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Internal Medicine: corner stone of Sub-Saharan Africa Medicine

Eric Gaël ANANFACK[1*], Nelson V. NJEDOCK[1], Jeannine NKOA[2], Pius Mary NCHINDO[1], Marthe Elimbi[1], Larissa NOUYA[2], Laetitia YONGOUA[2], Patrick MEDOUA BELLA[2], Arnaud Rudy NANA[2]

[1]Intern in Internal Medicine, Faculty of Medicine and Biomedical Sciences, Yaoundé, Cameroon

[2]Resident in Internal Medicine, Faculty of Medicine and Biomedical Sciences, Yaoundé, Cameroon

Corresponding author: Eric Gaël ANANFACK MD, Department of Medicine and Specialties, Faculty of Medicine and Biomedical Sciences, Yaoundé, Cameroon. e-mail: gaelnguef@gmail.com

Abstract

Internal medicine is a specialty that lies between general medicine and subspecialties. The fundamental characteristic of internal medicine is a holistic approach to the care of patients.
The proliferation of organ specialties has obscured the landscape to the disadvantage of Internal Medicine, prompting internists to work harder so that this specialty of the non-organ specialists, thriving for high quality medicine and requiring long and elitist training does not die out. Because Africa has been experiencing an epidemiological transition for several decades, the field of Internal Medicine in sub-Saharan Africa is now being redefined. This article inlights the situation of internal medicine in sub-Saharan Africa and the importance of this specialty in low incomes countries.

Key words: Internal medicine, corner stone, sub-Saharan Africa

Introduction

By the end of the 19th century, the very concept of Internal Medicine had established itself in German and English-speaking countries. The Italian Society of Internal Medicine was already celebrating its hundredth anniversary in 1987! By then, Internal Medicine was "one and undividable". The development of the various subspecialties did not really take off until after the second world war, between 1939 to 1945 [1-3]. "Internal medicine" derived its name from the

growing application of scientifically sound data and procedures to the clinical methods for disease diagnosis and improved patient care [2].

However, the ever-increasing complexity of medicine and the continuous development of investigative procedures inadvertently imposed vertical (cardiology, gastroenterology…), horizontal (oncology, Infectious disease…) and "patient-oriented" (geriatrics…) sub specializations; a sine qua non for research development and progress in medicine[1,3,4].

"Internal medicine" is, nowadays, mostly Anglo-Saxon and brings together at least ten specialties of adult medicine (cardiology, gastroenterology, endocrinology, nephrology, dermatology, neurology, rheumatology, chest medicine, infectious disease, clinical haematology). When a general practitioner, undergoes rotations in all these subspecialties within 3 to 5 years, (s)he is called an internist or specialist in internal medicine.

The proliferation of organ specialties has obscured the landscape to the disadvantage of Internal Medicine, prompting internists to work harder so that this specialty of the non-organ specialists, thriving for high quality medicine and requiring long and elitist training does not die out.

In Sub-Saharan Africa, the clinician's merit is placed on prompt etiological diagnoses, with as few additional investigations as possible, in a setting where resources are scarce and where almost all patients spend from their pockets for health [5]. Internal medicine makes plain the overall care of patients, and is called upon to be more than ever an asset in a setting where patients increasingly have multiple comorbid conditions due to the epidemiological transition stemming from the emergence of non-infectious diseases, including systemic diseases [5]. Internal Medicine in the tropics, today, has to adapt to the ever growing scientific world and any contributions to this would be essential.

Role of Internal Medicine in general

Internal medicine is a specialty that lies between general medicine and subspecialties. The fundamental characteristic of internal medicine is a holistic approach to the care of patients with focus not only on the heart, kidneys, or lungs, but to also on psychological component of health in contrast to organ specialties [1,2]. Internists, by the versatility of their specialized training, appear to be the best equipped to identify and propose treatment for diseases affecting several organs simultaneously. This is done through detailed histories, complete physical examinations with rigorous thought processes and adequately schemed complementary investigations amenable to diagnoses.

Nevertheless, the scope of Internal Medicine is vast and there can be no question of the Internist taking care of all the medical problems of adult patients, from diagnosis to the most sophisticated treatment. The role of the Internists is primarily diagnostic. They are practitioners to whom patients are referred to for difficult diagnoses, to unlock dilemmas especially in conditions with paucity of symptoms, or on the other hand, in conditions with an overwhelming number of symptoms often compounded by the presence of multiple comorbid diseases [3]. In addition, the Internist specializes in systemic diseases, immune diseases, late-onset congenital diseases, and other rare diseases [1,6].The training of the ordinary internists gives them the ability to manage nearly three-quarters of medical conditions, puttingthem in some settings in positions to see patients before and subsequently after the organ specialists with a pivotal role in multiple comorbid conditions and systemic diseases [3].

Place of Internal Medicine in Africa

Africa has been experiencing an epidemiological transition for several decades. The field of Internal Medicine in sub-Saharan Africa – once overwhelmed by infectious diseases such as AIDS, malaria and tuberculosis – is now being redefined. To these diseases are now added those of "development" [7]. The increasing consumption of processed food products high in fats, sugar and salt; the adoption of sedentary life styles and smoking; the rising life expectancy; coupled with automobile and industrial pollution has caused an explosion of cardiovascular diseases as well as other non-communicable diseases, including systemic diseases. Despite their emergence in Africa, and particularly in sub-Saharan Africa, systemic diseases still remain unpopular, and are subject to significant diagnostic delays [8]. They usually start with little signs, that are often overlooked. This therefore calls for a good thought process for a priori negligible symptoms or signs [2].On the other hand, because of the many prejudices (witchcraft,curses etc.) that characterizes health behaviors in Africa constituting barriers to research and treatment for rare, chronic and difficult-to-diagnose diseases, many of them are absent from the records of diseases in the region [9]. It was not until 2010 that Cameroon, for instance, took part for the first time in the international day of rare diseases [9]. In Morocco, the Alliance of rare diseases in Morocco (AMRM) proposed during the 11th edition of the international day of rare diseases to familiarize doctors and health professionals with "the universe of rare diseases" and to give them the " methodological keys ”of the“ culture of doubt ”, namely by asking the question “what if it were a rare disease?”. To achieve this, it is also necessary to develop a medicine specialized in "diagnosis", that is to say in particular internal medicine [10]. The internist as a diagnostics

specialist in this African context is better equipped to approach these patients whose heterogeneity is a source of diagnostic and therapeutic errors.

Internal Medicine specialty in African countries

Pretty much everyone in the public knows what a Cardiologist or Pediatrician is [1]. On the other hand, the specialty of Internal Medicine is poorly known or even unknown to some extent, and this is not the least of the problems encountered by this specialty. However, we should not believe that this is a solely Cameroonian or African problem. In the United States, for example, where more than 100,000 doctors specializing in Internal Medicine practice, ignorance about the specialty of Internal Medicine is also evident [2]. A 1998 survey published in the American Journal of Medicine revealed that among Americans surveyed about Internal Medicine, 1/3 knew roughly what it was, 1/3 thought it was a specialty that takes care of diseases of the interior of the body as opposed to those of the skin and finally the last third thought that it was medicine practiced out by “interns” [1].

In a study on the motivations for choosing specialties among residents in Congo, the authors found that out of 137 residents, 38.6% chose a medical specialty and internal medicine was the least chosen specialty with only two occurrences [11]. This result reflects the lack of interest that medical students in general and doctors in particular have for internal medicine in French-speaking countries in Africa.

The Anglo-Saxon system includes an almost compulsory passage through internal medicine in the training course for organ specialists. Though, this situation is more and more prone to change. In these countries, as in Nigeria, Kenya and Gambia for example, internal medicine most often appears between the second and fourth most popular specialty compared to surgery, gynecology and obstetrics, and pediatrics [12-16]. Despite the strong influence of role models transcending the history of choice of specialties, today, specialty choices are largely influenced by the financial returns associated, the flexibility of the profession, the openness to research, the management of emergencies, the diversity of patients and the skills involved, the contribution to society and above all the availability of places at training sites [17-19].

There is not much data on the specialty of internal medicine in sub-Saharan Africa. In North-western Africa, in 2003, Algeria had 644 internists identified in the health regions [20]. In Morocco, the number of internists recorded was less than 250, or a little less than 2% of specialists in the country. By comparison, internists represent the largest group of specialists in a

number of countries. Thus, they represent 25% for example in Germany or Switzerland, or more than 6,300 internists in the latter [10].

The challenge of internal medicine remains unresolved, as in several other African countries, and can only be met if the health, academic and political authorities create incentives to improve the attractiveness of internal medicine.

Internal Medicine, as the corner stone of Medicine in low and Middle income countries

More than 23% of America's 771,491 physicians received their medical education outside the United States, the majority (64%) in low- or lower-middle-income countries. A total of 5,334 physicians from sub-Saharan Africa are included in this group, a number that represents over 6% of physicians currently practicing in sub-Saharan Africa. Almost 86% of these Africans practicing in the USA, for example, come from only three countries: Nigeria, South Africa and Ghana [21]. This migration of doctors from sub-Saharan Africa has a very negative effect on the doctor / population ratio in Africa [21]. The doctors remaining and working therefore in the country have an increased workload. In such work settings, internists are a valuable asset. Internists would be an excellent workforce and should be underscored for their ability to take care of several patients with varied pathologies without focusing on patients with particular background. This leaves the possibility for all patients to benefit from a specialist consultation if necessary.

In countries with limited income, Internal Medicine – an autonomous and crossroads specialty – has an important role in public health and in the training of the internist who is a versatile specialist, endowed with an essence of synthesis, favoring horizontal rather than vertical acquisitions. This versatility is an asset for Africa, where, like the rest of the world, non-communicable diseases are in a constant epidemiological increase [22].

These non-communicable diseases – namely cardiovascular diseases, cancers, chronic respiratory diseases and diabetes –are responsible for 63% of deaths worldwide and 80% of deaths in low- and middle-income countries [22]. These are diseases with "multi-organ" repercussions that often require multiple-specialists opinion for adequate management. However, the other fundamental characteristic of Internal Medicine is to set itself the goal of comprehensive patient care as opposed to organ specialties that only take care of the problems and diseases linked to an organ or system.

Increasingly, hospitals have a tendency towards creating combined internal medicine and subspecialties services [3]. This approach could provide a solution to the segmentation of the care of hospitalized patients.

The success and resilience of internal medicine has often been catalyzed by strong organizations that advocate and highlight the merits of this specialty in addition to the lobbies created [4]. The creation and strengthening of such organizations in developing countries could play a role in the promotion of the “mother of specialties”.

Conclusion

Internal medicine is poorly known by the public in Africa, yet it is regaining interest and momentum in the evolution of health systems in many developed countries. Considering the limits of our countries in terms of health resources, the Internist must ensure the maximum of specialized care while being less dependent on the expensive technical platforms of organ specialties. In the era of flexibility, the Internist must be malleable and capable of practicing and teaching specialized synthetic medicine without being overly-specialized while at the same time adapting to the ever increasing and inevitable evolution of medical sciences. It will thus contribute to achieving primary health-care objectives in low-income countries. Promoting internal medicine among medical students and general practitioners would already be a step towards promoting this specialty, which is intended to be a major asset for Sub-Saharan Africa.

Competing interests

The authors declare no competing interests

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Author’s contributions

Study conception: EGA; Manuscript writing: EGA, JN, NVN; Critical revision: EGA, JN, NVN, PMN, ME, LN, LY, PMB, ARN; supervision: EGA.

All the authors have read and agreed to the final manuscript

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