MDR HIV: The future of the HIV epidemic in India?

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Highly Active Antiretroviral Therapy (HAART) has dramatically declined morbidity and mortality due to AIDS in the developed world (1) However rational use depends on multiple factors such as affordability and accessibility to drugs, a laboratory infrastructure to monitor therapy, trained physicians, and psychosocial support to promote adherence and existence of treatment guidelines. For this reason, translation of these benefits to patients in the poor world has been limited. On the contrary in India, the stage has been set for future development of multi-drug resistant HIV.

Affordability and accessibility

Currently 16 drugs have been approved for use in the developed world. Of these 11 are available in India. Generic companies manufacture most of them. This has dramatically reduced the costs of treatment. In the — world, some fixed dose combinations (combining all three drugs in a single pill) are manufactured exclusively by Indian companies. This has certainly helped a large number of patients who can now afford to take at least first line HAART. Additionally, studies have also shown the immunological and clinical benefits of using these generic drugs in the Indian population (2,3). Nevertheless when the first line regime fails, second line and salvage options are prohibitively expensive.

With projected 3.97 million HIV infected individuals in the country, pharmaceutical companies are interested in the potential market (4). Currently, five companies are already manufacturing these drugs with about six more planning to come in. Such competition would increase the possibility of using unethical practices to promote drugs. Some companies are already involved in such practices. More and more medical professionals ,including alternative therapists, are made to believe that these drugs can be used like antibiotics. Asking everybody to prescribe these drugs is expanding the market.

Globally, some Indian generic companies have been praised and acknowledged for bringing down the prices of these drugs. However, have these prices slashed for philanthropic or market pressures? For example when the drugs were first introduced they, were sold at around Rs 7,000 per month. The same combination is available for Rs 1,600 today. The high initial prices denied treatment to numerous patients and some of these even died. The same pattern may be replicated with the second-line regimes, which currently cost around Rs 8,000 per month. The price may go down in the coming years as the market for the regime increases. Currently, however, patients who need this treatment may die because it is unaffordable.

Investing in research is the standard reason given by MNCs for high drug prices. This can hardly be said of generic companies who have poor a research track record.

The pressure to increase sales with utter disregard to patient benefits is so much that some companies are using unique marketing tactics. For example, some of them are selling drugs at special prices to doctors and they in turn can sell it to the patient at additional profits. So doctors are tempted to dispense these drugs from their own clinics.

It is logical to believe that availability of monthly packs rather than strip packs may promote adherence to therapy. However, many companies still market strips of tablets for patients who are advised it to be taken only for a short period.

The other issue is the quality of the drugs. One of my patients complained that he was passing antiretroviral drugs intact in the stool. I asked the company for an explanation but it still not given a satisfactory answer. The approval process for these drugs needs to be made more stringent. An independent WHO team looking at the quality of drugs from generic companies worldwide mentions only two Indian companies in the list. As participation in the WHO's accreditation programme is voluntary (particularly companies interested in targeting other poor countries, for example in Africa), many Indian companies have not even bothered to subject themselves to scrutiny from this team.

Laboratory monitoring

The scene is also not encouraging on this issue. Numerous laboratories have cropped up claiming to do CD4/CD8 counts and plasma viral load estimations. The methods used are not necessarily the best ones available. For example, at least some laboratories claiming to estimate viral load are doing it by indigenous, invalidated techniques. These strength of these laboratories is their network of collection centres from all over India. In most places where laboratory facilities are unavailable physicians have no choice but to send their samples to these labs. As physicians are becoming aware of this issue, many have started questioning the quality of reports from these labs. Some effort is now being made to change over to standard methods.

This calls for periodic quality checks of laboratories. A national system to supervise them needs to be developed, and quality control should be made mandatory.

Physicians' training

Most physicians practicing today graduated before HIV came along. Naturally many of them need information about HIV therapeutics. Unfortunately, there are very few good quality training programmes available to meet these needs. The few that exist are concentrated in some states. For the remaining physician population, pharmaceutical companies are the only source of information. This information is naturally biased and more promotional than scientific. Even today some companies are promoting two-drug therapy as optimal to physicians.

However, putting the blame on pharmaceutical companies

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will not absolve physicians of keeping themselves abreast with treatment knowledge. Efforts to make continuing medical education compulsory need to be expedited. Some physicians view the competition among pharmaceutical companies as an opportunity to get favours in return for their prescriptions. It is sad that sometimes drugs are prescribed more to please pharmaceutical companies than to benefit patients.

Another issue critical in proper antiviral therapy is the need to involve the patient in the process of initiation and maintenance of treatment. Patients need to be told that therapy is not curative, it needs to be taken lifelong, and it is expensive, has long term side effects and needs high level of adherence. This requires developing a good rapport with the patient and making sure that the patient has understood the financial and other implications of taking these drugs for long periods of time. Unfortunately, this is not usually done. On the contrary, I have seen patients who have been put on therapy without even being told of their HIV status.

Counseling support

Facilities for provision of counseling and psychosocial support are again limited to certain major cities and towns. Additionally, treatment-related counseling is still in its infancy since counselors themselves need to have accurate knowledge about these issues. Additionally, counseling to promote adherence to therapy is crucial for a durable response to treatment. Such services need to be established urgently.

Guidelines for treatment

A mechanism to develop guidelines for treatment needs to be developed to achieve uniformity in treatment practices. This should be done periodically keeping in view the rapid advances in knowledge today. Additionally, these guidelines should be locally relevant; they should not be a copy of existing guidelines elsewhere.

Once guidelines are developed, a mechanism must be developed to ensure that they reach the medical community and are implemented accordingly. This is true for guidelines to treat most diseases. Guidelines then remain evidence of an academic exercise.

The recent draft WHO guidelines are an excellent effort to bring some uniformity in treatment practices amongst physicians using ARV therapy in the developing world (5). However, many components, especially those concerning laboratory monitoring, have been diluted in order that these drugs can be widely used on a programmatic basis. The regimes and laboratory monitoring tools (e.g. total lymphocyte counts) recommended are not necessarily based on strong scientific evidence. Again, this document raises the much debated issue of different standards of care for the developed and developing world.

Conclusion

While the world is looking at scaling up programes to use ARV therapy in the developing world, a simultaneous look into the factors discussed above is crucially needed. Lessons must be learned from the man-made disasters in the past — ciprofloxacin resistant typhoid or MDR TB. Improving access to therapy for poor patients should be coupled with ensuring mechanisms for rational use of these drugs. Otherwise, short-term benefits will only lead to a long-term catastrophe of MDR-HIV.

References

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