Clinical Research in India: The current scenario and prospects

The prospects of clinical research, especially delivering the market driven international clinical trials (CTs), including international bioequivalence studies, started as a pleasant dream in India in the early 2000s. It was projected by many think-tank and experts that by 2012, India would be all set emerge as a global center of excellence for clinical research. And such optimism was not built on enthusiasm and envisaged size of the market alone. There was a body of solid data.

Firstly, following implementation of the product patent in India, almost all multinational companies had started large CTs here. This is due to the pressures on pharmaceutical and biotechnology companies to accelerate development timelines under tighter budgets and resource constraints. India provided an increased access to treatment of naïve subjects in cancer, diabetes, hypertension, asthma, tropical infections and degenerative diseases by enlisting a huge number of sites outside of major markets. The second major factor was an enormous cost saving through economies of scale and cost of labor. Thirdly, skilled investigators and assisting manpower in trials and IT management, the former being well-trained in good clinical practice (GCP) and other good practices norms in India. There were several other positive factors such as extensive networks and hospitals throughout India, well-defined Standard operating procedures (SOPs) to comply with good practices (GXP), database of investigators in diversified therapeutic areas, etc.[1,2]

Until 2009, the dream was pleasant and somewhat smooth in nature, but ever since then there has been a rude wakening to the fact that since then there has been a dramatic drop in successfully conducting and delivering the international CTs outsourced to India. According to some calculations, this drop is up to about 50% in last 4 years.[3] At the same time international outsourcing of CTs to China and Russia has increased significantly in last 4 years. The conduct of trials, ethics, regulatory environment and the quality of data – all have been challenged explicitly as well as by the sheer facts of declining projects in India.

For a flawless conduct of trials, one need competent, well trained and experienced investigators and resourceful, expertise-oriented sites. For people who are investigators, monitors, trial designers, statistical analyzers etc., all need to be formally trained and tested in research methodology, GCP, good laboratory practice, documentation and regulatory affairs by experienced and expert personnel only. Unfortunately, there is a big gap in India between theory and practice for success in all these areas. Many mushrooming CT institutes/educational entities are doing a horrid disservice in that they don’t know what is important and what needs to be prioritized. Many of these teachers have never written or reviewed a meaningful trial protocol in real life practice.

The lapse in ethics in India is not very frequent, but it should be emphasized for all the same reasons. Recently Supreme Court of India has criticized the government severely for being lax about CT deaths and unauthorized trials and banned new molecular entity trials under certain conditions (Times of India January 3, 2013). The apex court further instructed that the government come up with a new regulatory regime for CTs that reflects the concerns of all stakeholders, including those who volunteer to undergo the tests at the risk of adverse health effects and even death (Hindustan Times July 26, 2013). The good news is that even as this proposal is being evolved and refined, recently the Central Drugs Standard Control Organization (CDSCO) has cleared trial licenses for 50 CTs such that the industry did not come to a standstill.

My personal opinion as a former Canadian regulatory officer is that the CDSCO has performed its utmost in last 10 years or so resulting in some success and a lot of criticism, exasperation and frustration. There are two main reasons why the current system of regulatory control in India is not working very well.

First, an evidential and competent review system of new drug applications (NDAs), investigational new drugs (INDs)
and abbreviated NDAs (ANDAs) (generic dossiers) is almost lacking. No one has ever seen a first class review report for any submitted NDA or ANDA in our country. As such a report is never written and promulgated in the current system. Whereas in countries such as Canada or USA a review report of an NDA is comparable with an article in a journal of impact factor of say 25. Such reviews are synthesis of all the good work that has gone into (clinical) development of the drug application and forms the basis of approval. These days, the cross-disciplinary review of an NDA is probably one of the highest theses ever written on that drug entity.

Developing a review system is not a child’s play. A couple of hours of an NDA meeting participated by a group of even competent experts cannot deliver a quality of review and a document thereof. If written-first-class reviews are not produced for each dossier, no long-term credibility and validity of regulatory mechanism will be established. The CDSCO must also divide its work load along rational and internationally accepted norms. At least two levels of reviews must be performed for every application. This can be followed by NDAs meetings.

An authoritative presence of the CDSCO officials, especially the first line reviewers at international conferences and professional gatherings is something to reckon with. If your presence is not felt, how can your influence be realized!

Second, issue of quality and documentation need to be addressed thoroughly. In recent inspections by US-Food and Drug Administration, it was found that Indian sites could have built in better quality in their trials had they been paying more attention to some particular areas. For example, protocol non-compliance, inadequate or inaccurate records, inadequate drug accountability, informed consent issues and adverse event reporting are the most common quality lapses our CTs,[3] when it comes to documentation in general, Indian sites understand the value and practice of a thorough and compliant process. However, since one of the major advantages in India is often a high rate of patient recruitment, sometimes the investigational sites focus less on documentation. This needs to be corrected as the documentation is the written record of GCP compliance.[4,5]

Finally, it is appreciated that a lot of work needs to be carried out for international clinical studies to flow into India again and to grow to the level of China, for example. The industry, academia, ethics committees, funding sources and all other stakeholders are here to cooperate whole heartedly with the government.

Dr. Bhaswat S. Chakraborty
Senior Vice President and Chairman Research and Development Core Committee, Cadila Pharmaceuticals Ltd., Dholka, Ahmedabad, Gujarat, India
E-mail: drb.chakraborty@cadilapharma.co.in

REFERENCES
1. Chakraborty B. From API to clinical research: New horizons in pharma R and D in India. Mumbai: Ingredients South Asia; 2011. p. 34-6.
2. Chakraborty B. Pharma RD. Is Indian prowess real? Available from: http://www.economictimes.indiatimes.com/opinion/pharma-rd-is-indian-prowess-real/articleshow/4273887.cms. [Last accessed on 2013 Aug 7].
3. Carol J. India’s clinical trial industry shrivels in wake of safety controversy. Available from: http://www.fiercebiotech.com/story/indias-clinical-trial-industry-shrivels-wake-safety-controversy/2013-04-21#ixzz2bAnDelCn. [Last accessed on 2013 Aug 7].
4. Marwah R, Van de Voorde K, Parchman J. Good clinical practice regulatory inspections: Lessons for Indian investigator sites. Perspect Clin Res 2010;1:151-5.
5. Bhatt A. Quality of clinical trials: A moving target. Perspect Clin Res 2011;2:124-8.

How to cite this article: Chakraborty BS. Clinical Research in India: The current scenario and prospects. J Adv Pharm Technol Res 2013;4:126-7.