

## THE IMPORTANCE OF CLINICAL PHARMACOLOGY AND NECESSITY OF DRUG AND THERAPEUTIC COMMITTEE

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During the 17th century the word "Materia Medica" came into the English language and afterward it implied the therapeutic substances and preparations used in the practice of medicine. John Mitchell Bruce's "Materia Medica and Therapeutics" was a significant book. A noteworthy book in 1884 named "An Introduction to the Rational Treatment of Disease" was later renamed Dilling's 'Clinical Pharmacology' in its twentieth version.

Clinical pharmacology developed as a discipline in the 1960s in the USA, Europe and the UK. The World Health Organization brought out a report on the scope, organization and training of clinical pharmacology in 1970. The International Union of Pharmacology (IUPHAR) in collaboration with WHO (1980) and the Council for International Organizations of Medical Sciences has brought a document on "Clinical Pharmacology in Health Care, Teaching and Research".<sup>1</sup> Clinical pharmacology had recognized as a specialty in many developed and developing countries.

Laurence and Bennett have contended that 'No medical school can be considered complete without a department or sub-department of clinical pharmacology'. The lack of clinical pharmacology department can cause a deficiency of teaching both at an undergraduate and postgraduate level. For sure, the information about medications among junior doctors was reported to be inadequate.<sup>2</sup> About 7000 deaths per annum within the USA due to medication error.<sup>3</sup> The shortcomings in the pharmacological knowledge underpinning could also be a crucial think about medication errors. Medication errors and Adverse Drug Reactions (ADRs) comprise a key challenge and prescribing is a skilled task that always carries a risk

of harm also as benefits. Medical graduates should have enough knowledge of principles of practical and rational prescribing at the point of graduation, as underpinned by the science of clinical pharmacology.

We need an earthquake, what I don't know is how to make the earth move for clinical pharmacology. What is the future of pharmacology in Bangladesh? Medical students, junior doctors like to be established themselves as clinicians. And they are less interested to make carrier in any preclinical and paraclinical subjects. Due to more speciality in clinical subjects like medicine, surgery, and obstetrics and gynecology with their allied branches, the junior doctors think that there is less opportunity to practice as a clinician and less money making capability.

Pharmacology continually being taken by undergraduates as a dreadful subject. I imagine that sort of negativity is awful for the subject and it is pointless. I think there is a lot to be hopeful about. Clinical pharmacology has the utmost prospect to make changes in learning, research, and field of clinical practice. The present undergraduate curriculum is conventional and based on subject wise teaching with no integration.

The greatest effect of pharmacology teaching-learning must be effective and safe prescribing of medicine and giving pharmacology counselling to patients. The acceptance of innovative methodologies in teaching and assessment methods along with training of faculty can help to revive pharmacology education as per the needs of the present tech savvy students. A compulsory assessment of prescribing after fulfillment of one-year internship training should be conducted. There is a requirement for a special focus in clinical pharmacology in our medical curriculum.

Several examples of development of clinical pharmacology department from basic pharmacology are available, where clinical pharmacologists who give immediate or consultative medical care to patients, for example by taking care of patients who

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have taken a medication overdose, conduct clinical trial or assessing patients with pharmacotherapeutic issues, for example, therapeutic failure or ADRs.<sup>4</sup> To add to the objective of improving medicine selection and rational use of medicine, all institutions, regardless of what size, ought to have some appropriate version of Drug and Therapeutic Committee (DTC). The DTC is a fundamental component of a health care organization's drug selection, utilization and distribution program.

Numerous major issues that health care organizations face include the overuse of antibiotics, increasing antibiotic resistance, ADRs and extensively higher cost related with drug use. DTCs can give the instruction and structure to choose appropriate medicines, managing ADRs and prescription errors, management of antibiotic resistance, promoting and conducting effective interventions to improve medication use including educational, managerial, and regulatory methods.

In our Medical College Hospital there is no drug and therapeutic committee, so that teachers and students are not integrated with the clinical side. They emphasized pharmacology teaching only on basic learning and teaching just remaining on basic text book. My recommendation is to establish a drug and therapeutic committee in every Medical College Hospital and a pharmacologist should be posted there as a clinical pharmacologist. His/her responsibility will be the observing rational prescribing, maintain essential drug list, prescription audit, clinical research, monitoring of ADRs, limit medication errors, cost analysis, control pharmaceutical promotion and conduct regular

workshop regarding rational drug use, disease guideline implementations. In addition to clinical pharmacology consultation, they ought to provide special courses to meet the present and upcoming challenges in rational prescribing for undergraduates as part of the continuing medical education.

There is a shortage of pharmacologists, so government needs clinical pharmacologists to help to deliver the goal of ensuring safe and effective drug therapy for their populations. The primary goal is to identify a practical clinical pharmacology module for undergraduate teaching program and 2<sup>nd</sup> need should be the conduction of overseas training program, incentives to clinical pharmacology training. Additional steps should be taken to set up clinical pharmacology department and DTC in every tertiary care hospital and medical colleges to improve health care. All stakeholders require to cooperate to overcome all sorts of difficulties for a better pharmacology education in Bangladesh.

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