

MEDICAL EDUCATION AT THE BEN GURION UNIVERSITY AT BEER-SHEBA, ISRAEL

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I would like to contribute to this discussion a few general remarks about the integration of basic sciences and clinical subjects and a short description of some special features of the curriculum taught at the Medical School of the Ben Gurion University of the Negev at Beer-Sheba, Israel.

There are three possible methods of teaching basic sciences at a Medical School:

- a) A large block of basic sciences is taught at the beginning of curriculum (pre-clinical semesters) and followed by a block of clinical subjects (clinical semesters) without any overall co-ordination between the two blocks and with only minimal contact between the teachers.
- b) Basic sciences and clinical subjects are taught in separate blocks but the contents of both blocks is thoroughly discussed and coordinated by teachers of both disciplines who are familiar with the whole curriculum.
- c) Basic sciences, behavioural sciences and clinical subjects are integrated into one problem oriented curriculum.

The differences between these three methods are not only organizational but rather "philosophical", the integrated problemoriented curriculum representing a special approach to medical studies, a particular "Weltanschauung".

In order to properly function as a physician, a medical student must acquire a vast amount of knowledge

and must internalize this knowledge to such a degree that will enable him to use parts of it in the appropriate situation, i.e. when treating a patient. Problemoriented curriculum attempts to teach the student the required medical "facts" (knowledge) and also to train him in building up the appropriate associations between these "facts" and thus facilitate his future function as a practicing physician.

The particularly gifted student will acquire this problem solving ability by himself, whatever the type of the curriculum. The average students, however, if not properly prepared by their medical studies, will have to spend the first few years of their professional carrieres in training themselves in practical application of the knowledge learned during the studies.

At the Faculty of Medicine in Beer-Sheba we try to use the problem-oriented approach. The curriculum provides basic sciences, clinical subjects and behavioural sciences in a pre-mixed co-ordinated manner regarding both the contents and the timing of courses. Moreover, most of the subjects are taught more than once, each time from a different viewpoint and using a different approach, providing on the whole a "learning spiral" which makes the internalization of knowledge easier. Another special feature of our curriculum is the "early clinical exposure" which enables the students of the first and second year to come in contact with the living patient.

The educational goal of the early cli-

nical exposure is twofold: to teach the student proper inter-relationship with people under his care on the one hand, and to train him in history taking. The course of early clinical exposure is conducted jointly by behavioural scientists and clinicians. The former are the specialists in the subject and the latter serve as role-model of a "physician in action" and provide medical explanations to specific questions (when such arise). As a rule the early clinical exposure deals with healthy persons in a special situation rather than with specific diseases. The course is divided into 4 parts:

The pregnant woman - her place and problems in the family and in the society. In this course students talk to and examine (externally) pregnant women in Prenatal Care Stations and in the Delivery Ward. They also visit the women at their homes and see the newborn at the Newborns Ward at the hospital.

The child. In this course the students help the doctors and nurses in preventive examinations at schools.

The elderly. In this course the students visit old people homes and community centers and make themselves familiar with the special problems of old age.

The reconvalescent. This course aims at familiarizing the students with the problems of rehabilitation and return to work following a serious disease (i.e. myocard infarction, accidents etc). Again psychological and social aspects of the problem are stressed. I would like to illustrate the integrated problem-oriented approach by describing briefly the subject of obstetrics and gynecology as taught at Beer-Sheba. This is certainly not the best example but it is closest to my heart.

During the first year, a course of "Reproduktive biology" is taught. This course is prepared jointly by biologists and gynecologists and deals with the physiology of reproduction in different animals and in the human.

During the first and second year, the early clinical exposure, in its part dealing with the pregnant woman, aims at teaching the students history taking, appreciation of the uterine size (on external examination) and auscultation of the fetal heart beat. In addition certain epidemiological aspects related to pregnancy such as gestational age, basic prenatal care, perinatal mortality etc. are explained.

The main block of Obstetrics and Gynecology is taught during the fifth year. Here an intensive course of 3 weeks duration is given by gynecologists together with related basic sciences teachers (microbiologist, virologist, pathologist, pharmacologist etc.). Following this a 6 weeks' clerkship is given. During this time the students (in groups of 2) are attached to individual instructors and gradually become responsible for a number of patients, their diagnosis and management. In order to provide as wholesome teaching as possible, the students rotate between Gynecology, Obstetrics and Oncology.

During the last study year, the students may take 46 weeks electives in OBGYN. During that time they function as clinical clerks under the supervision of physicians (i.e. similar to the junior assistants in the first years of specialty training). It is surprising how well prepared they are and how well they are able to cope with clinical problems at this stage.

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