Control of infectious diseases in developing countries: field studies on visceral leishmaniasis and meningitis

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Chapter I

Medical aid in the field

Médecins sans Frontières: emergency aid plus

Veeken H and Meijman B.

Médecins sans Frontières: aid in deed and word

Veeken H and Jansen J.
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Drugs for “neglected diseases”: a bitter pill

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All authors: Médecins sans Frontières
Médecins sans Frontières: emergency aid plus

The war of secession in Biafra 25 years ago indirectly led to the decision by a number of French doctors to establish a new medical humanitarian organization, side by side with the International Committee of the Red Cross (ICRC). The Red Cross was refused permission by the Nigerian government to carry out a relief campaign for Biafran civilian victims and, consequently, remained inactive. The French doctors felt that aid for the victims was needed and possible, even if it had to be given without the government’s permission: Médecins sans Frontières was born (1971).

Key values

The organization’s basic philosophy centres around a set of key values. Medical humanitarian aid is provided to populations in need, often victims of war or natural disasters. An impartial, indiscriminate approach, on both sides of the front line if necessary (as in Biafra), has been the organization’s hallmark from the very beginning. The needs of the stricken population take precedence over national sovereignty; aid is provided to victims regardless of government permission. For instance, the population of southern Sudan has been supported for years without the permission of the Sudanese government in Khartoum. Neutrality is a different principle altogether; Médecins sans Frontières deliberately chooses to observe neutrality in a conflict and will not actively involve itself in peace negotiations. The organization clearly gives priority to the victims. Volunteer work is another key value. Volunteers make up the heart of the organization. They include not only people currently engaged in field work, but also a vast body of men and women who, after returning from the field, continue to support the organization in society at large.

Those taking an active interest in the doings of Médecins sans Frontières can become members of the association subject to acceptance. The board of the association is elected by the members. The board, in turn, is the employer of the office staff. This set-up prevents any conflict of interests. The term ‘volunteer’ does not imply an unprofessional approach. Volunteers sent on missions usually have proved skills and specific expertise. Their inspiration to work for MSF springs from a strong sense of idealism. The continuous inflow of volunteers helps the organization maintain its vigour and stay firmly rooted in society. While those employed with the organization for a long-term period are given contracts, their salaries are low in comparison with equivalent positions in the commercial sector. This is to safeguard the “volunteer attitude” among the “professional staff” and to prevent monetary considerations from becoming the sole motive for people to join the organization. Thanks to 2.5 million donors, the organization is independent from governments and can choose to intervene whenever it sees fit to do so. The organization sets the greatest store on maintaining its independence, which is why the support given by private donors, in addition to that provided by institutional donors, is essential.
Sister associations under one umbrella

The concept of Médecins sans Frontières caught on, and sister associations were established in Belgium and Switzerland (1980), the Netherlands (1985), and Luxembourg and Spain (1986). The various sections are autonomous, but collaborate intensively. While the name 'Médecins sans Frontières' is used as the movement's international label, the names of the various sections are translated into the respective national languages, e.g. in the Netherlands: 'Artsen zonder Grenzen', etc.. Médecins sans Frontières-International in Brussels is the sections' joint secretariat. Today, the Médecins sans Frontières network extends from New York to Tokyo through 13 delegate offices. These delegate offices have been set up specifically for the purpose of recruiting volunteers and raising funds. They also serve to disseminate MSF’s humanitarian philosophy worldwide.

Emergency aid in case of disasters

From the very beginning, Médecins sans Frontières has concentrated on the provision of emergency aid. Promptness of action, large volume and a short planning horizon are characteristic features of MSF interventions. Effective logistic capability, know-how about public health care in an emergency situation and the flexible deployment of motivated staff are the organization's mainstay. In combination they provide the expertise needed for the provision of efficient emergency aid. Promptness of action is made possible by the worldwide network of Médecins sans Frontières projects. The field personnel are alert and able to carry out exploratory missions in their region. The exploratory team determines the primary needs in the areas of health care, food supplies and sanitation and gathers information about the political and humanitarian context. Telex and satellite telephone or fax can be used to communicate with head office. Head office guarantees that action will be taken within 48 hours. People on stand-by for rapid deployment and balanced rapid intervention stocks are the keys to prompt action. Many years of experience has led to standardization of supplies in ready made sets for optimum efficacy. As a result, MSF staff are often the first to arrive on the spot - ready for action. Regularly serving as a source of information for the media, Médecins sans Frontières is often in the spotlight. The aid given to refugees in Kurdistan, Rwanda and Bosnia illustrates this.

The relief effort provided during an acute refugee crisis has its own dynamics. The emphasis lies not only on medical aid but also on public health care aspects such as vaccination against measles, supplying clean drinking water, adequate sanitation, food, tents and blankets. There is intensive collaboration with other non-governmental organizations such as the International Committee of the Red Cross (ICRC), Oxfam, Concern, Care and different agencies of the United Nations, such as the World Food Programme, the High Commissioner for Refugees (UNHCR) and the UN-Children's Fund (UNICEF).
Medical aid in the field

Support in chronic emergencies

Most people associate Médecins sans Frontières primarily with this kind of emergency aid. However, Médecins sans Frontières does not limit its aid to such acute mega-disasters, as its general purpose is to assist a population during a crisis situation. In doing so, the organization mainly serves those people who are ignored by the rest of the world, most of all by their own government. Many countries are suffering from chronic instability, getting caught in a downward spiral of civil wars and deteriorating economic strength. It remains important, therefore, to provide direct aid to the population, if need be without the collaboration of government institutions. Aid for victims of forgotten wars, such as in Afghanistan, Sudan and Liberia are examples of this. Médecins sans Frontières also carries out projects of greater diversity, such as aid for the rehabilitation of health care in Cambodia, medical aid for the Indians in Peru and Brazil, aid for street children in Brazil and for vagrants in Belgium.

The decision to mount an emergency aid operation is usually made quickly in case of mega-disasters, where the projects are directly life-saving. The organization owes it to the victims, and to the public supporting its efforts, to take action. Interventions aimed at supporting health care in a chronically bad situation often require a broader discussion. The final choice is made in close consultation with the staff in the country concerned. They know the region and maintain contacts with the local authorities or non-governmental organizations. Priorities should be set and it is impossible to accept every project that is proposed. Our manpower and financial resources impose certain restrictions in this respect. Other organizations, moreover, may have specific expertise in store that makes them more fit to undertake a certain project.

The short-term planning of the emergency aid programmes has often been criticized. It is pertinently untrue, however, that long-term needs are given short shrift. Médecins sans Frontières considers it a part of its task to provide for the transfer and continuity of its programmes. Sometimes, while the acute emergency phase is over, the situation is still too unstable for other organizations to start development projects. In such a situation Médecins sans Frontières would be forced to continue its activities. The organizations Aedes and HealthNet-International have been set up to fill this gap: the provision of aid to population groups that find themselves in the grey zone between an emergency situation and a phase of development. Their activities are characterized by a longer planning horizon and greater emphasis on the support of local initiatives.

In word as well as in deed

Médecins sans Frontières regards it as its responsibility to stand up for population groups in word as well as in deed. Its presence in crisis situations often gives the organization access to detailed information. Helping a population group by making their plight known
to the international community is an integral part of its mission. Such an activity must always go hand in hand with a medical intervention programme. Medical aid continues to be the basis of our actions. If it will help the target group, the organization will actively engage in an advocacy effort on its behalf. Médecins sans Frontières will always denounce gross violations of human rights such as genocide (Rwanda), forced repatriation of refugees (Burmese refugees in Bangladesh) and war crimes (Bosnia). Helping victims, in word as well as in deed, does not prejudice the principle of neutrality in any way. All we are concerned about is the victims themselves.

The six head offices of the various Médecins sans Frontières sections have been established to provide direct support for the projects; the total number of office staff comes to about 500. Project management, staff recruitment and selection, finances, purchasing and fundraising are the offices' main activities. Everyone agrees that the office should stay as small as possible, the organization's main focus being the field. The office serves as a storehouse of institutional knowledge and experience, it ensures quality support and the best possible implementation of the projects. Projects are supported by head office through the provision of medical and logistic expertise. Supporting public health care in an emergency situation is a core activity. Attention is also paid to such aspects as setting up outpatient clinics and field hospitals and a variety of other subjects such as malnutrition, mental health and sexually transmitted diseases including AIDS.

In Paris, Médecins sans Frontières-France has established an institute for applied training and epidemiological research in emergency situations, called Epicentre. Practical orientation is the key word. There is close collaboration with the World Health Organization and the Centers for Disease Control (CDC) in Atlanta USA. The total budget of Médecins sans Frontières in 1994 amounted to 306 million dollar, half of which consisted of donations by 2.5 million private persons. The other half consisted of donations made by institutional donors, such as the European Union and several governments.

Volunteers, the heart of the organization

Partly as a result of the brief mission terms (averaging 6 months), human resource policy is fairly complicated. In 1994, the six sister organizations sent a total of 2,800 people on missions to projects in 64 countries. The expatriates collaborated with more than 20,000 local staff members. The proportion of male and female expatriates was about 50/50. The average age was 34. Some 40% of the expatriates are medically trained, the other 60% have a logistic, technical, administrative or coordinating position.

Training is an important priority in the organization. The aim is for every candidate expatriate to follow an introductory course. This objective is not always met on a practical level due to time pressure. The basic principles are explained in the medical as well as the
technical, communicative, strategic and humanitarian fields. Stress management, security and teambuilding are also important subjects. Specific medical technical training for more experienced staff is tailored to emergency situations, including training courses on how to treat malnutrition and how to set up a vaccination campaign. Management courses are also given to co-ordinators; an average project involves directing some 10 expatriates and many more local staff. Specific training courses are devoted to the setting up of training programmes and the implementation of water and sanitation programmes, and so on.

The national staff also take training courses in their own country and candidates regularly visit Europe to attend a training.

There is a great deal of interest to work for the organization. This is borne out by the high turnout at information evenings. However, not everyone is fit to be sent on a mission straight away. Medical doctors must have practical experience and knowledge of tropical diseases. Command of several foreign languages is also important. As noted above, about half of those sent on a mission have a non-medical background. People with a technical, logistic and financial background are indispensable for the running of projects. The most important attribute an expatriate must possess is the ability to function well in a team under stressful conditions. Expatriates work very long hours. Everyone shares a house, which, certainly in emergency projects, offers no luxury.

Security problems often give rise to tensions and frustrations; there is no place for adventurers. Security is given constant attention. Many projects are implemented in conflict areas. That is where the needs of the civilian victims are often the most acute and where few other organizations are prepared to work under the given conditions. However, if there is any prospect of success there will always be motivated staff who are willing to take risks in order to help the target group. Every staff member can decide for himself at any time whether to continue his work under the given circumstances or to leave the project in view of the increasing level of risk. If considered necessary, teams can be withdrawn by the organization, either temporarily or permanently. Working conditions are very exacting and staff members will experience psychologically disturbing events. A possibility for mental after-care has been created for anyone needing this after his or her return.

Your help is always appreciated

The work of MSF encompasses far more than presented by the media. After 25 years of aid work, the organization has established a permanent place in society. After the Red Cross, it is the largest private medical humanitarian aid organization. The organization is supported by millions of people and, in serving as their collective conscience, has a grave responsibility. The staff's will-power and drive ensure that, if necessary, the organization will strengthen its position in the years ahead.

This article is a translation of the original publication: Artsen zonder Grenzen: noodhulp en nog meer.
Médecins sans Frontières: aid in deed and word

Médecins sans Frontières (MSF) has been confronted over the years with gross violations of human rights such as, genocide (Rwanda), concentration camps (Bosnia) and forced repatriation (Burmesse refugees in Bangladesh). It proved to be impossible to support these populations without paying attention to their political and humanitarian plight. Despite MSF’s neutrality the organization speaks up on behalf of the victims if confronted with such human right violations. In the interest of the victims MSF offers more than mere medical aid; if needed the human right violations are exposed.

Neutralit y

MSF was born out of discontent with the Red Cross’s narrow interpretation of the concept neutrality. The Red Cross will only intervene after consent of all warring parties. Sticking to this concept by all means, aid workers continue to support victims of unacceptable violations. One gets the vision of honest, conscientious, aid workers closing their eyes for cruelties against a population; by ignoring they “somehow become collaborators” of those practices. The neutral aid workers remain silent, arguing that speaking up on the issue would mean the end of the support. Aid and silence, however, are not indissoluble. MSF learnt that advocacy for the fate of a population can be a constructive part of the support provided. Furthermore, there are situations where one, even if one keeps silent, does not gain access to the victims. An example is Afghanistan during the Russian invasion, or the Kurds in south-eastern Turkey. MSF does intervene without prior consent of all parties of a conflict.

By integrating advocacy into the mission MSF is confronted with many dilemma’s. Does one set the authorities against oneself by speaking up? Is the continuity of the project endangered, if one speaks up? Are there repercussions for the security of the aid workers? At which moment should one speak up? Does one speak up on issues that might be sensitive for the Dutch public, such as the functioning of Dutch batallion in Srebrenica, Bosnia; or for the French public, such as has been the case at the time of nuclear testing in Mururoa, French Polynesia? Who decides which are the interests of the target group; does the population itself have a say? These are some of the dilemmas aid workers are confronted with.

Generally speaking, MSF will only go public for the fate of a population if gross human right violations are at stake. Violations which threaten the population in their very survival. Advocacy never stands on its own, it goes always hand in hand with medical support. Advocacy is only possible, effective and credible if medical aid is provided. By medical support the organization gains not only access and information, but also respect and often cooperation of different authorities. The medical aid remains the first priority. This puts MSF apart from other humanitarian organizations, such as Amnesty International.
Advocacy

There are various ways to advocate on behalf of a population in danger. The most simple form of advocacy is the individual aid worker who informs his colleagues on the abuses he has seen. The next step is "silent diplomacy": MSF informs other organizations or an embassy in the country on incidents the team has witnessed. This can bring the issue to a higher (international) level. From there, MSF can actively approach the press, with the same aim but using more publicity. In the last resort MSF will denounce a government publicly. The MSF team will not easily make use of this method. Denouncing always has repercussions for the assistance, or even for the safety of all the aid workers in a country.

The choice to start a medical project for an oppressed population can already contribute to advocate for their fate. One could think of a malaria project for the Yanomami indians in the Amazon, or an AIDS project in Burma, where AIDS is a non-issue for the government. MSF does not pretend to solve the epidemic, but sees that the issue is acknowledged and gets a place on the agenda. We would like to illustrate the dilemmas in three different countries.

Bangladesh 1991

In 1991-1992, 260,000 Rohingyas fled their homeland Burma to find refuge over the border in Bangladesh. The Rohingyas are predominantly Muslims and they had been violently oppressed by the Burmese government, a country mainly inhabited by Buddhists.

Their basic human rights were violated on a daily basis; the list entailed issues such as: forced labour, custody without trial and sexual violations. The government of Bangladesh requested MSF to offer medical support for the refugees in the camps. The activities were co-ordinated by UNHCR. Right from the start it was clear that the government of Bangladesh considered the support as temporarily. The government would have liked to repatriate the refugees as soon as possible. Towards the end of 1992, thousands of refugees were repatriated. This repatriation was accompanied by intimidation and physical harassments. Furthermore, the situation in Burma had not changed for the better and the refugees still feared for their lifes in their home country. The international agreements on the conditions for repatriation were not upheld. Refugees should be informed on the situation in their country of origin, the situation should have changed for the better; the reason for fleeing their homeland should have been solved. Repatriation should be on a voluntarily basis, without force. It should be the refugees own choice to return, without any coercion. The repatriation should be safe and executed with dignity.

Under pressure of the government of Bangladesh, the UNHCR continued the repatriation process. The refugees were interviewed in the camps. At a later stage it became evident that the people by being interviewed, unwittingly, were registered for repatriation. The tension in the camps rose; the Rohingyas were scared to return to Burma. UNHCR in contrast
stated that the situation in Burma had improved and were conducive to return. MSF conducted a survey among the refugees and indeed most were not willing to return under the prevailing conditions in their homeland.1 Through the report pressure was exerted on the government of Bangladesh and international organizations. MSF argued that the Rohingya refugees can only return to Burma if the situation improves. Forced repatriation will be denounced.

The Rwandan refugee camps in the Great Lakes area, 1994

One and a half year after the genocide, in which 500,000 Tutsi’s were killed by Hutu extremists, still no justice has been done to the victims and their families. The perpetrators are still freely living in the refugee camps in Zaire and Tanzania. The return of the refugees to their homeland, however, is a prerequisite for the stability in the region. The return could be facilitated if the suspects of the genocide are arrested and brought to trial. The judicial system in Rwanda however is not functioning. There is even no physical space in the prisons for all the suspected perpetrators. Within the camps, the extremist leaders manipulate their own population.

For MSF the situation is a big dilemma. By offering aid to the camp population, one supports the resurrection of the former Rwandan army, which prepares a new attack on Rwanda. The camp authorities take a large share of the aid and the people most in need (elderly, children) are poorly supported. The total impact of the aid is negative: the power game, which forms the basis of the genocide, is consolidated.

The issue is brought to the attention of the international community by two MSF reports.23 The reports call for: protection of the refugees; arrest of the perpetrators of the genocide, who should be put on trial; employment of human right monitors; deployment of an international police force; stopping all delivery of arms to any party in the region. During the months after the reports nothing changed. Finally, MSF decided, after health statistics indicated that the emergency phase was over, to stop all activities in the camps. An extreme decision, but continuation had too many negative consequences.

Ethnic cleansing in Bosnia

After the fall of the “autonomous republic Krajina” in Croatia, hundreds of thousands of Serbs fled the area and entered the Bosnian Serb area around Banja Luka. The Serb authorities of Banja Luka expelled on their turn thousands of Muslims and Kroats to Croatia. MSF was asked to offer medical support for this exodus: installing a transition camp in Banja Luka and supporting the Muslim and Kroat refugees on their journey. The dilemma is obvious. On the one hand MSF would like to support the refugees, we will not be able to stop the deportation; on the other hand one does not wish to collaborate with such a violation of human rights, one becomes an accomplice. The organization decided to provide materials
for the support of victims but not to get actively involved in the delivery of medical care ourselves. It seems a half-hearted solution. It is, but given the situation the most feasible compromise. MSF thought it important to expose the issue to the international community and dispatched a report among members of parliament in various countries.4

More than pills

The work of MSF is more than dispensing pills. MSF operates on the edge of medical and humanitarian action. The moral dilemmas the workers are confronted with are often insolvable. Yet a standpoint is asked for, not only by the media and international community, but also by the public, donors and victims. Traditionally, humanitarian organizations do not speak out on human right violations. It did not fit within the mandate. But for MSF monitoring of violations has become more and more an integral part of the work. The role of an aid worker is ever more demanding. Next to medical expertise, he should have political insight, capabilities to negotiate and to assess a security situation. The ever increasing dominant position of the media in conflicts, puts the aid worker in the spotlight. Actions are widely broadcast and analysed in the papers.

Taking a stand can contribute to the fate of a population. The organization chooses deliberately not to “collaborate” with violations. Often MSF stands with its back against the wall, because the international community is unwilling to address the core of the problem. Geopolitical influences play a big role. One has to be alert that humanitarian aid does not become the excuse for politicians to abstain from further action.

The article is a translation of the original publication: Artsen zonder Grenzen: hulp met danden én woorden.

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4 Lack of protection of the Muslim population in Serb held territory in Bosnia: Amsterdam: Médecins sans Frontières; 1995.
Chapter 1

Drugs for “neglected diseases”: a bitter pill

Health is determined by many factors, yet pills remain key to the cure of many diseases. Provided you can get hold of them, that is. People in poor countries often have no access to essential drugs; this can be a matter of life or death. For some diseases drugs do not exist (e.g., Buruli ulcer); for others, drugs have been withdrawn from the market (such as efloinithine for treating sleeping sickness); or are too expensive (antibiotics, antimalarials, antiretrovirals). Cost is the main obstacle. To put it simply: greed in the West curtails the availability of life-saving drugs for all.

Lack of research

Research and development into tropical diseases has come to a virtual standstill due to low profits. Of 1223 drugs globally licensed between 1975 and 1997, only 13 were for treatment of tropical diseases. Two of these were an outcome of military research (halofantrine, mefloquine), six resulted from veterinary research (albendazole, benznidazole, ivermectin, oxamniquine, praziquantel and nifurtimox) and two were merely modifications of existing drugs (pentamidine and amphotericin B). Thus, over more than twenty years only three drugs were developed specifically for the tropics (artemether, atovaquone, and efloinithine). Artemether was a Chinese Academy discovery; the development of atovaquone for malaria would have been endangered had it not turned out that it is effective in AIDS-related opportunistic infections; and efloinithine is no longer produced. Apparently it is more profitable to develop and market Viagra®, than to research a new drug to treat patients with visceral leishmaniasis, a fatal disease if left untreated. Such a drug is more likely to be developed through veterinary research, if it has economic potential on the pet market.

Patent protection

A wide range of international trade regulations protect market rights of producers through the implementation of the World Trade Organization agreement. Patent protection guarantees income for the industry and stimulates drug research, but patents also increase drug prices and place them out of reach for many. The scenario is extremely bleak for patients suffering from diseases restricted to poverty areas, diseases without commercial incentives to invest in solutions. Two typical examples of such neglected diseases are sleeping sickness and visceral leishmaniasis.

Sleeping sickness

Sleeping sickness is rapidly re-emerging in Africa after it had nearly vanished from the continent in the 1960s. It is estimated that 60 million persons are at risk, and half a million persons are infected, predominantly in war torn countries such as Sudan, Angola,
Democratic Republic Congo and Uganda. Therapy of first-stage sleeping sickness is with suramin (developed in 1920s) for *Trypanosoma brucei rhodesiense* and with pentamidine (developed in 1940s) for *T. b.gambiense*. These treatments have remained unchanged for more than half a century.

The long-term supply of suramin is by no means secured. The producer, Bayer, planned to stop the production on several occasions, and only continued after the intervention of WHO. Pentamidine (Aventis) was originally produced for treating sleeping sickness. Once its potential to treat Pneumocystis carinii pneumonia in AIDS patients was established, the price went up. The company donated a limited stock to WHO, which kept the market price low (US$ 3 per vial) for its restricted use in treating sleeping sickness. But the donation has been used up and over the next few years the price of pentamidine will gradually increase to the market price of US$ 14 per vial. Donations are often preferred to dual pricing (for rich and poor customers). Dual price-setting could jeopardise sales of expensive compounds also marketed for nonparasitic indications. Alternative treatment options for first-stage sleeping sickness do not exist.

Therapy for second-stage (cerebral) sleeping sickness relies mainly on the organic arsenical melarsoprol, introduced in the late 1940s. This drug requires intravenous administration, and lethal complications occur in a substantial number of patients. Even though melarsoprol is toxic and resistance to it is increasing, we should be glad it is still on the market. Its future production is not guaranteed and can only be secured with commitment from the industry. Due to its specific component arsenic, environmental lobbyists keep putting pressure on the manufacturer to stop production.

Currently we have only one drug for treating relapses of sleeping sickness. This drug, eflornithine, was developed through anticancer research, where it performed unsatisfactorily. It was introduced successfully, on a compassionate basis, for treating refractory sleeping sickness patients. In 1995 the manufacturer Hoechst, Marion, Roussel (HMR) stopped the production of eflornithine. The drug was not turning an adequate profit. A last batch of 8000 vials was produced at the end of 1999, enough to treat approximately 1200 patients. At the same time, HMR passed on the license for eflornithine to WHO. This liberates the company from further obligations to manufacture the drug. A new producer for eflornithine remains to be identified.

Nifurtimox is normally used to treat Chagas disease (American trypanosomiasis). It has been used in African sleeping sickness, mostly for second line treatment, with mixed success. Its potential use for combination therapy, in first and second stage, is not evaluated yet. It can be administered orally and costs only US$ 10 for a 14-day course. A new drug (benznidazole) has been introduced to treat Chagas disease and the manufacturer of nifurtimox (Bayer, Argentina) stopped its production. The company is willing to produce further batches,
but will not take the responsibility of commercialising and marketing the drug.

Research and development of new treatments for sleeping sickness has come to a standstill. There are compounds in the preclinical pipeline, such as megazol and diminazene acetate (used in veterinary trypanosomiasis), but due to lack of funds no progress is being made.

Leishmaniasis

Visceral leishmaniasis (kala-azar) is a fatal disease caused by a parasite of the genus *Leishmania*. Half a million persons become infected each year world-wide.\(^\text{13}\) Organic pentavalent antimonials (e.g. stibogluconate) have been the mainstay of treatment of kala-azar since their discovery in the 1920s.\(^\text{14}\) The branded antimonials are expensive, approximately US$ 185 per patient treated, and need to be given daily, intramuscularly, for one month. In this case too, we should be grateful that this old fashioned drug is still available. The future supply of antimonial drugs is by no means certain, and demand at times exceeds output.

Generic sodium stibogluconate is available for US$ 13 per patient treated, 1/14 of the price of the branded drug.\(^\text{15}\) Governments do not register the generic drug simply because it is produced in India. The trial described in this journal, comparing the efficacy of branded stibogluconate and generic stibogluconate under field conditions, demonstrates that the drugs are equivalent.\(^\text{16}\) Hopefully the result of the trial will facilitate introduction of cheap, affordable treatment for thousands of kala-azar patients.

Resistance to drugs used for treating kala-azar is increasing, especially in India.\(^\text{17}\) Treatment of relapses requires drugs that kill *Leishmania* parasites through different modes of action. Alternative treatments for kala-azar are few and either expensive (pentamidine, Ambisome®; a lipid amphotericin formulation\(^\text{18}\)); potentially toxic (amphotericin B) or currently unavailable (aminosidine). With the exception of miltefosine, which has potential as an orally administered drug, no further research is under the way.\(^\text{19}\)

What should be done?

We can not accept that the dearth of effective drugs for tropical diseases is simply the consequence of a global market economy. Drugs for “neglected diseases” do not belong in the free market, these drugs require a centralized, public, non-profit approach. Drugs are not a consumer commodity. Governments, manufacturers and the nongovernmental organizations have a shared responsibility. The public sector must invest in research and development and secure the market. This necessitates centralised estimation of the needs and global distribution. Pharmaceutical companies must be engaged in the sustainable production of life-saving drugs. Registration and legislation should be adapted to overcome barriers of export and import between different countries. The pill should not be that bitter.
References
