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Zambia Health Information Digest



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ZAMBIA HEALTH INFORMATION DIGEST

EDITORIAL BOARD

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Surgery Department
Lusaka

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Head, Medical Library
University of Zambia
Medical Library

ADDRESS

Zambia Health Information Digest
University of Zambia
School of Medicine
Medical Library
P.O.Box 50110
Lusaka, Zambia
Telephone: 260-1-250801
Fax: 260-1-250753
E-mail: medlib@unza.zm

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July - September 2004

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EDITORIAL

This issue carries a selection of articles on the all-important subject of HIV/AIDS and the different efforts and progress being made towards arresting the pandemic.

The main feature article however, is on Obstructive Sleep Apnea (OSA). The word "**apnea**" derives from the Greek, and literally means "without breath." In obstructive sleep apnea, the throat collapses during sleep causing sufferers to snort and gasp for breath. People with severe cases may have hundreds of these episodes every night, causing daytime sleepiness and possibly increasing their risk of high blood pressure and heart problems.

These breathing interruptions can occur hundreds of times per night, and place significant strain on the heart and cardiovascular system. Each interruption can last from 10 seconds to a minute or longer. To learn more about this sleep disorder go to [<http://www.itonsil.com>].

There is a wealth of information on sleep disorders and there are a number of sites that give sources of valuable information on this subject. One of such sites is the Sleep Medicine homepage found at [<http://www.users.cloud9.net/~thorpy/sleep.htm>], which lists resources regarding all aspects of sleep including, the physiology of sleep, clinical sleep medicine, sleep research, federal and state information, patient information, and business-related groups.

OBSTRUCTIVE SLEEP APNOEA AND ITS VARIANTS

The traditional definition of sleep apnea, that is apnea of 10 seconds or longer occurring five or more times per hour of sleep, failed to appreciate the true nature of this condition. It was unnecessarily restrictive and failed to take account of the two linked events that are central to the development of daytime symptoms in these patients. These are:-

- Excessive upper airway narrowing during sleep with increased inspiratory effort.
- Recurrent arousals from sleep, mainly due to the increased inspiratory effort.

Although obstructive apnoeas of more than 10 seconds do result from excessive upper airway narrowing and lead to arousals, they are not the only events to do so. The upper airway narrowing in normal subjects referred to earlier is usually of no consequence, because the slight increase in inspiratory effort that results does not lead to arousal. Once the increased upper airway narrowing leads to sufficiently increased inspiratory effort to provoke arousal, then there is the potential for daytime symptoms to develop due to recurrent sleep fragmentation.

We now know that even snoring alone (without apnoeas, hypopnoeas, or hypoxia) can provoke recurrent arousals and daytime symptoms indistinguishable from the classic presentation with full apnoeas. Furthermore, the relationship between nocturnal events and daytime symptoms is very limited, making arbitrary definitions of abnormality based on sleep studies impossible. Thus rigid definitions of normality versus abnormality are currently impossible in this area, and one is forced to use clinical definitions for the disorder: for example, significant daytime symptoms (sleepiness etc., see later) in conjunction with evidence of sleep related upper airway obstruction (snoring, hypopnoeas, apnoeas) and sleep disturbance (EEG arousals, body movements, autonomic activation etc.).

Such definitions have important consequences when designing sleep studies and deciding upon treatment (see later).

Prevalence

OSA syndrome is the most common cause of sleep-disordered breathing. Community surveys indicate that the condition may be symptomatic in up to 1% of apparently normal men of working age. There is wide variation in the severity of OSA from short periods of recurrent sleep disruption with snoring, which are present in over 5% of asymptomatic men, to the full classical syndrome in which the patient can never sleep and breathe at the same time.

Pathophysiology

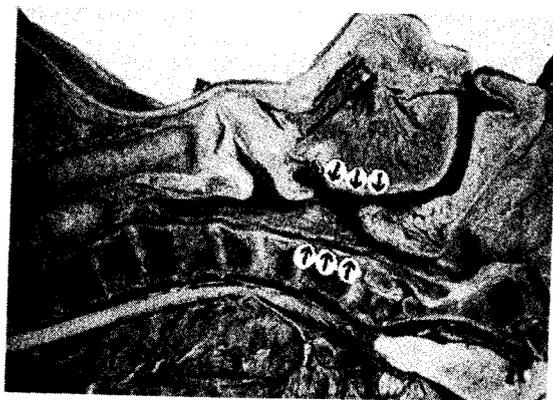


Figure 1. Anatomy of obstructive sleep apnoea. *Coronal section of the head and neck showing the segment over which sleep related narrowing can occur (arrows).*

The critical event in obstructive sleep apnoea and its variants is the narrowing and collapse of the pharyngeal airway with the onset of sleep (figure 1). This can occur anywhere along its length, from the soft palate to just above the epiglottis. The collapse can be complete (apnoea) or partial (when snoring is usually present) and leads to increased inspiratory efforts, sometimes to pleural pressures of -80 cms H₂O or so. After a variable period (from a few seconds to over 2 minutes), arousal occurs with the opening of the airway and, almost always, loud snoring. The derangement of blood gases that usually develops during an apnoea or hypopnoea is then rapidly corrected by a short period of hyperventilation.

The arousal mechanism is probably multifactorial, but pharyngeal and/or pleural receptors sensing the increased inspiratory effort are probably the

most important. The deterioration in blood gases (asphyxia) is likely to be contributory since this is clearly the arousal stimulus in central apnoeas when no inspiratory efforts are made. It is the arousal and the consequent increase in pharyngeal muscular tone that pulls the airway open, ends the period of obstruction, and allows the resumption of ventilation. After a short period, sleep resumes and the cycle is repeated.

A patient with severe sleep apnoea can experience 300 - 500 of these events in one night, with sleep occurring in short intervals no longer than the longest period of apnoea (usually less than 60s). With such a severe disturbance to sleep architecture, the deeper refreshing stages of sleep (i.e. SWS) are seldom entered, and it is easy to see why these patients are hypersomnolent.

The severity of sleep apnoea, as judged by conventional definitions (numbers of apnoeas, distribution of sleep states etc.), correlates poorly with daytime symptoms. It is likely that the degree of arousal from sleep, the length of any interapnoeic periods, as well as the number of arousals, are the important factors in determining the symptom of hypersomnolence.

Pharyngeal airway: the pharynx has to serve two very different functions - breathing and eating. When air is the only consideration, the trachea can be a rigid incompressible tube; when food and drink are the only consideration, the oesophagus can be a floppy muscular tube propelling material along its lumen. The pharynx accomplishes both functions by having a complicated set of muscles that can hold it open during breathing, but when relaxed allow the propulsion of food and drink by peristalsis.

The factors that oppose these muscular dilator forces are intrapharyngeal negative pressure, intrapharyngeal space occupying masses, and external compression. During inspiration, there is a subatmospheric pressure in the pharyngeal lumen due to the normal upstream resistance in the nose; if there is a high nasal resistance, the pressure difference will be even greater. During normal breathing, increases in phasic inspiratory pharyngeal muscular tone combat this increased suction. External

compression (e.g. mass loading by fat) also tends to cause closure against which the pharyngeal muscles must act.

Another important factor affecting the balance of forces in the pharynx is the starting size of the lumen. If the lumen is encroached on by, for example, tonsillar hypertrophy, or abnormal tissue deposition (e.g. in acromegaly, hypothyroidism and the mucopolysaccharidoses), then it is easier for the lumen to be further obliterated. Other important provoking anatomical factors are the dimensions of the lower face. Quite subtle degrees of underdevelopment and retropositioning of the mandible and maxilla contribute to the development of sleep apnoea. This particular facial shape may to some extent be hereditary, although there is also evidence that prolonged mouth breathing as an infant can produce similar changes (sometimes called the adenoidal facies).

The main risk factor for obstructive sleep apnoea is obesity. Quite how obesity produces sleep apnoea is not clear, but recent evidence has suggested that simple mass loading of the neck overcomes the ability of the pharyngeal muscles to maintain a lumen during sleep, when the tonic postural input to these muscles is withdrawn. Studies have shown that the tendency to have sleep apnoea correlates better with neck circumference than with general obesity, and that a neck circumference of more than 43 cm (17 inches) is the most significant predictor of the presence of OSA syndrome.

A unifying concept drawing all this together is that excess weight in the neck loads the pharyngeal dilators even when the patient is awake, but that the increased muscular activity due to tonic postural input is effective in maintaining a lumen. With the onset of sleep, this compensation may be lost thus allowing the external weight to compromise the airway, particularly in the presence of prior structural narrowing from a degree of retrognathia or tonsillar hypertrophy.

Sedative drugs, such as alcohol and the benzodiazepines, reduce muscular tone in the pharynx and can produce snoring or provoke obstructive

apnoeas in snorers. Thus, it is important to enquire about alcohol and sedative use in patients with suspected sleep apnoea.

Paediatric Aspects

OSA syndrome is being increasingly recognised in children and is mainly caused by tonsillar enlargement (occasionally only minimal). In many of these children there is no apnoea at all and it is snoring alone that produces the symptoms. Tonsillectomy virtually always leads to rapid relief of symptoms, which are often less specific than in adults: they include hyperactivity, bad behaviour, poor school performance and enuresis, as well as the loud snoring. Because tonsillar size fluctuates in children (due to upper respiratory infections), the snoring and symptoms will fluctuate and a one-off sleep study may be deceptively normal. Thus the parents' history may be more indicative of a significant problem than the sleep study.

SYMPTOMS IN OBSTRUCTIVE SLEEP APNOEA

Common (>60%)

- Loud snoring
- Excessive daytime sleepiness
- Feelings of choking or shortness of breath at night
 - Restless sleep
 - Unrefreshing sleep
- Changes in personality
 - Nocturia

Less common (10-60%)

- Morning headaches
 - Enuresis
 - Reduced libido
- Spouse worried by apnoeic pauses
 - Nocturnal sweating

Rare (>10%)

- Recurrent arousals/ insomnia
 - Nocturnal cough
- Symptomatic oesophageal reflux

Measuring the Consequences of OSA

Hypersomnolence in patients with OSA syndrome can be profound with the onset of irresistible sleep during talking, driving and eating. As the condition worsens, progressively more and more stimulation is required to maintain arousal. In the early stages, the hypersomnolence may be noticeable only during boring activities. Car accidents are more common in sleep apnoea sufferers, but concerns about losing one's driving licence lead to under-reporting of drowsiness while driving. The Epworth sleepiness score is a simple verified way to document the degree of sleepiness although occasionally it fails to represent the degree of sleepiness (figure 3).

EPWORTH SLEEPINESS SCALE

Name: _____ Hospital number: _____

Sex: _____ Your age (Yrs) _____ Your sex (Male - M / Female - F) _____

How likely are you to doze off or fall asleep in the situations described in the box below, in contrast to feeling just tired?

This refers to your usual way of life in recent times.

How if you haven't done some of these things recently try to work out how they would have affected you.

Use the following scale to choose the most appropriate number for each situation.

- 5 = would never doze
- 4 = slight chance of dozing
- 3 = Moderate chance of dozing
- 2 = High chance of dozing

Situation	Chance of dozing
Sitting and reading	
Watching TV	
Sitting, awake in a public place (eg a theatre or a meeting)	
As a passenger in a car for an hour without a break	
Lying down to rest in the afternoon when circumstances permit	
Sitting and talking to someone	
Sitting quietly after a lunch without alcohol	
In a car, while stopped for a few minutes in the traffic	

Figure 3. Assessment of sleepiness using the Epworth sleepiness scale.

This questionnaire can be filled in by the patient unattended.

A total score up to about 9 is considered normal and most patients with severe OSA syndrome will be above 15.

Snoring: the prevalence of regular snoring increases with age and is more common in men than women; approximately 25% of men and 5-10% of women aged 35-65 years snore. Recent population surveys have found a strong correlation between snoring and daytime

sleepiness, which probably results from the sleep disturbance that snoring alone can produce, without necessarily any sleep apnoea, as discussed earlier.

At an epidemiological level there are probably more people with excessive daytime sleepiness due to snoring than from classical OSA syndrome with full apnoeas. However, in most sleep clinics, reporting of apnoeas by the bed partner has been more predictive, than just snoring alone, of actual sleep apnoea on a subsequent sleep study.

Cardiovascular consequences

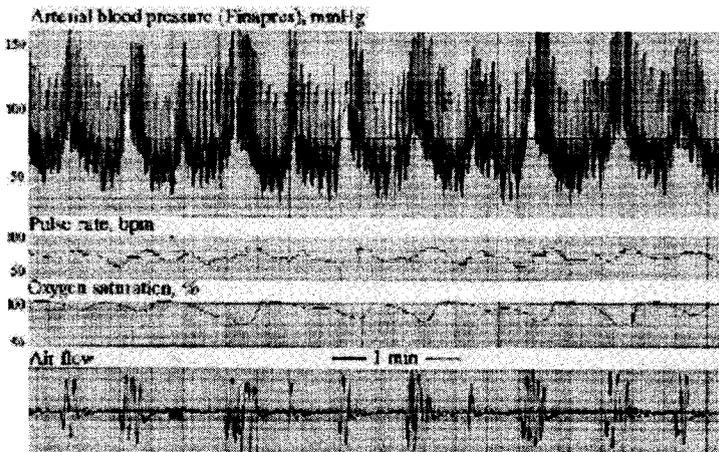


Figure 4. Non-invasive monitoring of systemic blood pressure in a patient with obstructive sleep apnoea.

During an apnoea (no air flow) the obstructed inspiratory efforts lead to falls in pleural pressure that are reflected in the blood pressure tracing. At the end of an apnoea the arousal provokes a rise in blood pressure.

One of the most dramatic physiological consequences of OSA is the large rise in systemic blood pressure that occurs at the end of each apnoeic episode (figure 4). Systolic blood pressure can increase by up to 100 mmHg, 300-400 times each night in severe cases. It had been thought that hypoxaemia played a central role in the development of these blood

pressure swings, but recent evidence shows that arousal from sleep is sufficient to cause the rise in blood pressure.

Although there is no definitive evidence that these blood pressure swings have deleterious long-term effects, intuitively it does seem likely. It has been suggested that normal sleep enhances longevity by reducing cardiovascular workload (i.e. fall in blood pressure, heart rate and vascular resistance) and that these recurrent periods of hypertension may well be harmful. This view is supported by some evidence of increased cardiovascular mortality in patients with OSA. Most of the available studies do not have ideal controls and a large retrospective survey of sleep clinic patients did not find the presence of OSA to be an independent risk factor for cardiovascular death.

A direct cause and effect relationship between sleep apnoea and sustained daytime hypertension now looks increasingly doubtful. Recent large studies have found that the occurrence of OSA syndrome and hypertension together is almost entirely due to an important common risk factor - obesity. However early morning, post-sleep, blood pressures may be independently affected by the presence of sleep apnoeas.

Respiratory complications

Although in early reports cor pulmonale was fairly common in patients with obstructive sleep apnoea, it is now clear that these patients were at the severe end of the disease spectrum. Patients are now being recognised earlier and associated cor pulmonale is a much less common finding. It is also clear that another factor, in addition to obstructive sleep apnoea, probably needs to be present to provoke diurnal respiratory failure and fluid retention. This is usually either a degree of lower airways obstruction (e.g. from smoking), gross obesity or respiratory muscle weakness. However, the lower airways obstruction need only be mild, and hypercapnia out of proportion to the degree of lung disease and breathlessness should suggest OSA syndrome as a possible additional diagnosis, particularly in the presence of other symptoms such as snoring and sleepiness.

Investigations

The diagnosis is often made on the history alone. The probability of obstructive sleep apnoea in a sleepy patient with a large neck, and a long history of loud snoring, witnessed apnoeas, and restless sleep is extremely high. However, some form of confirmatory study is considered essential before starting treatment.

Visual observation of sleep: the frustrated, struggling inspiration, often for over 1 minute, followed by noisy resumption of breathing with variable arousals, is easily recognised once seen. It is important to observe sleep in both the supine and decubitus postures, as obstruction occurring in the supine posture can be simply relieved by position training. Failure to observe apnoeas during a short period of sleep does not of course exclude OSA syndrome.

Pulse oximetry is another simple screening method and also provides a continuous reading of heart rate (a marker of arousal). Modern equipment enables the arterial oxygen saturation and pulse rate to be recorded for at least 8 hours overnight and can be used at home.

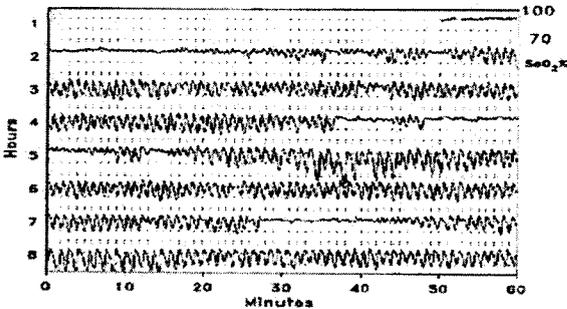


Figure 5a. Overnight arterial oxygen saturation monitoring.

A patient with severe obstructive sleep apnoea. Recording shows multiple dips in oxygen saturation.

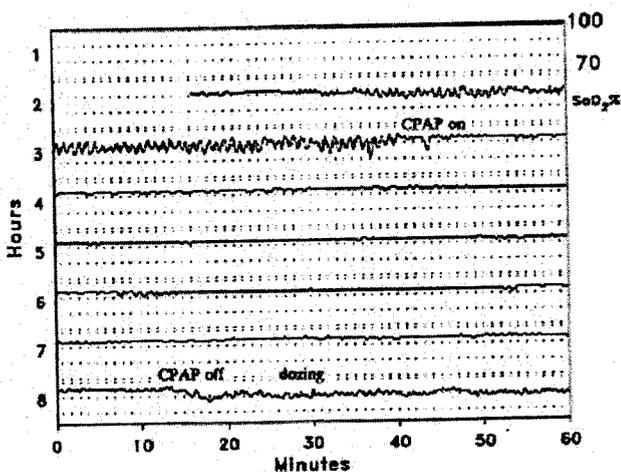


Figure 5b. Overnight arterial oxygen saturation monitoring.
The same patient while receiving continuous positive airway pressure via a nasal mask throughout the night.
The recording shows the abolition of dips and is essentially a normal tracing.

Figure 5a shows a recording of the SaO₂ characteristic of OSA syndrome. A totally flat trace in a patient who says he slept well virtually excludes the diagnosis.

Results between these two extremes may require more extensive studies, particularly if recurrent arousals due to heavy snoring alone are to be recognised.

Oximetry and video: the addition of an all-night video recording is useful, as doubtful areas on the oximetry trace can be reviewed to confirm if any sleep and breathing disorder is present.

A further development of oximetry and video recordings has been to process the video signal digitally to detect body movements as another marker of arousals in addition to rises in heart rate.

Tracings of movement, SaO₂, pulse rate and snoring are very characteristic in classic OSA, snoring with arousals and snoring alone; if all four tracings are flat then a sleep and breathing disorder is excluded (figure 6).

Figure 6. Overnight monitoring using oximetry and video recordings.

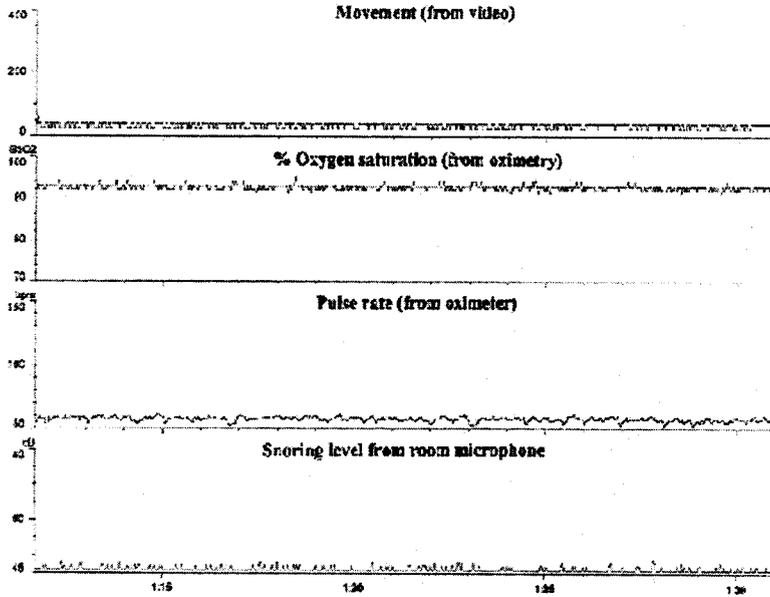


Figure 6a.

The four tracings represent body movement (processed from the video signal), oxygen saturation, pulse rate and noise/snoring volume (in dB, where 45 dB is background levels and 55dB is quiet snoring). This is a normal tracing with four flat lines throughout with no evidence of snoring, hypoxaemia or recurrent arousals.

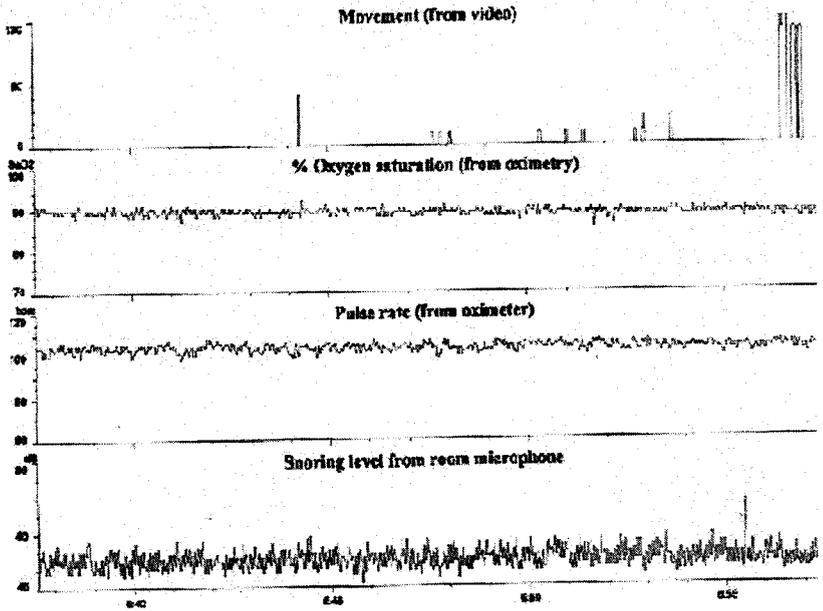


Figure 6b.

A patient with continuous snoring but no evidence of multiple arousals in that the pulse rate is steady and there are very few body movements. In addition there are no dips in oxygen saturation.

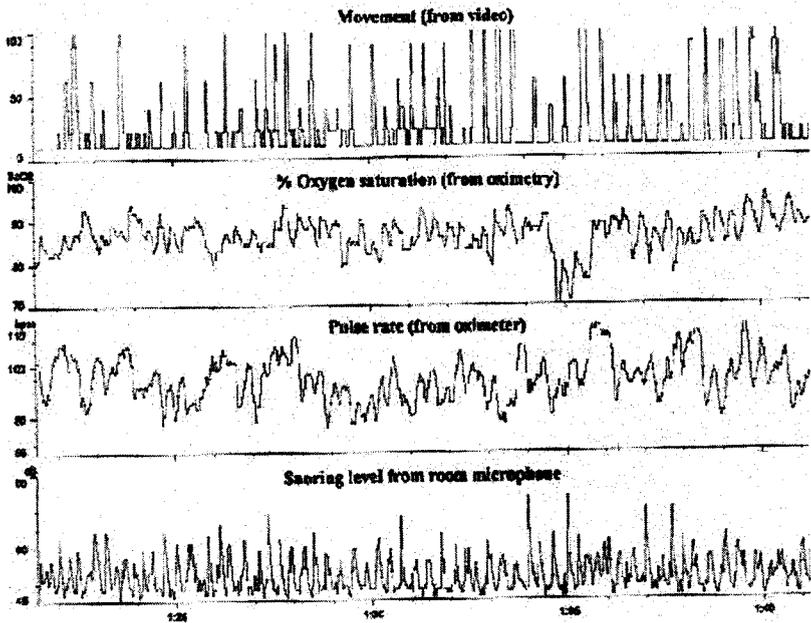


Figure 6c.

This patient with OSA shows the typical snore/silence/snore pattern in association with body movements and pulse rate rises indicating sleep disturbance, and falls in oxygen saturation showing that the obstruction has been bad enough to interfere with gas exchange.

Such simple sleep study techniques have always been compared with full polysomnography. However this is incorrect. Full polysomnography missed the partial forms of sleep apnoea (snoring induced arousals for example) and is not a good gold standard. The correct way to evaluate sleep monitoring equipment is to assess its ability to recognise those patients with a sleep related upper airways problem that will respond to definitive treatment. In future, response to treatment (such as nasal CPAP, see later) is likely to be the gold standard against which the success of diagnostic tests is judged.

Full polysomnography, in which many physiological variables are monitored, used to be regarded as the gold standard. It may include:

EEG, eye movements and chin muscle tone to define sleep stages

Respiration by monitoring oronasal flow, and ribcage with abdominal movements

Snoring

Leg movements to diagnose periodic movements of the legs during sleep, a common finding (particularly in the elderly) which does not often cause significant hypersomnolence

Oximetry

ECG to identify serious arrhythmias.

Despite the availability of sophisticated automated analysis and reporting systems, the interpretation of all these different physiological signals requires considerable experience, not least because of the numerous artefacts produced during sleep recordings.

Treatment of OSA Syndrome

Treatment must be tailored to the individual patient's symptoms. The main driving force to treat is the hypersomnolence or other daytime symptoms, not the sleep study 'severity'. In mild OSA, simple therapeutic measures, such as avoidance of alcohol or sedatives (which further suppress upper airway tone), weight loss (particularly successful if lost from around the neck), mandibular advancement devices and reduction of nasal resistance, often suffice.

In a few patients, in whom obstructive sleep apnoea only occurs when they lie supine, measures to maintain sleep when lying flat may be successful. Clearly, any underlying cause, such as hypothyroidism or acromegaly, must be sought and treated.

Continuous positive airway pressure therapy (CPAP): in severe cases with disabling symptoms, it is necessary to provide CPAP from a fan pump, delivered via a nasal mask (figure 7).

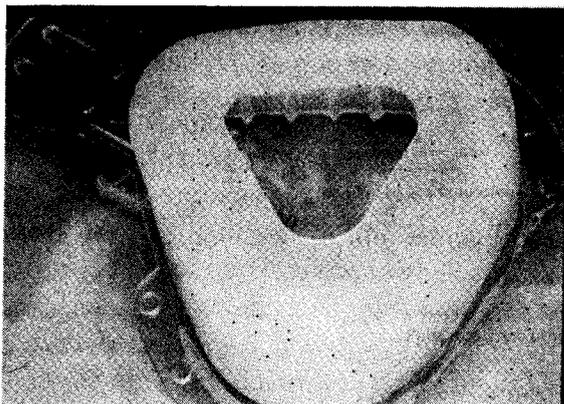


Figure 7. CPAP nasal mask.

Nasal mask used for continuous positive airway pressure. The same type of mask can be used for nasal ventilation.

This provides a "pneumatic" splint that literally blows open the pharynx to allow

unobstructed breathing, with striking results on pulse oximetry (figure 5b) and abolition of the blood pressure swings. The resolution of the disabling symptoms can be dramatic and explains why such cumbersome and unaesthetic equipment is well tolerated, (figure 8).

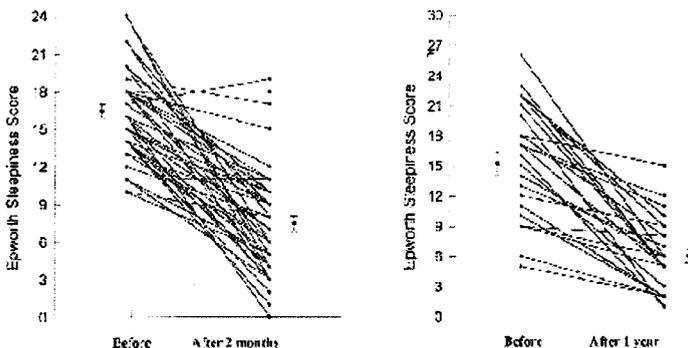


Figure 8. Resolution of sleepiness after nasal CPAP therapy. *Epworth sleepiness scores (see figure 3) before and after a period on nasal CPAP. Most patients are within the normal range following treatment.*

Manual titration of the individual pressure required by the patient overnight used to be required, now this process can be done quite adequately automatically by so-called 'intelligent' CPAP machines. These sense snoring, flow limitation, hypopnoeas and apnoeas which leads to appropriate raising or lowering of the pressure. This overnight pressure profile can then be reviewed in the morning and an appropriate fixed

pressure chosen for subsequent home use. There is no evidence that use of an 'intelligent' machine is of any value used at home long-term, although there are theoretical reasons why it might be.

Mandibular advancement devices: Moving the jaw forward enlarges the retroglossal airspace. This can be achieved during sleep by the use of an intraoral device that fixes to upper and lower teeth. The simplest form of such devices consists of a pair of custom made gum shields for the top and bottom teeth that are welded together with the lower jaw held closed and protruded forward by about 75% of maximum protrusion, figure 9.

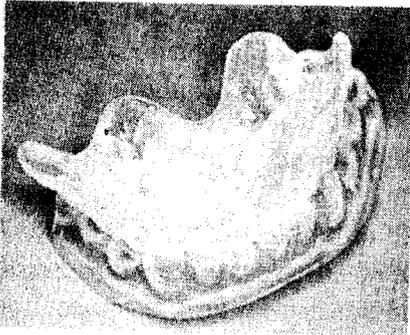


Figure 9. Mandibular advancement device.

Simple oral appliance constructed from two custom made gum shields. Worn at night this increases the retroglossal space and reduces upper airway resistance.

There is good evidence that this approach works for snoring and mild-to-moderate OSA, but there are some problems with tolerability (though probably less than with CPAP).

Surgery: the clear indication for surgery is the removal of enlarged tonsils or other obstructing "tumours".

The operation of uvulopalatopharyngoplasty (removal and reshaping of the soft palate and pharynx) has dropped out of favour for the treatment of OSA although it clearly can work in some carefully selected cases. We regard it as second or third line treatment when other, non-destructive, approaches have failed, i.e. CPAP (with humidifier if necessary) or dental appliance. It may still be an appropriate treatment for loud snoring in carefully selected cases, although objective evidence suggests that the benefits are very small compared to the subjective reports.

Chronic Obstructive Airways Disease

There can be large falls in arterial oxygen saturation during sleep in patients with chronic obstructive pulmonary disease. In general, these falls can be predicted from daytime oxygen levels and are not due to classical OSA syndrome, but to a number of factors which combine to produce worsening hypoxaemia during sleep. These patients are often at the limits of their respiratory capacity, and the loss of the intercostal and accessory muscle contribution to breathing, and the increase in upper airways resistance associated with REM sleep, cause marked falls in ventilation.

In addition, patients may be hypoxic while awake and small falls in ventilation and PaO₂ lead to large falls in arterial oxygen saturation during sleep. The hypoxic episodes demonstrated by overnight oximetry in a patient with chronic obstructive pulmonary disease differ in character from those seen in patients with OSA syndrome (figure 10).

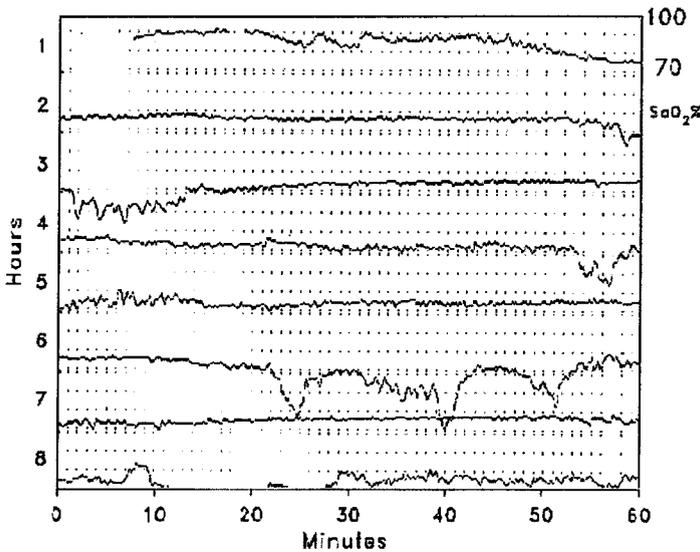


Figure 10. Overnight arterial oxygen saturation monitoring in a patient with chronic obstructive pulmonary disease.

There is some evidence that increases in upper airway narrowing during sleep, short of apnoeas and even snoring, may contribute to the development of CO₂ retention in these patients.

However classical sleep apnoea is not significantly more common in unselected COPD patients with raised CO₂ levels, and excessive nocturnal hypoxaemia is not one of the predictors of long-term survival in patients with COPD.

Central Sleep Apnoea

Pure central sleep apnoea syndrome is rare, it is caused by a heterogeneous group of disorders characterised by intermittent loss of respiratory drive during sleep. Causes include cardiac failure (Cheyne-Stokes respiration), cerebral degeneration, and infection or infarction or compression of the brain stem.

The loss of the awake drive is critical here, allowing breathing to undershoot and thus promotes instability. OSA can occasionally look like central sleep apnoea when the inspiratory efforts are too weak to see on tracings of chest wall movements, such as in muscular dystrophy or the very obese. Restrictive disorders of the chest wall (e.g. scoliosis or old thoracoplasty) can lead to nocturnal hypoventilation, as can a variety of neuromuscular disorders.

The pathogenesis here is thought to be that whilst awake there are compensatory mechanisms available that drop out during sleep, especially REM sleep, causing hypoventilation or complete apnoea.

Over time the marked hypoventilation every night produces respiratory drive blunting, that further renders the patient dependent on the awake (or behavioural) drive to breathe.

The treatment of these nocturnal hypoventilation syndromes is usually overnight ventilation via a nasal mask. Occasionally protriptyline or other

REM suppressant can ward off respiratory failure, but usually only temporarily.

Acknowledgements. An earlier version of this article appeared in *Medicine (International)* 1995;13(9):372-5

<http://www.priory.com/cmol/treatmen.htm>

Commonwealth Foundation support for HIV/AIDS Organisations 01 December 2003

Article prepared for the newsletter of the Social Transformation Programmes Division of the Commonwealth Secretariat

The Commonwealth Foundation provides support to civil society organisations (CSOs) working on the field of HIV/AIDS by giving them grants to learn from each other, receive training and share experiences and at courses, workshops, conferences and exchange visits. The Foundation believes that only through co-operation, mutual learning and sharing can the HIV/AIDS crisis be tackled. Below are some examples of co-operation we have supported recently. Civil society in two parts of the Commonwealth severely affected by HIV/AIDS are pooling their mutual learning. From Kolkata, India, a four person civil society team recently went to study programmes for children and youth infected and affected by HIV/AIDS in KwaZulu Natal, South Africa. The participants came from the Child in Need Institute, which supports children abandoned on the streets, slum dwellers, children of sex workers and child labourers in West Bengal.

The response of the faith community to HIV/AIDS is important. Among organisations recently supported by the Foundation are the Botswana Christian AIDS Intervention Programme, an inter-denominational organisation that has mobilised church communities to respond to HIV/AIDS. BOCAIP provides training in home-based care and counselling at a number of HIV/AIDS centres in Botswana. They were

able to pass on their considerable expertise to other church-based CSOs at a symposium of the Pan-African Christian HIV/AIDS Network held in Kenya in September 2003. They then went on to attend the International Conference on AIDS and STIs in Africa, along with another organisation which received support from the Foundation, the Zambia National AIDS Network, a body which facilitates co-operation between and develops the capacity of AIDS service organisations in Zambia.

The Southern African Network of AIDS Service Organisations has developed a programme to address the issue of stigma and discrimination in the region. The Foundation supported Southern African AIDS service organisations to plan this at a meeting in Zambia in 2003. Practical training remains vital too. A staff member from the India-Canada Collaborative HIV/AIDS Project was recently supported to attend a training Programme on the Prevention of Mother to Child Transmission of HIV/AIDS in Uganda.

Recognising that HIV/AIDS is not an issue that can be ghettoised, the Foundation has also supported activities where HIV/AIDS issues feature as part of a broader picture. These include a national level Youth Seminar on a Youth-Friendly Sexual and Reproductive Health Programme, held in Malaysia, and a study visit to Kolkata on preparing a specialised curriculum for educating sex workers by a civil society team from Bangladesh.

The Foundation has also given support since its inception to Para 55, the group that brings together various Pan-Commonwealth associations to work on HIV/AIDS issues.

For details on how to apply for a grant from the Commonwealth see: <http://www.commonwealthfoundation.com/news/common.cfm?id=440>

Indian AIDS drug gets rave review

Friday 02 July 2004

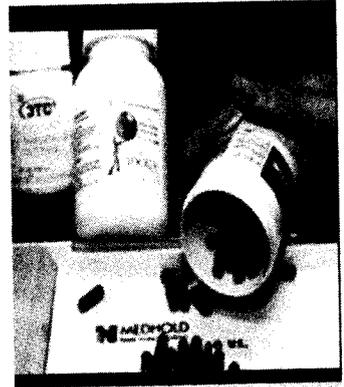
A cheap three-in-one generic AIDS pill from India is just as good as more expensive branded medicines and should be widely used in developing countries, researchers have said. Lack of scientific evidence about the clinical effectiveness of such generic fixed-dose combinations has until now caused some international AIDS donors to refuse to fund their use.

But a team from the French national agency for AIDS research and Swiss charity Medecins sans Frontieres said Cipla's Triomune performed as well as brand drugs in the first open clinical study in a developing country.

They found that 80% of HIV-infected patients given the tablet twice a day had undetectable levels of virus in their blood after six months of treatment.

Comparable results

Results of the study involving 60 patients in Cameroon, 92% of whom had full-blown AIDS, were published in The Lancet medical journal on Friday.



***WHO aims to ensure
AIDS drugs to three
million by end-2005***

"This generic fixed-dose combination (FDC) gives results comparable to those seen in the developed world using triple-drug therapy comprising brand-name drugs," said study coordinator Eric Delaporte.

"It is now no longer possible to raise scientific uncertainty as an objection to the widespread utilisation of FDCs in the developing countries."

In addition to being cheaper, drugs like Triomune - which contains GlaxoSmithKline's lamivudine, Bristol-Myers Squibb's stavudine and Boehringer Ingelheim's nevirapine - are simpler to use since patients need to take only two pills a day.

As such, they have a major role to play in meeting the World Health Organisation's goal of getting antiretrovirals to three million people in the developing world by the end of 2005, N Kumarasamy of the YRG Centre for AIDS Research and Education in Chennai wrote in a commentary accompanying the research.

Women Health Ministers Form Network To Address Women's Health Issues, Including Reproductive Health [May 21, 2004]

Women health ministers from countries around the world on Tuesday formed an international network to address the inequalities women experience in accessing basic health care services, including reproductive health care, according to a **Council of Women World Leaders release**. The ministers discussed the issue at an "unprecedented" meeting organized by CWWL, a network of current and former women heads of state, during the 57th World Health Assembly, according to the release. CWWL -- which is chaired by Mary Robinson, former president of Ireland and United Nations high commissioner for human rights -- aims to promote

"It is now no longer possible to raise scientific uncertainty as an objection to the widespread utilisation of FDCs in the developing countries"

**Eric Delaporte,
AIDS drug study
coordinator**

effective governance and improve the experience of democracy worldwide by increasing the number, effectiveness and visibility of women in leadership positions in countries around the world. The newly established network -- called the Network of Women Health Ministers -- will include current women health ministers, women leaders of multilateral and regional organizations and representatives from select nongovernmental organizations. During the meeting, the network agreed to focus on several health issues facing women, including high maternal mortality and morbidity rates, the need for improved reproductive health care and HIV prevention services and the health impact of violence against women, according to the release.

Reaction

"The foundation of a Network of Women Ministers of Health will serve as a platform for the ministers to exchange ideas as they work toward solutions for critical health issues that impact women and girls," CWWL Secretary-General Laura Liswood said, adding, "It will provide opportunities to discuss and develop recommendations and programs for practical health solutions to the varied challenges confronting nations and the world." Finland Health Minister Liisa Hyssala, who will co-chair the new network with Sierra Leone Health Minister Agnes Taylor-Lewis, said, "We recognize that addressing the underlying problem of gender inequality is critical and that solutions to such health problems will have to include the empowerment of women through education and a guarantee of their human and reproductive rights." UNAIDS and Finland's Ministry of Social Affairs and Health provided support for the meeting, according to the release (CWWL release, 5/18).

Tests to Begin on New Drugs to Protect Women From Contracting H.I.V. New York Times July 14, 2004

By LAWRENCE K. ALTMAN

BANGKOK, July 13 - Classes of drugs used to treat patients with H.I.V. are being tested for the first time as microbicides to protect women from

becoming infected during sex, a scientist at the 15th International AIDS Conference said here on Tuesday.

The tests - some of them under way, others expected to begin by the end of 2004 - involve more than 28,000 women in the United States, Africa and Asia. A number of other antiviral drugs are being tested in the laboratory or on animals.

A microbicide is at the top of health workers' wish list to protect the many women in poor countries whose husbands refuse to use condoms. A microbicide would also protect an infected woman's sex partners from infection. The need for a microbicide is even more urgent because there is no vaccine for H.I.V.

"Microbicides will not be magic bullets, and microbicides probably will never be as effective as condoms," which are considered nearly 100 percent protective, Dr. Zeda F. Rosenberg, chief executive of the nonprofit International Partnership for Microbicides, said in an interview.

"But even a partially effective microbicide could save millions of lives," she added. Dr. Rosenberg is scheduled to deliver her official report to the conference on Thursday. It will take 5 to 10 years before any microbicide is marketed, Dr. Rosenberg said, but the drugs may prove more effective in combinations similar to the "drug cocktails" that many infected people now take.

Experience has taught scientists that there is no guarantee of an effective microbicide. At the AIDS Conference in Durban, South Africa, in 2000, health workers had fully expected that a large trial of a spermicide, nonoxynol-9, would prove effective. But the trial showed that nonoxynol-9 may increase the risk of H.I.V. infection rather than protect against it. So scientists have shifted their focus to drugs that specifically aim at separate parts of H.I.V.'s life cycle.

An ideal microbicide would work in three ways. First, it would kill H.I.V. in the vagina and cervix. Second, the microbicide would prevent any virus that escapes from attaching to a woman's cells, the way H.I.V. starts to infect. Third, for any virus that does enter cells, the microbicide would

block an enzyme, reverse transcriptase, that H.I.V. needs the enzyme to replicate. At the same time, an effective microbicide would not irritate the vagina or cervix; such damage could enhance the ability of H.I.V. to infect cells.

For example, Dr. Rosenberg said, an ideal microbicide would not kill the bacteria that are normally present in healthy vaginas and that produce hydrogen peroxide, a natural disinfectant. Also, scientists do not want a microbicide to change the acidity of the vagina, allowing unwanted bacteria to flourish.

In developing drugs as microbicides, scientists would need to find ways to deliver them as gels and creams or add them to sponges. Another approach would be to put them in rings that would be inserted into the vagina; the rings would be designed to release the drug over a period of a month or longer.

While cost, stability and ease of manufacturing are critical, "how the product looks, feels, smells, tastes are all critical since a highly effective microbicide that no one likes to use will not prevent any infections," Dr. Rosenberg said.

Australian scientists have conducted limited tests of the acidic juices of lemons and limes that some people have long used as contraceptives in an effort to develop them as microbicides. Dr. Rosenberg said that such juices should go through the same rigorous screening tests that other drugs and chemicals must pass before tests on women can begin.

The classes of drugs being tested include those known as entry inhibitors, nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors and membrane active agents. Viread, a drug made by Gilead Sciences that is prepared as a topical gel, is the only licensed antiviral drug being tested as a microbicide. Viread is a member of the class of drugs known as nucleoside reverse transcriptase inhibitors. The National Institutes of Health is about to begin the second of the three-stage testing system for topical Viread, Dr. Rosenberg said.

Two drugs are in full scale tests as possible microbicides: Savvy, made by Biosyn, which is being tested in Ghana; and Carraguard, which the Population Council is testing in South Africa. At a cost of from \$50 million to \$100 million for each trial, \$1 billion will be needed to test all candidate drugs as potential microbicides, Dr. Rosenberg said.

Duplicated Efforts Are Hampering AIDS Fight, Conferees Say. July 13, 2004

By LAWRENCE K. ALTMAN

BANGKOK, July 12 - As spending to stop the global H.I.V. epidemic rises, waste and inefficiency from the duplication of efforts by donors are a major obstacle, a panel of experts said at the 15th International AIDS Conference here on Monday.

In a session about why donors fail to work together, participants agreed about some steps that might improve coordination of donations to poor countries. They included standardizing measures to monitor the costs and outcomes of prevention efforts and accepting a set of principles from the United Nations that would be aimed at more efficient use of the influx of new resources.

But there were no formal proposals, in part because the participants said it would take more time to resolve the complexities involved in the relationships between donors and recipient countries. Private-sector donations exceed government donations in the AIDS effort, said Hank McKinnell, the chief executive of Pfizer, who moderated the session.

"Like a flywheel gaining speed, the global donor community is now pledging, moving and disbursing funds and materials at unprecedented rates," he said.

That influx creates tensions. The government staffs of most poor recipient nations are small, yet must must respond to high expectations of donors. At the same time, donors and recipients often become overwhelmed by the extensive paperwork that comes with donations.

Describing his experience as a World Bank vice president, Praful Patel of Uganda said that he had "not found a single country that wants donors to work together."

The reasons vary. Some countries mistrust the motivation of donors who push for coordination, Mr. Patel said, fearing it could be used as a tool for control.

As donors compete for prominence, said Dr. Biziwick Mwale, executive director of the National AIDS Commission in Malawi, "lack of agreement on approaches and key issues among the donors themselves has also led to delays or problems in program implementation and coordination."

Also, Dr. Mwale said, many donors lack the appropriate authority to make decisions and have to consult and seek approval from their own countries or headquarters.

Dr. James Curran, dean of the Emory University School of Public Health, urged that donors and countries use the same monitoring system to determine how many lives are prolonged and at what cost for each year saved.

Gregg Gonsalves of the Gay Men's Health Crisis in New York City said that scaling-up services through the public sector was essential to controlling the epidemic but that volunteer groups had "played a key role in the response to AIDS, all too often filling in where governments have reneged on their duties" to infected people and those at risk.

"There are thousands of community organizations, some large, some very small, doing incredible work around the world, some with very little support," Mr. Gonsalves said. "We need to document this work, describe it

and catalog it, so that what has been invisible takes shape and form for our governments, donors and ourselves.

Fixed-Dose Mixtures of Generic AIDS Drugs Prove Effective

By LAWRENCE K. ALTMAN July 15, 2004

BANGKOK, July 14 - The first large-scale study of AIDS patients receiving fixed-dose combinations of generic antiretroviral drugs in poor countries documented their effectiveness, scientists reported at the 15th International AIDS Conference here on Wednesday.

The combinations consist of three antiretroviral drugs formulated into one pill that is taken twice a day. The aim is to simplify therapy because experience has shown that the fewer the pills a patient needs to take, the better the compliance. Doctors Without Borders, the group that carried out the study in 21 countries, bought the pills from two manufacturers in India, Cipla and Ranbaxy Laboratories Ltd.

Fixed-dose generic drug combinations have been controversial. Critics contend that they may be less effective than patented versions and not as safe. This study expands on a much smaller study with similar results published in the *Lancet* early this month.

The findings from Doctors Without Borders should assure patients, donors, health workers, governments and others, said Dr. Alexandra Calmy, an AIDS adviser to Doctors Without Borders in Geneva. When Doctors Without Borders began prescribing the fixed-dose combinations in 2002, "we were convinced they would work or we would not have done it," said Dr. Calmy, who specializes in infectious diseases. "It was common sense."

But to make certain, her group undertook the study reported Wednesday.

"We found a very robust outcome, and the findings are important for the Global Fund and other groups that are recommending" use of generic fixed

dose combinations of antiretroviral drugs, Dr. Calmy said in an interview. The combination that Doctors Without Borders uses for first-line therapy is the same one recommended by the World Health Organization, drugs known as stavudine, lamivudine, 3TC and nevirapine.

Of the 12,058 adults that Doctors Without Borders has treated with antiretroviral drugs in 21 countries in Africa, Central America and Asia since 2002, 6,861 received fixed-dose combinations. Since March, 80 percent of the group's new AIDS patients have received fixed-dose combinations.

Among the fixed-dose combination recipients, the probability of survival after one year was calculated as 82.4 percent, Dr. Calmy reported. About 60 percent of the deaths occurred in the first three months of therapy. The deaths occurred largely among patients who were so ill that they began the antiretroviral therapy too late to protect them from the infections that often kill patients as a complication of AIDS.

Among the 6,861 fixed-dose combination recipients, there was a significant increase in the number of immune cells, known as CD-4 cells that are destroyed by H.I.V., the virus that causes AIDS. The CD-4 count rose by an average of 137 cells in a year, in about half the patients. Because of logistical difficulties in treating patients in slums and rural areas in countries like Malawi with poor roads and transportation, Doctors Without Borders does not routinely monitor each patient with the tests that measure the amount of virus in the blood. Doctors in developed countries routinely use such tests, known as viral loads, to determine the effectiveness of therapy.

However, a viral load test in a subset of patients showed that fixed-dose combinations failed in 12 percent of the 477 tested, which is comparable to findings in developed countries, Dr. Calmy said. Among the 6,861 patients who had been on treatment for one year or longer, 51 had to switch to other drugs because they had suffered side effects to one or more of the drugs in the fixed-dose combination. For those who had to take a new regimen, the number of pills was 13 or more a day.

Nevirapine was the most common cause of the unwanted effects. Of the 51 who suffered reactions such as rashes and liver damage, 23 changed to other regimens. An additional nine patients switched to other drugs because they suffered nerve damage and disfiguring accumulations of fat on the neck, back and abdomen. The frequency of adverse reactions was comparable to that observed among recipients of patented drugs in developed countries, Dr. Calmy said.

In a separate part of the study conducted in Malawi, Dr. Arno Jeannin's Doctors Without Borders team randomly tested the amount of H.I.V. in the blood of 477 patients who had received fixed-dose combinations there for six months or longer. Of these, H.I.V. could not be detected in 85 percent, showing the overall effectiveness of the fixed-dose combinations. The annual cost of the fixed-dose combinations was \$389 or less.

Mandela Lends Weight to Fighting Tuberculosis and AIDS.

July 15, 2004

By LAWRENCE K. ALTMAN

BANGKOK, July 15 — Nelson Mandela came to the 15th International AIDS Conference here today to lend his prestige to the battles against tuberculosis and AIDS, two deadly diseases that are intricately linked. The former president of South Africa was diagnosed with tuberculosis while in prison, where he spent 27 years for opposing the former apartheid regime before his release in 1994.

"We cannot win the battle against AIDS if we do not also fight TB," Mandela said at a press conference today. "TB is too often a death sentence for people with AIDS." Mandela has acknowledged that, as president, he did not recognize the severity of the AIDS epidemic in South Africa, which now leads the world with 5.3 million people infected with HIV, the virus that causes the disease. Since Mandela left office, he has embraced the

fight and has pushed his successor, Thabo Mbeki, to confront HIV and tuberculosis.

Tuberculosis causes from 15 percent to 50 percent of deaths among HIV-infected people, making it the leading cause of death among people with AIDS, according to the World Health Organization. While the AIDS virus and the tuberculosis bacterium each can cause fatal illness, the two diseases can form a deadly combination, each amplifying the other's progress. By weakening the immune system, the AIDS virus leaves infected people particularly vulnerable to developing tuberculosis. Mandela said he spoke about his case of tuberculosis because he felt that the disease is ignored, and to help the Bill and Melinda Gates Foundation open a \$44.7 million program to conduct research to develop strategies to control tuberculosis in communities where HIV is highly prevalent.

Mandela said prison doctors diagnosed his case of tuberculosis by testing his sputum. "Fortunately, we sent the specimen before there were holes in the lung," Mandela said. After doctors told Mandela that it would take four months to cure his tuberculosis, he told his friends in prison about the diagnosis. He said: "My friends objected to me sharing my personal affairs. But I consoled them and told them that the doctors and hospital staff knew about my status and I therefore had no reason to hide this information from those close to me."

Mandela said he took the same steps of disclosing his more recent case of prostate cancer. "I knew that once people were aware of the effects, they would support me," Mandela said. "I'm convinced that the support of my family, friends and the public in general contributed to my healing process." Mandela said it was a blessing that "the world has made defeating AIDS a top priority." But an additional fight against tuberculosis is required, he said. The problem, said Dr. Richard Chaisson of Johns Hopkins University in the United States, a recipient of one of the new Gates grants, is "a catastrophic collision of two epidemics."

Determining whether tuberculosis or HIV caused the death of a person with AIDS can be difficult and depends on specific medical facts in each case.

Because such determinations involved medical judgments, the percentage of deaths caused by tuberculosis has varied widely in different studies. Tuberculosis was widely prevalent even before the AIDS epidemic began to take hold in 1981. But now more people are dying from tuberculosis worldwide than ever, the United Nations says.

In sub-Saharan Africa, where 25 million people are HIV-infected, two-thirds of tuberculosis patients also have the AIDS virus. And of the estimated 1.6 million deaths that tuberculosis causes each year worldwide, one-fourth occur among HIV-infected people. As many as 50 percent of HIV-infected people worldwide, develop tuberculosis. Treatment of tuberculosis can prolong and improve the quality of life for HIV-infected people, but cannot alone prevent people from dying of AIDS.

The current strategy for managing tuberculosis in poor countries generally depends on patients seeking care, and aims at treating patients with active tuberculosis, not those with silent infection. The Gates Foundation grants are to support research to determine the cost-effectiveness and feasibility of two interventions in communities with a high prevalence of co-infection of HIV and tuberculosis. The two steps are improved case-finding and preventive therapy with a drug, isoniazid. Research has shown that isoniazid prevention can be more than 85 percent effective in reducing an individual's risk of developing active tuberculosis. But scientists have not determined the effect of widespread isoniazid use during a tuberculosis epidemic.

The Gates studies will be conducted in Brazil, South Africa and Zambia and take more than seven years to complete. The Global Fund spends from 15 to 20 percent of its \$3 billion budget on tuberculosis.

Vitamins delay the progress of AIDS: study

NY TIMES NEWS SERVICE, NEW YORK

Friday, Jul 02, 2004, Page 7

A daily vitamin pill can delay the progress of AIDS in HIV-infected women, an eight-year study by Harvard researchers has found.

Vitamins are by no means a cure or a substitute for antiretroviral therapy, the researchers said. But for malnourished women in Africa or Asia with little hope of getting better drugs, vitamins are an inexpensive, safe way of giving them extra months of life and a little less misery before they die, the study suggested.

"The study is important for developing countries, especially for pregnant and post-partum women, who are a nutritionally vulnerable group," said Dr. Lynne Mofenson, chief of the pediatric and maternal AIDS branch of the National Institute of Child Health and Human Development, one of the National Institutes of Health.

Dr. Richard Marlinck, who helps run treatment programs in six African countries in his dual roles as director of the Harvard Aids Institute and scientific advisor to the Elizabeth Glaser Pediatric Aids Foundation, said the study would prompt him to recommend vitamins for patients in all six programs.

"This is exciting because it costs literally pennies and can ward off the time when you need to begin treatment with expensive and toxic drugs," he said.

The study, run by the Harvard School of Public Health and the medical school of Tanzania's Muhimbili University, followed 1,078 women in Dar es Salaam between 1995 and last year. The women were recruited when they were pregnant. Like millions of others in poor countries, they had no access to the drug therapy known as AIDS cocktails, so HIV infection meant a sentence of eventual death from tuberculosis, meningitis, pneumonia, Kaposi's sarcoma, diarrhea or another opportunistic infection.

About 6 million people in poor countries are already sick enough to need antiretroviral drugs, the World Health Organization estimates, and another 25 million or more will need them soon. Only about 400,000 are getting them.

Efforts to increase that number have gone slowly because of high drug prices, fights over patents, a lack of interest by donors, reluctance by African leaders to admit that their nations have epidemics and the inability of shattered health-care systems to muster enough doctors, nurses and laboratories to safely deliver the drugs.

Vitamins costing less than US\$15 a year might prolong the lives of people waiting for rescue, the study concluded. The supplements do not attack the virus, but enhance the body's own immune system, allowing it to do so.

The vitamins were specially made for the study "but are quite easy to mass-produce," said its lead author, Wafaie Fawzi, a Harvard professor of nutrition and epidemiology. They contained about three times the recommended daily allowance of vitamin E and six to 10 times the allowance of C and B-complex vitamins.

The Tanzania study found that 30 percent fewer of the women who received the multivitamins died or progressed to full-blown AIDS during the study than a group of women receiving a placebo.

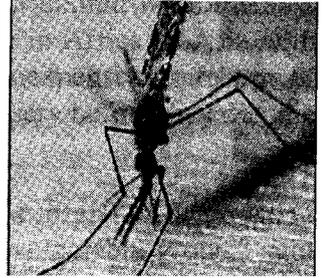
Nonetheless, vitamins were no cure-all. About a quarter of the women who received them still died or reached full-blown AIDS during the study and, without anti-retroviral treatment, virtually all can be expected to die in the next few years. The study had to be changed twice in mid-stream for ethical reasons, Fawzi said.

Vitamin A was dropped from the supplements because researchers found evidence that it increased the risk that mothers would pass the infection to their babies. Also, when the authors had early evidence that multivitamins prevented fetal death and premature births, they put all the women in the study on multivitamins until they delivered. After that, the mothers went back on their previous regimens.

The study confirms what researchers have suspected since the epidemic's early days, Marlink said.

Flick mosquitoes away say doctors

Doctors in the United States have warned people not to swat mosquitoes against their skin. Writing in the *New England Journal of Medicine*, they said it could increase the risk of serious infection. It follows the case of a 57-year-old woman who died after developing a fungal infection in her muscles. Doctors believe she developed the infection after she swatted a mosquito, causing part of the insect to penetrate and infect her skin.



Doctors puzzled

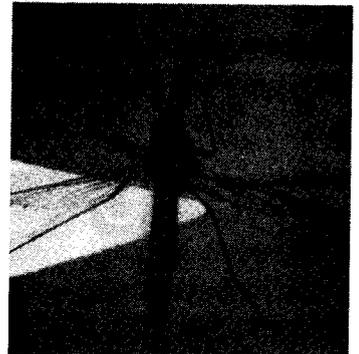
The woman developed a fungal infection called *Brachiola algerae*.

The infection puzzled doctors, not least because it is thought to be found only in mosquitoes and other insects.

Unlike malaria or West Nile Virus, it is not found in mosquito saliva so doctors were able to rule out a bite as the cause of the infection.

But they concluded that the woman, who died in 2002, probably developed the infection after smearing the insect into a bite.

The case has prompted doctors at Albert Einstein College of Medicine in New York to warn against swatting mosquitoes against the skin.



"I think if a mosquito was in mid-bite, it would be wiser to flick the mosquito off rather than squashing it," said Christina Coyle, one of the authors of the article.

However, Roger Nasci, a mosquito expert at the US Centers for Disease Control in Colorado said there was no scientific basis for switching to flicking.

He added that flicking a mosquito away is only a temporary solution.

"Unfortunately, then the mosquito often goes on to bite another person, or bites you again," he said.

Chris Curtis, professor of medical entomology at the London School of Hygiene and Tropical Medicine, was also sceptical.

"If you flick a mosquito away, they will come back. They are desperate for blood," he told BBC News Online.

"I think it is better to swat the brutes and take the microscopic chance of developing this infection."

[BBC Online]

Internet HIV/AIDS information Resources on Zambia

By Christine Wamunyima Kanyengo

This list is not exhaustive of all the full text HIV/AIDS information resources that are available on online on the Internet. However it goes some way in facilitating access to available vast resources on the Internet that deal with HIV/AIDS and Zambia.

AIDS in Zambia Bibliography

The bibliography covers published material on HIV/AIDS in Zambia through 1995. For each citation, there is an abstract and a location for the fulltext. It was compiled by Douglas Webb of UNICEF, with assistance from James Sulwe and Rosemary Likwa (MOH).

Online Availability

<http://www.medguide.org.zm/aids/aidsbibl.htm#research>

Bond, Virginia, (1997)

'Between a rock and a hard places': applied anthropology and AIDS research on a commercial farm in Zambia. Health Transition Review 7(supp.3):69-83

Abstract

Fieldwork on a commercial farm in southern Zambia, which was aimed at designing an HIV prevention program for farm workers, gradually exposed the nature of sexual liaisons between young girls, coming to work on the farm from the surrounding villages, and older migrant men workers. Before completing fieldwork, the anthropologist voiced her concern about the implications of these liaisons for the spread of STDs and HIV with the local rural community, farm management and farm workers. The immediate outcome of her intercessions was the decision by management to sack under-age workers. Although some members of the local community, including local research assistants, and some managers

and workers welcomed this decision, others were angered by it. Caught between interest groups and conflicting guidelines, the anthropologist, it is argued, was in a no-win situation, between a rock and a hard place. The paper proposes that the application of anthropological ethics in AIDS research needs some reevaluation.

Online Availability

<http://eprints.anu.edu.au/archive/00000965/00/Bond2.pdf> or

<http://nceph.anu.edu.au/htc/pdfs/Bond2.pdf>

Bond, Virginia and Mathur Sanyukta (2003)

Stigma Associated with Opportunistic Infections and HIV and AIDS in Zambia

Online Availability

<http://www.icrw.org/docs/stigmaoi.pdf>

Bond, Virginia and Dover, Paul (1997)

Men, women and the trouble with condoms: problems associated with com use by migrant workers in rural Zambia.

Health Transition Review 7(suppl.):377-391

Abstract

Understanding cultural attitudes to condoms is of the utmost importance in promoting their use as a means of protection against HIV transmission. This article examines condom use in relation to what people see as the purpose of sex, what good sex entails and how this relates to ideas of being a proper woman or man. It seems that the underlying and pervasive ideal is that sex is essentially a procreative act, since an emphasis on male potency and male and female fertility often overrides anxieties about contracting HIV and other sexually transmitted diseases. Hence condom use is usually only negotiated within some short-term relationships and then not consistently. Whilst both men and women have negative attitudes to condoms, women because of their economic and ideological dependence on men are in a much weaker position to negotiate condom use.

Online Availability

<http://eprints.anu.edu.au/archive/00000923/00/Bond1.pdf>

<http://nceph.anu.edu.au/htc/pdfs/Bond1.pdf>

Bond Virginia, Cliggett, Lisa and Schumaker, Lyn (1996)

"STDs and Intrarural Migration in Zambia: Interpreting Life Histories of Tonga Migrants in Relation to the Transmission of STDs and HIV"

Abstract

Since 1993, up to 2000 Tonga from the Gwembe valley have begun migrating on a seasonal basis to pick marigolds and paprika on a commercial farm developed in Chiawa on the lower Zambezi river. The paper shows how this unusual rural-to-rural migration figures in the spread of STDs and HIV. It relates the findings of two anthropological studies--the famous longitudinal study of the Gwembe Tonga begun in 1956 by Colson and Scudder, and a current wide-ranging study of the factors involved in community capacity to prevent, manage and survive HIV/AIDS begun in 1991 in Chiawa. Using life histories constructed from data from these two projects, the authors are able to speculate on individual exposure to STDs and (in more recent years) to HIV, in relation to the migrants' contact with various workplaces and urban centres and in relation to their marriage and mortality patterns. Current data (1993-1996) on the Tonga migrants' sexual practices and strategies--as well as on the prevalence, treatment and prevention of STDs and HIV--on the commercial farm where they work, helps to confirm the significance of these migrants in the spread of STDs and HIV. In addition, the paper assesses the potential influence of their exposure to health education and health care from the work settings where some have worked in the past.

Online Availability

http://www.indiana.edu/~pirt/PIRT_WP/wp97-6.html

Clay Sue and Bond, Virginia

We Didn't Apply To Be AIDS Orphans

<http://www.thezambian.com/Reports/aids.aspx>

Fetters, Tamara, Fines Munkonze, and Julie Solo. 1999.

Investing in Youth: Testing Community Based Approaches for Improving Adolescent Sexual and Reproductive Health. CARE Zambia and Population Council

Abstract

Two interventions – condom distribution by peer educators and small business loans to youth aged 14-19 – led to safer sexual practices among adolescents in peri-urban communities. Both program participants and their peers reported an increase in abstinence and monogamy and a decrease in sexually transmitted infections. Youth in the intervention areas were better informed about ways to prevent HIV/AIDS than those in the control group. However, the interventions did not lead to greater use of contraception or condoms for dual protection

Online Availability

<http://www.popcouncil.org/pdfs/frontiers/orsummaries/ORSum17.pdf>

Kalunde, Wendy Kabwe (1997)

HIV/AIDS and sexual behaviour among youth in Zambia.

Health Transition Review 7(suppl.3):91-95

Abstract

This study was carried out in selected urban areas in Zambia in the area along the major rail links between the urban areas of Lusaka, Kabwe, Kitwe and Ndola. The objective of the study was to ascertain the influence of socio-economic, demographic and cultural correlates on the sexual networking and activities of the youth in selected towns of Zambia: specifically to determine how sexual behaviour among young people might influence the course of the AIDS epidemic and also to suggest policy interventions. Sexual behaviour among young people both in-school and out-of school, aged between 12 and 25, may be vital in influencing the spread of AIDS in Zambia. The results indicate that sexual matters are discussed with close friends of the same sex and peer group, or with cousins who are of the same age. Sometimes grandmothers are consulted for advice by co-resident grand-daughters. Girls and boys engaged in sex or thought about engaging in sex at quite an early age. Girls discussed

their intentions about sex with their close friends, many of whom appeared poorly informed about sex themselves. The general views of both sexes about STDs should be a source of concern. The youth do not seem to take STDs seriously basically because most of them, aside from AIDS, are curable. Many young people do not regard AIDS as threat to their lives and do not even consider it as a hindrance to sexual relationships. There should be programs to inform parents and guardians on the importance of educating their children about sex and AIDS, through radio and television as well as through seminars and workshops. There should be campaigns on condom use, not just for prevention of pregnancy, but also for the prevention of STDs. Information and discussion of condom use with partners can be given, more elaborate education on STDs and their link to AIDS. Sex education should be intensified in the schools and teachers should be encouraged to give appropriate advice.

Online Availability

<http://eprints.anu.edu.au/archive/00000967/00/Kalunde1.pdf>

<http://nceph.anu.edu.au/htc/pdfs/Kalunde1.pdf>

Kelly M

The Orphan crisis in Zambia

Abstract

In the following article, Michael Kelly, S.J., looks at the devastating effects of HIV/AIDS on families and children, especially that the epidemic is occurring at a time of almost universal poverty. Michael discusses how the AIDS pandemic makes poverty even deeper and more dehumanising. He examines how the loss of productive adults and the costs involved in caring for the sick and burying the dead have eaten away at families' few resources, leaving survivors with their hearts torn out and their ability to cope almost shattered. The majority of these survivors are the children whom we call orphans. Hence the upsurge of the orphan population and the crisis that this brings about

Online Availability

http://www.jctr.org.zm/bulletins/orphan_crisis.htm

Kelly M (2001)

What HIV/AIDS Can Do to Education, and What Education Can Do to HIV/AIDS

Abstract

HIV/AIDS is conceptualised as having the potential to affect education through ten different mechanisms: reduction in demand, reduction in supply, reduction in availability of resources, adjustments in response to the special needs of a rapidly increasing number of orphans, adaptation to new interactions both within schools and between schools and communities, curriculum modification, altered roles that have to be adopted by teachers and the education system, the ways in which schools and the education system are organised, the planning and management of the system, and donor support for education.

Online Availability

<http://www.jctr.org.zm/publications/HIV-AIDS%20and%20education.html>

Stuebing, Kathleen W. (1997)

Maternal schooling and comprehension of child health information in urban Zambia: is literacy a missing link in the maternal schooling-child health relationship.

Health Transition Review 7(2):149-169

Abstract

This paper examines the relationship between literacy skills and comprehension of health information by studying mothers of young children in a high-density urban area in Zambia. Both decontextualized language and print literacy skills were assessed for each woman and the resulting scores were related to her comprehension of both broadcast and printed health information. The results indicate that fluency in a language is not sufficient for full comprehension of broadcast messages in the decontextualized type of language used in bureaucratic communication, and that a woman's ability to use decontextualized language is associated with greater comprehension of such messages. Skill in using this type of language increases with years of schooling, even in the poorly equipped schools in Zambia, as does print literacy, even though the levels of

comprehension achieved are well below their grade level on average for these women. Some implications of these findings for both health care providers and educators are then considered.

Online Availability

<http://eprints.anu.edu.au/archive/00000425/00/stuebng1.pdf>

<http://nceph.anu.edu.au/htc/pdfs/stuebng1.pdf>