Provings—Planning & Protocol

DR. V. M. NAGPAUL*

Summary

Provings provide knowledge about the instruments that we, Homoeopaths, use in combating human sickness.

A vast amount of pre-planning and laying of protocols is necessary in conducting the provings for the purposes of achieving scientific validity of the work. The author has, therefore, dwelt only upon various stages of planning and protocols necessary in conducting successful provings.

Introduction

The systematic procedure of testing substances on healthy beings in order to elucidate the symptoms reflecting the action of the substance is called "Proving". Hahnemann reasoned that in order to know that what healing properties are contained in a given substance, we must know what the substance is capable of doing in a healthy person. The law of similar states: any substance which can produce a totality of symptoms in a healthy human being can cure that totality of symptoms in a sick human being. Proving of medicines, therefore, is a technique for ascertaining the curative powers of a drug.

Historical Development of the Concept

Though Hahnemann gives credit to the physician Albrecht Von Haller for observing before him that the method of proving (testing) drugs with reference to their pure and peculiar effects, by altering the sensorial condition of man. Yet the fundamental theoretical basis for the proving of drugs on healthy persons was enunciated originally by Doctor Hahnemann himself, in spite of the fact that there still are stray instances on record where proving have been done earlier such as:

(i) Wm. Alexandar, Surgeon in Edinburgh had made proving on his own body. He nearly lost his life by taking two scruples of Camphor, after which he desisted from drug proving.

(ii) Samuel Crumpe an Irish Physician, publised "An Inquiry into the Nature and Properties of Opium".

Hahnemann studied different languages compulsively and was competent in German, Latin, Greek, English and Spanish with a smattering of other languages. His eight translations from English, French and Italian into German included a work of considerable significance, "A Treatise on Materia Medica" by Dr. William Cullen who was a leading teacher, Chemist and Physician in Edinburgh and was considered to be an authority on medical substances. Hahnemann was given the task of translating the second edition of this book in two volumes consisting of 1170 pages from English into German in 1790.

While translating this work Hahnemann was succumbed to the temptation of experimenting with one particular drug, Cinchona bark (Cortex peruvian), on himself. This drug had been used by the indigenous natives of South America for the treatment of malaria, and it had been brought to Europe by missionaries. It was given its name by the Swedish Botanist, Linnaeus, from Dutchess of Cinchon, Vice-Queen of Peru, who was cured by it. The statement of Dr. Cullen in this book regarding the action of

* Assistant Director (Drug Research), C.C.R.H., New Delhi.

Cinchona Bark in the cure of ague appeared unsatisfactory to Hahnemann and he was prompted to try this drug on himself.

"For the sake of experiment I took for several days four quentschen (drachms) of good Cinchona twice a day. My feet, the tips of my fingers, etc. first became cold, and I felt tired and sleepy; then my heart began to beat, my pulse, became hard and quick, I got an insufferable feeling of uneasiness, a trembling (but without rigor), a wearings in all my limbs, then a beating in my head, redness of the cheeks, thirst; in short, all the old symtoms which I was familiar in Ague appeared one ofter the other. Also, those particularly characteristic symptoms which I was wont to observe in Agues-obtuseness of the senses, a kind of stiffness in all the limbs, but especially that dull disagreeable feeling which seems to have its seat in the periosteum of all the bones of the body, these all put in an appearance. The paroxysm lasted each time for two or three hours, and came again afresh whenever I repeated the dose, not otherwise. I left off, and became well". Thus, Hahnemann recorded the effects of a medicine administered to a healthy person which fore-shadowed his enunciation of one of the first principles of his new method of treatment—homoeopathy. This led him to a six year study of different drugs on himself and others which were called "provings" (or testing) medicines. The results of the laborious, painstaking work of proving homoeopathic medicine was published first in Hahnemann's work "Fragmenta de Viribus Medicamentorum Positivis" in 1805 and later in Materia Medica Pura, in six parts between 1811-1821. Several thousand symptoms were recorded in an index covering sixty six individual medicines.

Over the years the procedure became so refined that the proving of medicine became an art (or science) in its own right and it still forms the basis of the system which is practised today. James Stephenson M.D., New York has termed it as "Hyganthropharmacology". The word Hyganthropharmacology is a derivative of Greek word Hygeia—health; anthros—man, Pharmakon-medicine and logos-discourse.

Aims and Objectives

To discover the positive characteristics of the action of the drug on the vital energy of the human beings; to obtain a full knowledge of its action (i.e. totality of morbid symptoms produced by that drug) so that its powers can be readily distinguished from any other drug *for the lawful application of the remedy in states of disturbed vital energy which is called disease.*

At the present time, there are literally hundreds of remedies derived from minerals, plants and diseased tissues whose characteristics have been fully delineated through carefully conducted provings and thousands more which have at least been partially proven. As homoeopathy continues to advance, it is necessary to perform provings of new remedies so that the therapeutic armamentarium can be further expanded.

Planning and Protocol

There is a lot to think about and arrange before commencing a proving so that no vital piece of preparatory work is over-looked. Planning of the whole operation of the study should be done before any steps are taken to execute it. Of these the most significant are:

1. Personnel

There are some forms of experimentation which are one man enterprise but this is not true in the case of provings. Every proving is a co-operative enterprise which consists of:

(i) *Trial Leader or Project Director*

He initiates and takes overall view of the whole proving programme, decides upon the drug and the potencies in which it is to be proved. He also ensures that the methods that are used during the experiment conform to the highest standards. He also decides according to the routine randomisation techniques as to which subjects will receive the experimental drug and which will receive placebo. He decides as to what should be the test substance. He is the actual person knowing the actual drug being proved as well as the codes governing who receives the drug and who receives placebo.

(ii) *Pharmacological Adviser*

He assists the Trial Leader or Project Director and provides him information

regarding toxicity in connection with the drug to be proved both in toxic and hypotoxic doses.

(iii) *Panel of Investigators*

They monitor the responses, inquiring in detail into each symptom recorded in the provers day-books.

(iv) *Subjects or Provers*

They receive the drug or placebo. They also maintain careful records of symtoms experienced by them. The value of choosing human subjects for our provings is, that thereby their subjective symptoms—the sufferings as well as the phenomenon they cause can be ascertained.

2. Selection of Variables

The study is to be undertaken on a sample of healthy persons selected, known as provers, on the basis of biological, environmental, social and nutritional variations and there should be clear cut rules for the inclusion of persons to be selected as provers or subjects.

Rules for Inclusion

(i) The subject must be between 18-45 years of age, so that the natural bodily degeneration that comes with age will not be a serious factor.

(ii) The person should be reasonably healthy by orthodox standards.

(iii) The subject must be well acquainted with homoeopathic methodology and above all he or she must have a good knowledge of the symptomatology found in Homoeopathic Materia Medica. This is necessary for the subject to fully appreciate the particular deviations that may manifest during the experiment or proving.

(iv) The subject must be able to lead a life which is as normal as possible during the course of the experiments. This means that the life circumstances of the individual must be such as to allow a definite time for sleep, for walking and for eating etc.

(v) The subject must be intelligent enough to properly appreciate and record the subjective symptoms as deviations from his normal condition of life as these subjective symptoms are of utmost value.

(vi) Honesty is a pre-requisite of a good prover for he must be very careful to record all phenomenon as fact and that fact can be produced repeatedly in others; therefore fact must be carefully recorded from the very beginning of experiment

Rules for Exclusion

The subjects as categorised below should be excluded from the provings.

(i) The subjects should not be hysterical or anxious persons. This is necessary because such individuals display a high incidence of *"Placebo effect"*.

(ii) Those who note down a lot of emotional symptoms. Too many symptoms in these realms confuse the final results.

(iii) Those who obviously omitted to recall symptoms or who exhibited superficially in reporting. These tendencies indicate either a lack of mental clarity or lack of sincerity.

(iv) Those who suffer from hypersensitivity diseases such as asthma, hay fever, allergies, food hypersensitivities etc.

3. Test Substance

The test substance or the drug to be proved is decided upon keeping in view "The quality of the drug which must be pure; it must be free from all mixtures with other drugs, and it must possess all its active properties."

4. Determination of Dosage

The determination of the dosage depend on the nature of the drug proposed to be proved. However, there are certain considerations which are sufficiently stable for guiding rules. These are:

(i) Any drug which in its natural state affects the vital energy but little will develop a proving only in *high potency.*

(ii) Any drug which in its natural state disturbs the vital energy to functional manifestations only may be proven in a *crude form.*

(iii) Any drug which in its natural state disturbs the vital energy to destructive manifestations should be proven only in a *potentiated form.*

5. Rhythm of Administration of Dose

If the first dose of medicine produces no effect, and enough time has been allowed to be sure that the prover is not sensitive to it, the next best thing to do is to create sensitiveness to it, which may be attempted safely by administering dose thrice daily for a period of 7 days unless the symptoms arise earlier.

6. Time Scale

Proving trials take time. If proving results are worth having, they are worth waiting for. Therefore no fixed time scale can be prescribed.

7. Nature of the Trials

The nature of trials on provings should be:

(i) Double blind technique where neither the investigator nor the subject knows what drug is being proved and in which potency.

(ii) Multicentric trials should be undertaken for the proving of a drug. The studies should be conducted at least at three different centres under the same protocol before publishing or releasing the data for professional use.

8. Number of Subjects Required

The higher the number of subjects better would be the accuracy of the results. But, it may not be possible to go for a big number of subjects for practicability and availability reasons. Hence an optimum number should be selected so that it may yield the information with precision. Ideally 20-30 subjects be employed at one centre which should include at least 25-30% controls who receive only placebo in a randomised fashion.

9. Need for Having Controls

Influences and bias on the part of the provers and the investigator can significantly modify drug responses, thus, interfering with the interpretation of the therapeutic efficacy of a drug. In order to avoid such complications, test responses to new drugs require the use of a dummy preparation or substitute drug referred to as "Placebo" which should be of the same colour and texture as that of the test substance and should be administered to the control group in the same way as that of experimental group.

10. Location of the Experiment

Ideally the experiments should be conducted at three different locations, in the mountains, on the low plains and the seashore because the reactions vary so much depending on environment.

11. Precautions in Provings

(i) Care should be taken that nothing which may ruin the health be proposed for proving.

(ii) Administration of the drug is halted at the earliest indication of symptoms.

(iii) Avoid any extraneous influences which may distort the results.

(iv) Avoid tea, coffee, wine or brandy, spices or strongly salted foods, avoid all green vegetables, roots, and all kinds of salads and pot herbs; all of which retain some disturbing medicinal properties, even if most carefully prepared. Hahnemann did not encourage even games or work activity which might disturb the concentration ot judgement of the prover. Moderate exercise may be undertaken.

12. Legal Requirements

No trial should be undertaken without first checking that all the subjects or provers involved are fully covered by insurance against any claims being made in the event of unforeseen circumstances.

13. Ethical Considerations

(i) The subject or prover should be in such a mental, physical, and legal state as to be able to exercise fully his or her power of choice.

(ii) Consent should, as a rule, be obtained in writing from the subject. However the responsibility always remain with the in-

vestigator or investigating team. It never falls on the subject even after consent is obtained.

(iii) The nature, purpose of drug proving must be explained to the subject or prover.

(iv) Provings should never be done in toxic doses; for toxic symptoms we must rely solely on the reports of accidental provings recorded in toxicological literature.

(v) The investigator or the investigating team should discontinue the provings if in his or their judgement, if any, if continued, be harmful to the subject.

14. Proformae Layout

(i) It is certain that, for each prover a large amount of information will be accumulated. In the *first place* there will be relevant data to be collected in the pretrial period. As it is nearly impossible now-a-days to find perfectly healthy people, therefore, a format designed to minimise recording of any preexisting pathological symptoms. This could be known as *INITIAL MEDICAL REPORT PROFORMA.*

(ii) *Secondly* there will be drug response data originating in the proving trials after the administration of the drug. Such data has to be recorded in two different proforma designed, such as:

(a) *Prover's Day Book Proforma:* For the subject or prover to record the subjective symptoms or deviations from his normal conditions of life.

(b) *Response Monitoring Proforma:* For the investigators to monitor the responses of the subject inquiring in detail into each symptom recorded by the prover.

(iii) *Lastly* there should be a proforma for recording the state of health of the subject after the proving trials are over which could be known as *TERMINAL MEDICAL REPORT PROFORMA.*

15. Recording

The information collected during the study is to be recorded in predesigned proforma as already mentioned. While doing so the following instructions are worth following for the purpose of scientific validity of the proposed work. The *Initial Medical Report Proforma and Terminal Medical Report Proforma* should be conducted by a team of investigators consisting of persons having specialised knowledge in psychiatry, otorhinolaryngology, opthalmology, gynaecology (in case of females subjects only) and in general medicine.

(i) Adherence to the protocol, honesty and sincerity are the pre-requisites both on the part of investigators and the subject.

(ii) Diary notations must be made at least thrice a day to prevent even minor memory lapses etc.

(iii) Each notation should record even the slightest deviation from the subject's normal state.

(iv) Intensity and duration of the symptom should be carefully recorded.

(v) Possible exciting cause should be recorded meticulously.

(vi) Detailed record of the order of appearance of all the symptoms should be recorded.

(vii) Analysis of the symptoms such as location, sensation, duration and the modifying characters of the symptoms together with concomitants or apparently unrelated symptoms should properly be recorded.

(viii) Recording should be done without prebiased ideas about the outcome of the provings.

16. Criteria for Thorough Proving

(i) Symptoms must be recorded from provings on healthy individuals using toxic (as recorded from accidental poisonings) hypotoxic (i. e. low potencies) and *highly potentised doses.*

(ii) The symptoms recorded must be drawn from all the levels of the organisms namely mental, emotional and physical plane.

(iii) A drug cannot be said to be thoroughly and scientifically proved unless and until it has been proved on all sorts of conditions and constitutions.

17. Sources of Error

Sources of error which are likely to enter into the proving trials are:

(iii) Any drug which in its natural state disturbs the vital energy to destructive manifestations should be proven only in a *potentiated form.*

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17. Sources of Error

Sources of error which are likely to enter into the proving trials are:

(i) *Non response errors* are mainly because of lack of cooperation from the subject, illegible enteries in the day book reports.

(ii) *Response errors*—descriptions of the same symptom by different subjects.

18. Ways of Minimizing Errors

There are several ways of minimizing these errors. The following are few important ones:

(i) The subjects should be assured that the information will be treated as confidential.

(ii) There should be frequent meetings between investigators and the subjects to record elaboration and clarification on each symptom.

(iii) The subject should be provided transportation to and from the proving centre.

19. Plan of Data Compilation and Interpretation

When the proving trials conclude, all the daily notation records of the subjects and the panel of investigators from each of the three centre are collected at the Project Director's office and all the symptoms which represented deviation from the subjects' normal state are listed and the experiment is "Unblinded". Symptoms generated by the placebo subjects are deleted from the records—and all the remaining symptoms collected and the results published.

Conclusion

An inadequately planned proving programme may be worse than having no proving at all. Therefore for getting maximum information with minimum effort and expenditure, a vast amount of planning and laying down of protocols to be followed is very essential.

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