

News and Notes

Auto-destruct syringes

The following information is extracted from No. 13 (1992) of *Essential Drugs Monitor*:

An auto-destruct syringe is a disposable syringe that after 1 use cannot be re-used. This new technology has recently been introduced into many EPI programmes. As 5 of the 6 vaccines used in the EPI are administered by injection it was considered a priority that injections given for vaccination be of the highest safety standards. The injections given with the EPI syringe are simple as the dose is a standard volume. Auto-destruct syringes for the injection of other essential drugs are not currently manufactured but could be made available.

Auto-destruct syringes provide good protection against cross-infection to the patient but new risks will be introduced if there are any stock shortages. If health workers use all the auto-destruct syringes and still need to give injections they will be unable to do so. Some health workers may stop giving injections. Others may seek out the few conventional disposable syringes remaining and reuse them repeatedly. The EPI recommends that each health centre using auto-destruct syringes should have an emergency contingency supply of sterilizable syringes and sterilizer as a back-up in the event of stock shortages.

The introduction of auto-destruct syringes into a programme normally using standard disposable syringes does not represent a change in policy. It is merely an additional step to reinforce the inherent safety of disposable syringes after use.

In summary all 3 methods have economic and/or safety advantages and disadvantages:

The reuse of syringes and needles after sterilization is usually culturally acceptable, the risk of not having sterile syringes and needles available when needed is greatly reduced, and the cost is the most advantageous at about US\$0.02 per injection. However, if steam sterilizers are not available in the health centre, problems may arise through inadequate disinfection practice. Fuel supply can also represent a problem in some areas—particularly rural parts of the country without access to electrical supply.

Standard disposable syringes provide a very high degree of assurance of sterility when first used but are subject to abuse. They are moderately expensive at about US\$0.05 per injection.

Auto-destruct syringes also provide the same high degree of assurance of sterility but are safer since they cannot be reused. However, this is the most expensive method of all, costing about US\$0.13 per injection, which will be beyond the means of many health services. It should only be considered when disposable syringes are required but there is no assurance that standard disposable syringes will not be reused.

The Essential Drugs Monitor is produced and distributed by the WHO Action Programme on Essential Drugs and Vaccines and is published in English, French and Spanish. Since the Action Programme was launched in 1981, more than 100 countries have either drawn up essential drugs lists or started projects in support of primary healthy care, providing reliable essential drugs and vaccines which:

- meet people's common health needs;
- have significant therapeutic value;
- are acceptably safe;
- offer satisfactory value for money.

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HealthNet and SatelLife, Cambridge, Massachusetts, USA

The following information is extracted from *International Development Research Centre Reports* (IDRC), Vol. 20, No. 3, October 1992 under the title 'Help from above':

'HealthNet is an innovative use of satellite technology that will transmit medical information and enable physicians to communicate with their colleagues throughout the world'.

HealthNet was begun by SatelLife, an international, non-profit organization based in Cambridge, Massachusetts that aims to address health information and communication needs in the developing world. SatelLife chose to use low-earth orbit satellite technology to accomplish its goals.

IDRC is collaborating with SatelLife on the HealthNet project. This is a natural partnership; IDRC has been promoting the use of this technology since the early 1980s because of its interest in exploring the potential use of satellites to improve communication to and from the developing world.

Built by Surrey Satellite Technology Ltd. at the University of Surrey in the UK, the HealthNet satellite is designed to transmit information to and receive messages from ground stations based at medical institutions in Africa and other regions of the world.

Africa, with its severe communication problems, stands to benefit most from HealthNet's technology. Expensive and unreliable telephone systems, non-existent transmission lines, and costly medical literature make it hard for African physicians to keep abreast of recent medical developments and communicate with other health professionals.

Examples of communication difficulties abound. There are more telephones in Manhattan than on the entire continent of Africa.

Africa also suffers from a dearth of medical information. Financial constraints have forced medical libraries to cut their journal subscriptions; in some cases, the most recent acquisitions date back to the 1970s. In Uganda, where AIDS is a major health concern, current information on the virus is scarce. The first journal article on AIDS was published in 1981 and Makerere University, once considered the jewel of African medical institutions, has not been able to pay for a periodical since 1980.

The satellite that can transcend national boundaries is no bigger than a beach ball. It revolves around the earth in a 800-km orbit 14 times each day, sending out a continuous signal that is picked up by a modified amateur (HAM) radio attached to a personal computer. Once the signal is recognized, a message transfer takes place between the satellite and the ground station. When in range of a ground station, the satellite can transmit about 30 pages a minute.

In Africa, ground stations have been licenced in Congo, Ghana, Kenya, Mozambique, Tanzania, Uganda and Zambia. They are operating in all these countries, with the exception of Ghana where a station is in the process of being established. In total, 15 African countries are expected to participate in the project being funded by IDRC.'

For further enquiries write to: Dr Charles Clements, Executive Director, SatelLife, 126 Rogers Street, Cambridge, Massachusetts, 02142, USA.

Current global situation on the HIV/AIDS pandemic: WHO

The following summary has recently been received from the Global Programme on AIDS, WHO, Geneva:

'The World Health Organization (WHO) currently estimates that a cumulative total of 10-12 million adults and 1 million children worldwide have been infected with the human immunodeficiency virus.'

ciency virus (HIV) since the beginning of the epidemic. The total of 11–13 million infected men, women and children includes approximately 1 million persons who were newly infected with HIV during the first 6 months of 1992.

The regional distribution of cumulative adult HIV infections is as follows: sub-Saharan Africa has over 7 million infections; North America and Latin America, including the Caribbean, have over 2 million; South and South-East Asia have over 1 million; Europe, including the countries comprising the former Soviet Union, has over 500,000; North Africa and the Middle East have about 75,000; Australasia has over 30,000; and East Asia and the Pacific have approximately 25,000.

Of the 1 million persons newly infected since January 1992, about one-half live in sub-Saharan Africa, about one-quarter live in Asia and the Pacific (the vast majority in South and South-East Asia), and a little more than a tenth live in Latin America and the Caribbean. It is estimated that nearly one-half of new adult infections have occurred among women.

As of 1 July 1992, a cumulative global total of over 500,000 adult AIDS cases have been reported from 168 countries; however, WHO estimates that when underdiagnosis, under-reporting, and delays in reporting are taken into account, the actual number of adult AIDS cases may be closer to 1.7 million. It is estimated that over half of all adult AIDS cases thus far have occurred in sub-Saharan Africa. Of the 1.7 million adults having developed AIDS since the start of the epidemic, the vast majority have most likely died.'

Preliminary recommendations on the use of surgery for the treatment of leprosy neuritis: ILEP

The above article appeared in the *Medical Bulletin* No. 4, which is published by the International Federation of Anti-Leprosy Associations (ILEP), 234 Blythe Road, London W14 0HJ. The following, which is taken from this article, appeared under a subheading entitled, 'Caution concerning the use of surgery for the treatment of leprosy neuritis':

1 The place of direct nerve surgery in prevention of deformities

Deformities and disabilities are the consequence of leprosy neuritis, thus the best prevention of deformities is:

- First, the early detection and treatment of as many patients as possible,
- Then, the early detection and appropriate treatment of reactions which involve the nerves.

The therapy of leprosy now uses well-tried MDT regimens and new drugs for treatment of both uncomplicated disease and leprosy reactions. Unfortunately, chemotherapy is not always used early enough, is not always well conducted, well tolerated or well followed.

In addition, anti-inflammatory treatment, even with corticosteroids (or thalidomide in ENL neuritis), cannot always relieve inflammation of nerves nor the mechanical compressions which occur in a thickened sheath, especially where the inflamed hypertrophied nerve passes through an unyielding osteo-fibrous tunnel and this also contributes to the destruction of nerve bundles.

Thus, *when medical treatment alone is not sufficient to relieve nerve damage*, it is clear that mechanical compression could be relieved by opening the tunnel and incision of the thickened sheath.

This nerve surgery has a long history and has been claimed to give good results when performed before the damage becomes irreversible.

However many therapists still have doubts about the efficiency of nerve decompression. They think it is not possible to determine whether nerve surgery will give better results than medical treatment alone.

There are 3 main explanations for their doubts:

- Even if for more than 30 years, good results of nerve surgery in leprosy have been reported by many authors, these authors have not had the same data and methods of evaluation. In particular, the duration or the type of neuritis and the duration of follow-up have hardly been specified. Furthermore, all surgeons have not had the same facilities and not all have used the same indications for surgery. Many of them have practised full-time in the hospitals of main cities, in institutes, or in research centres and some of them have practised in the field, in provincial or district hospitals.
- Sometimes, quite sincere therapists, who have asked surgeons for nerve decompression, have thought the immediate result of surgical decompression was a failure because they do not know that recovery is not immediate. Usually recovery duration may take some months or even 1 year for the ulnar nerve.
- Many authors have reported good results with medical treatment alone and they consider that the need for both external and internal nerve surgical decompression has been very much reduced. Nevertheless, it may be observed:
 - that medical treatment alone may have drawbacks
 - that in some published cases (but how many are unpublished?) of corticosteroid treatment, sometimes prolonged for more than 1 or even 2 years, there was no recovery. If nerve surgery is then subsequently performed, it has no utility.

In some of those cases, in which pain is finally relieved, it could be said that medical treatment alone has finally brought an improvement. However, decreased pain is not necessarily an indication of improvement of the nerve because pain may decrease as nerve function decreases.

In these cases, earlier surgical nerve decompression might have given recovery and therefore shortened the corticosteroid treatment duration of neuritis.

Indeed, some *good* results of MDT in a country where experienced surgeons are available have recently been reported *with no record of disability over grade 1*. What will be the evolution of these grade 1 disabilities in 3 or 5 years?

2 Research study on the place of surgical nerve decompression

Over 2 years ago, it was proposed to the ILEP Medical Commission to undertake a complementary investigation on *direct nerve surgery*. This proposal which was originally put forward during the ILA Hague Congress in September 1988 was accepted.

This multicentred and comparative study has to be undertaken with:

- statistically significant trials despite the large number of variables
- a necessarily long follow-up

And the objectives are:

- to compare surgical decompression with treatment of neuritis by medical treatment alone
- to confirm whether nerve surgical decompression is effective (when medical treatment is not sufficient to improve nerve damage)

So far, not one of these results has been supported by a convincing controlled study. However, at the time when the ILEP Medical Commission Therapy Discipline is developing a research study on *Reversal Reaction Treatment in Borderline (BT-BL) Leprosy*, this seems a good opportunity for a study on *The Place of Nerve Surgery for Better Treatment of Reaction Neuritis*. It could be conducted by the ILEP Rehabilitation Discipline in liaison with the Therapy Discipline research study.

Co-ordination of these trials will make the comparative study easier, broader, quicker and an assessment of the results by both surgeons and therapists more objective and less debatable.

3 Recommendations on indications and techniques now agreed for nerve surgery

Until the results of a multi-centre trial on the value of surgical decompression are reported, only basic recommendations are possible.

The recommendations listed below were agreed by a working group of the Rehabilitation Discipline of the ILEP Medical Commission which met between 5 and 6 July 1990 in London:

Recommendations

- In a certain number of cases *in addition to medical treatment*, surgery may be required for the prevention/recovery of nerve damage
- Surgery *without medical treatment is not recommended*
- The technique of surgery *should not be undertaken by untrained medical personnel*
- The following surgical techniques are *not recommended*:
 - Nerve decapsulation
 - Complete fascicular neurolysis
- The following conditions are *not acceptable*:
 - Surgery done by therapists who are not surgeons
 - Surgery without strict asepsis
- Neither surgical nor medical treatment should be undertaken without standardised pre- and post-treatment VMT and ST assessments of nerve function.

[The original text was prepared by Professor P. Bourrel.]

Further progress in leprosy control: Orissa, India

The Directorate of Medical Education and Training of the State Government, in association with the Damien Institute and the Health Education Unit of the Gandhi Memorial Leprosy Foundation (GMLF), recently organized a further series of meetings and orientation courses in Orissa in order to increase the coverage of multiple drug therapy (MDT), using the 'modified' system (see *Leprosy Review*, **63**, number 3, September 1992, page 288)—2-day courses were held in the districts of Kalahandi and Keonjhar, attended by a total of about 100 doctors from primary health care centres, with emphasis on the operational changes needed in order to detect, diagnose and allocate cases to pauci- or multibacillary regimens, using modified MDT through the primary health care system. A meeting was also held in Cuttack Medical College, attended by professors and heads of departments, many of whom have contributed through the years to the training of medical students in leprosy, and who have recently participated in meetings concerned with the revision of a GMLF publication: *Intensification of teaching of leprosy to medical students*, due to appear in early 1993.

Orissa, a high-endemic area of India, is now making excellent progress in leprosy control. A high percentage of the known, registered cases are either taking, or have completed MDT and the 2 districts mentioned above started implementation in January 1993. Only 2 districts then remain and these should start MDT later in 1993. There is excellent and continuing co-operation between the above Directorate, the Directorate of Health Services, the Government Training Centre at Aska, the Health Education Unit of GMLF at Jatni (not far from Bhubaneswar), the Damien Institute, DANLEP (DANIDA assistance to the National Leprosy Eradication Programme) and other non-government organizations. Teaching, training and orientation courses for leprosy in Orissa, together with health education, are all in advance of what is currently available for other public health problems of comparable importance. Teaching and learning materials, including the translation of several items into Oriya, are available and have been distributed. Finally it is encouraging to report that statistical information from the districts, coming to the Leprosy Cell of the Directorate of Health Services in Bhubaneswar, is both up-to-date and accurate, and more than adequate as a baseline for monitoring the progress of leprosy control in Orissa, hopefully towards an elimination level. [Source: A. Colin McDougall, Oxford, UK.]

Personal protection against malaria

The Guardian newspaper has recently drawn attention, yet again, to the problem of effective protection against malaria. Fears have been expressed by experts in this field that existing drugs for chemoprophylaxis may become ineffective within 5 years, due to the increasing incidence of drug-resistant strains. Specialists now stress that most of the cases being diagnosed every year in the UK could be avoided:

- Keep arms and legs covered after sunset.
- Sleep in screened accommodation or mosquito nets. (*The Lancet* recently reported that the use of insecticide-treated bed-nets in Gambia had reduced malaria deaths among young children by up to 30%.)
- Use insect repellants and knockdown sprays.
- Seek medical help immediately if you develop a fever or feel ill on returning home.

Under the heading of 'Prophylaxis against malaria for travellers from the United Kingdom', the subject was reviewed in detail (Malaria Reference Laboratory and Ross Institute) in the *British Medical Journal*, 28 October 1989, pages 1087–89. A recorded information service on malaria prophylaxis, for all areas of the world, is run by the London School of Hygiene and Tropical Medicine on 071 636 8636. A wide range of products to protect against stinging and biting insects is available from Masta, Medical Advisory Service for Travellers Abroad Ltd, Keppel Street, London WC1E 7HT, UK, including impregnated mosquito nets for children (cots) and adults.

Errata—Weber *et al.*

The following corrections are for the paper by Weber, Van Soest, Neff, Chiang and Pfau entitled 'Results of surgical procedures for the correction of foot-drop and of lagophthalmus due to leprosy'. The paper was published in Volume 63, pages 255–262:

p. 255, Summary, line 4, after lagophthalmus insert 'with the transposition of the temporalis muscle or for footdrop'.

p. 259, line 3, for '15–300°' read '15–30°'.

The figure captions should read as follows:

Figure 1. Tibialis posterior transposition. Ability to lift the foot above the neutral position (n = 25).

Figure 2. Temporalis transposition. Remaining gap when the eyes are intended to close (n = 33).

Figure 3. Social situation, the means of living are provided by: (men, n = 31; women, n = 8).

Addendum—Letter to the Editor, Sugita *et al.*

The authors would like to add N. Ishii to the list of authors for the Letter to the Editor entitled 'Rapid healing of a chronic wound surrounded by hyperkeratosis in a leprosy patient after hydrocolloid occlusive dressing' published in Volume 63, pages 379–382.

Leprosy Courses, Fontilles, Spain, Autumn 1993

Sanatorio de Fontilles are running 2 courses which are to be held in Fontilles, Alicante, Spain: (1) for auxiliary staff between 18 and 30 October 1992; and (2) for paramedical workers between 15 and 20 November 1992.

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