Letters to the Editor

Endocrinology in the hills of Himachal Pradesh, India

Sir,

The state of Himachal Pradesh in the northwestern Himalayas extends between 32°22′–33°12′N and 75°45′–79°04′E covering an area of 55673 km^2. The topography of the state is dominantly mountainous with an altitudinal range of 350–6975 m. The state has a population of 685,650 and 90.2% people are living in the rural areas.[1] It is a multireligional, multicultural, and multilingual state, like other Indian states. The state also has a substantial tribal population of Lahaulis, Kinnauries, Gaddies, and Gujjars. The staple diet of a common *Himachali* consists of grains, fibers, fruits, and vegetables. The consumption of processed food is not prevalent. Alcohol consumption among males is a norm. The nonvegetarian cuisine is preferred in the tribal belt. The physical activity of the rural population has substantially decreased and preference for the urban lifestyle is evident.

The state has witnessed a development in the health sector in the past few years by opening the second medical college in a rural area, introducing superspeciality courses in cardiology and cardiothoracic surgery, and increasing the number of undergraduate and postgraduate seats in two medical colleges of the state. The state has a strength of 90 medical specialists in both government (includes the two government medical colleges) and private sectors. The department of nuclear medicine is fully functioning in the regional cancer center of the state.

Endocrinology practice in the state mostly revolves around the management of diabetes and thyroid disorders. Patients mostly seek consultations either from general practitioners or medical specialists. Referral among doctors is not a very common practice and even surgeons continue to treat the endocrine disorder. The state never had and does not have even a single trained endocrinologist either in the government or in the private sector till date.

There are about 50.8 million people with diabetes in India and the number is expected to rise to 70 million by 2025.[2] This is also reflected in our day-to-day practice where diabetes is the dominant endocrine disorder. Patients predominantly have type II diabetes and are being increasingly recognized in the younger age group. Most of the diabetics are either normal weight or overweight but not obese. Majority of the patients are on optimal therapy and achieve a fair glycemic control. Generally, the effective management of blood pressure, lipid abnormalities, thrombotic state, weight, and nutrition is not individualized. The resistance toward the early use of insulin is present across the board among all sections of the society. However, the acceptance among rural, illiterate, and female folk is still better than the rest. Compliance as well as self-monitoring of blood glucose is an issue. Acute complications of diabetes are frequently encountered in emergency. A subset of patients is found to have ketosis prone type II diabetes. These patients are negative for circulating beta (β)-cell auto-antibodies and require insulin therapy initially. Subsequently, after few months these patients remain well-controlled on oral hypoglycemic agents. Neuropathy is the commonest microvascular complication observed. Diabetic foot is the most neglected complication. Majority of the patients are not aware about foot care. Proper consultation is delayed by seeking nonallopathic treatment initially and patients attend hospital in an advanced stage and grade of diabetic foot. A subset of patients has shifted toward yoga and traditional health system with the belief of total cure by the alternative medicine. Poor communication, lack of knowledge, economic constraints, etc., are the factors which result in the delay in initiating treatment, poor follow-ups, and poor compliance.

There is, however, a great need for diabetic educators and counselors as patient education plays an important factor in the prognosis of this disease. Outpatient clinics are usually crowded and that leaves very little time for the physician to counsel the patient regarding his or her illness. Specialty clinics in endocrinology are to be encouraged with multidisciplinary management which includes health educators, dieticians, and nurses besides clinicians. A community-based strategy is required to be formulated for the prevention of diabetes in the state.

Thyroid disorders are common endocrine diseases in the state. District Kangra in Himachal Pradesh is a known area of endemic iodine deficiency. A goiter prevalence of 55% was reported from the district in 1956. The prevalence of goiter was 12.1% in 1999.[3] Despite years of salt iodization under the universal iodization program, the total goiter rate (TGR) was found to be 19.8% in 2004. No biochemical deficiency of iodine was found in the population studied despite that 36% families were consuming salt with the iodine content less than 15 ppm. The higher prevalence has been attributed to a chronic iodine deficiency state.[4] However, the role of other goitrogens, deficiency of other micronutrients, and thyroid autoimmunity needs

to be explored in view of this observation. These goiters are not only a cosmetic problem but are also functionally decompensated and hypothyroid. Among the functional disorders, hypothyroidism is common. The presence of subclinical hypothyroidism among the general population and especially pregnant females is frequently encountered while screening patients for thyroid diseases. Thyrotoxicosis is predominantly a disorder in women. The presence of opthalomopathy is not uncommon with Grave's disease. Toxic multinodular goiter is more common than toxic adenoma. Some unique features attributed to thyrotoxicosis in elderly are the presence of thyrocardiac disease in the form of atrial fibrillation and heart failure in our set-up. These patients have invariably neglected their symptoms. A poor pregnancy outcome and infertility due to thyroid disorders is common among reproductive women. Improvements in establishing diagnosis have been achieved and subsequent treatment has been provided with the availability of thyroid nuclear imaging studies and radioactive thyroid ablation facilities in the department of nuclear medicine at the regional cancer center.

Metabolic bone diseases constitute a bulk of endocrine disorders. An increase in life expectancy, and indiscriminate use of glucocorticoids put patients at a risk for the development of osteoporosis. Data on osteoporosis are lacking. Diagnostic tools are not available. The state lacks a dual-emission X-ray absorptiometry scan machine in the government sector. Osteoporosis is treated mostly by orthopedicians as there is very little public awareness and any active prevention programs. The prevalence of vitamin D deficiency and related disturbances of bone mineral metabolism is appreciated even in middle or higher socioeconomic groups who are otherwise healthy looking despite the presence of plenty of sunshine in the hills. With the awareness and availability of diagnostics, celiac disease is frequently diagnosed now.

Reproductive endocrine disorders are the most neglected ones. It is estimated that approximately 10% of the couples suffer from primary infertility. Much progress has to be made in diagnosing the cause and effectively treating infertility. Polycystic ovarian syndrome (PCOS) remains a major concern for young women. Many of the young women suffer from PCOS and struggle for appropriate treatment for infertility and menstrual irregularity. The social stigma attached to infertility is enormous and is inappropriately treated, especially in rural areas.

Availability of MRI scans has helped us in making the diagnosis of Sheehan's syndrome possible, thereby implying that many more remain undiagnosed with this disorder in the community. Diseases affecting the adrenal glands are rarely recognized early in their natural history. Full-blown Cushing's syndrome or Addison's disease is occasionally diagnosed.

In Himachal Pradesh, we still have a long way to go in achieving adequate knowledge regarding the prevalence and profile of common endocrine diseases, such as diabetes, thyroid disease, osteoporosis, vitamin D deficiency, and other metabolic disorders. Endocrinology has been neglected in the state as is evident from the scanty published literature. We have a moral duty toward our own humanity to serve it better by understanding the uniqueness of disease pattern in our own population. We can improve our knowledge of endocrinology by organizing continued medical education (CME) meetings, and annual and periodic local and regional meetings. The state is in need of qualified endocrinologists. More physicians should enroll for the training or fellowship programs in the field of endocrinology at the national academic institutes. Endocrinology is destined to improve in Himachal Pradesh with the collaboration, guidance, and support of the *Indian Journal of Endocrinology and Metabolism*.

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