

## Research by small private establishments

Research is an integral part of progress. The present world stands testimony to this statement. Scientific medicine is perhaps the greatest of all human achievements.<sup>1</sup> Research is not the prerogative of the chosen few or the lucky few. It is not the prerogative of the towers of excellence in medicine and research. It is possible to perform quality research in small, remote and private setups. What is necessary for this is the ability to observe and interpret, the courage to question existing dogmas and the desire to follow-up with the idea (or gut feeling) with a well planned and executed enquiry. A few examples will prove this point: The discovery of gravity by Newton, the development of laws of inheritance by Mendel and the invention of small-pox vaccination by Jenner. Another stimulus for research is seeking answers/solutions to problems that one faces. The best example I can quote is that of Dr. Bawaskar from Mahad, a small town in Western Maharashtra, where fatal scorpion bites are common. By applying himself to the problem and understanding the pathophysiology of heart failure that causes these deaths he introduced treatment with vasodilators, thereby bringing down mortality significantly.<sup>2</sup> Today, his work is quoted the world over.

Should fame and name be the only aim of research? Not really. Research is beneficial in many ways: it keeps the brain ticking, makes work interesting and improves the quality of work. It creates an atmosphere of enquiry, search and innovation – the only way to progress. Research is the only way through which we can change (improve) our working.

Research can be organized in many ways. One method is to form a group of compatible, similar-minded individuals, not necessarily belonging to one's own faculty. In fact, the exchange of ideas and discussions with others is often more rewarding. A chance meeting at the lunch table between Dr. D. A. Brewerton, a rheumatologist and D. James, the head of Tissue Typing Laboratory led to discovery of the association between HLA B27 and ankylosing spondylitis.<sup>3</sup> A group of doctors can monitor or perform postmarketing surveillance of any newly introduced therapy, be it a drug or surgery. Some adverse reactions are rare but important, and this is the only way to identify them. Another avenue is to respect other pathies, folk medicine, grandma's remedies and to study them (scientifically). These are often the product of years of experience and observations. How else would *Digitalis folia* and quinine have found their way into our medical practice?

Case reports and observational studies are important triggers. Randomized double-blind or even triple-blind studies can subsequently follow to validate the observations. It is not necessary that everything has to be double blinded, randomized and evidence based, as it will leave no scope for new ideas.<sup>4</sup> Serendipity is important. That is how penicillin was discovered.

A question that comes to mind is why are we not involved in research? There are many explanations. Research in terms of philosophy is a way of life that is never taught to us during our formative years. We are not encouraged to think or ask questions. Use of words like why and how (in science) is not taught to us. The dogma stands. "It is not described. It is not seen in India (This prevented us from appreciating diseases such as ulcerative colitis and sarcoidosis for a long time. Once, even rheumatic fever was considered uncommon in India!)." The result of all these – we have stopped thinking. To make matters worse, today we have outsourced our mental faculties to laboratories, scans, computers, and (super) specialists. Finally, we lack the practice of maintaining good, meticulous and correct records. We do not understand their importance. Just one example: without good records, the fact that phocomelia was caused by thalidomide would not have been recognized.

Without research, individuals and institutions decay and die. Someone has said, "If you have not changed your practice of medicine in the last ten years, check your pulse. You may be dead!"

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### References

1. Tallis R. Myths, Medicine and meaning. *Lancet* 2006;367:1135-6.
2. Bawaskar HS. Diagnostic cardiac premonitory signs and symptoms of red scorpion sting. *Lancet* 1982;2:552-4.
3. Brewerton DA. Discovery: HLA and disease. *Curr Opin Rheumatol* 2003;15:369-73.
4. Wu J. Could evidence-based medicine be a danger to progress? *Lancet* 2005;366:122.

Recommended reading:

RD Lele. Clinical Science and Clinical Research: A companion for every clinician. Sajjan Sons Publ: Mumbai; 1993.