Community endocrinology

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Endocrine function and disease

Endocrine phenomena, whether physiological or pathological, are ubiquitous in the community. Puberty, pregnancy, lactation, and menopause are phases of life which almost everyone has to pass through. Other endocrine conditions such as Vitamin D deficiency, and overweight, are so common as to be considered an acceptable part of life. Yet others, such as diabetes, obesity, and osteoporosis, afflict a large segment of the population. According to a bibliometric analytical study conducted on the types of articles published in an endocrinology and metabolic disorders related national journal, it was found that of all the articles published during a selected interval of 4 years in the section “endocrinology and gender,” 17% of them pertained directly or indirectly to community health aspects of endocrinology.[1]

Most of these conditions can be managed, or modulated, by nonpharmacological management, including dietary, physical activity, and lifestyle modification. This can easily be achieved by counseling and health education, and can obviate the need for drug therapy. While many patients may still require pharmacological therapy, drugs included in the essential list of medicines, available at primary care level, suffice for the vast majority. At the same time, to complement these measures, interventions based upon food fortification, e.g., with iodine or with Vitamin D, need to be implemented in the whole community, for a meaningful impact.

The high prevalence of endocrine phenomena and disease; the (seeming) simplicity of individual-based and community-based interventions; and the potential advantages of prevention, as opposed to cure, of endocrine disease; all argue for inclusion of endocrine care in primary, or essential health care.

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Community medicine and endocrinology are the two major disciplines, upon which falls the onus of assessing such endocrinology related care needs, and devising ways to fill identified gaps.

In conjunction with other specialties such as pediatrics, obstetrics/gynecology, andrology, and geriatrics, these disciplines can help provide appropriate endocrine care at the community level. Inter-professional collaboration with nutrition, exercise physiology/physiotherapy, psychology and social work will facilitate the process. This concept, which can be termed community endocrinology, is similar to that proposed for, and followed by, community psychiatry and community geriatrics.

Hence, the term “community endocrinology” may be defined as the specialty which involves assessment of the endocrine and metabolic health needs of populations, planning and administering community-based, community-oriented promotive, preventive, and curative services to meet those needs, to maintain optimal endocrine and metabolic health, using available manpower and resources. It also involves teaching and research in the field.[2]

Community endocrinology may include, within its domain, maintenance of optimal endocrine health at every life stage, prevention and timely management of endocrine, and metabolic disorders [Table 1]. This is achieved by attention to individual, as well as a community, awareness of healthy lifestyles and practices, and by advocacy in favor of an endocrine-and metabolic-friendly healthy environment. Behavior change communication is the crux of, and the key to, community endocrinology interventions for early disease prevention and health promotion. A focus on promoting life-stage and gender-appropriate endocrine hygiene and metabolic hygiene, similar to health promotion and primary prevention, will help improve health substantially. The concept of community diabetology needs special mention here. With diabetes becoming endemic to most societies,
provide such essential care. Rather, horizontal integration of relevant endocrine interventions, across existing national health programs, will be more apt. Figure 1 discusses the simple screening and therapeutic measures that can be potential interventions for incorporation into the ongoing programs depending on the available evidence.

This can be achieved by including community endocrinology related issues in induction training or ongoing education of medical officers serving in the public health system. A formal course on community endocrinology can also be initiated with the help of open universities as well. Similar to that of the experts in community medicine or public health, skills of people trained in the proposed specialty/super-specialty of community endocrinology can also be utilized in planning/implementation of relevant future national programs at a large scale. However, concerted focus on equity of endocrine and metabolic health, at the community level is necessary. The strategic efforts may include training of paramedical staff in healthy lifestyle behaviors including diet and physical activity, early detection of endocrine disorders, as well as basic management. It will also necessitate focused campaigns on community awareness, including the need to adopt healthy lifestyles, improve health care seeking behavior, and promote health friendly societal support.

**Conclusion**

The Bhima-esque task of planning the public health interventions for managing endocrine and metabolic disorders, through seemingly insurmountable, pales in comparison to much larger health challenges which have been successfully handled by experts in community medicine.

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**Table 1: Domains of community endocrinology**

| Life-style endocrine transition |
|--------------------------------|
| Puberty                        |
| Marriage                       |
| Preconception                  |
| Pregnancy/lactation            |
| Andropause/amenopause          |
| Ageing                         |
| Lifestyle management           |
| Obesity/overweight             |
| PCOS                           |
| Diabetes                       |
| Subfertility                   |
| Food fortification             |
| Iodine                         |
| Vitamin D                      |
| Environmental issues           |
| Vitamin D exposure             |
| Endocrine disruptor chemicals  |
| Diabetes-friendly cities       |
| Minority issues                |
| Transgender rights/intersex management |
| Women’s health                 |

PCOS: Polycystic ovarian syndrome
eradication, and reduction in maternal and infant mortality, are some examples of challenges which have been overcome. These successes have been achieved by the provision of community-based services, with the help of trained and committed paramedical staff, taking into account local customs, traditions, and requirements. A similar approach will be required to tackle the endocrine and metabolic diseases that are gradually becoming endemic in our society. Working together, community medicine and endocrinology should be able to spearhead the movement of community endocrinology, to achieve optimal endocrine health for all.

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