference, that's the Annual Meeting which will be held this year in Berlin on October 4-8, 2008. See you there!

Aux membres libanais de l'ERS

Maintenant que l'année 2008 est bien entamée, je voudrais présenter mon rôle comme Déléguée Nationale pour le Liban à la Société Européenne de Pneumologie (ERS). J'ai déjà envoyé par mail aux nouveaux membres, ainsi qu'aux anciens, une lettre de bienvenue. Les nouveaux membres ont dû également recevoir un paquet de bienvenue. Depuis que l'ERS a démarré cette initiative en 2006, de tels paquets ont été envoyés à un total de 3005 nouveaux membres. Une version électronique sera préparée au cours de cette année.

Ces paquets vous présenteront d'abord la Société Européenne, ainsi que vos avantages comme membres. Vous

trouvez également mes coordonnées dans la lettre qui accompagne le paquet de bienvenue.

Le rôle du Délégué National est de développer chez les membres un sentiment d'appartenance à l'ERS, de s'assurer qu'ils se sentent une partie intégrante de la Société, mais aussi d'aider l'ERS à comprendre les besoins des membres.

J'espère que ma contribution améliorera les relations et la communication entre les membres et le bureau central de l'ERS, et qu'elle incitera les membres libanais à participer activement aux activités de la Société.

Exceptionnellement, mon mandat comme Déléguée Nationale a débuté le 1er février 2008. N'hésitez pas à m'appeler si vous avez besoin de quoi que ce soit concernant la Société, plutôt que de contacter directement le bureau central de l'ERS. Je voudrais enfin à cette occasion encourager les membres à soumettre des résumés (abstracts) à la prochaine Conférence annuelle qui aura lieu cette année à Berlin les 4-8 octobre 2008. J'espère vous rencontrer là-bas à cette occasion !

Dr. Mirna Waked
Déléguée Nationale du Liban à l'ERS
National Delegate of Lebanon in the ERS

Info

Congrès de Pneumologie de Langue Française

Le 12ième Congrès de Pneumologie de Langue Française (CPLF) s'est tenu à Lille du 8 au 11 février 2008 et a

regroupé plusieurs milliers de participants dont une vingtaine de libanais. Le congrès était très riche en sessions scientifiques

principalement centrées sur l'asthme, l'allergie et la tuberculose. Huit cours de perfectionnement et quarante-quatre ateliers ont assuré une formation continue de qualité.

Ce congrès est l'occasion pour les membres de notre société de rencontres toujours enrichissantes avec de nombreux pneumologues libanais ou d'origine libanaise vivant en France, ainsi qu'avec des pneumologues français ayant déjà visité le Liban ou qui aimerait bien le visiter.

Dr. Georges Khayat



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References: 1. Casaburi R, Kukafka D, Cooper CB, Witek TJ Jr, Kesten S. Improvement in exercise tolerance with the combination of tiotropium and pulmonary rehabilitation in patients with COPD. *Chest*. 2005;127:809-817. 2. Sewell L, Singh SJ, Williams JEA, Collier R, Morgan MDL. Can individualized rehabilitation improve functional independence in elderly patients with COPD? *Chest*. 2005;128:1194-1200. 3. Celli B, ZuWallack R, Wang S, Kesten S. Improvement in resting inspiratory capacity and hyperinflation with tiotropium in COPD patients with increased static lung volumes. *Chest*. 2003;124:1743-1748. 4. Vincken W, van Noord JA, Greefhorst APM, et al, on behalf of the Dutch/Belgian Tiotropium Study Group. Improved health outcomes in patients with COPD during 1 yr's treatment with tiotropium. *Eur Respir J*. 2002;19:209-216. 5. Calverley PMA, Lee A, Towse L, van Noord J, Witek TJ, Kelsen S. Effect of tiotropium bromide on circadian variation in airflow limitation in chronic obstructive pulmonary disease. *Thorax*. 2003;58:855-860. 6. Niewoehner DE, Rice K, Cote C, et al. Prevention of exacerbations of chronic obstructive pulmonary disease with tiotropium, a once-daily inhaled anticholinergic bronchodilator: a randomized trial. *Ann Intern Med*. 2005;143:317-326.