The interaction between thyroid gland and skin are of profound clinical importance in health and disease. Given the prevalence of thyroid disease worldwide it is imperative that primary care physicians appreciate the scope of this association so that thyroid diseases may be diagnosed early and treated early.

Next to diabetes Mellitus, Thyroid disease is the commonest endocrine problem in India. Till half a century ago, iodine deficiency goiter was prevalent in many states in India including Kerala, however that scenario has changed to autoimmune thyroid disease now. It is estimated that about 54 million people in India are having goiter, cretins about 2.2 million, and children with mild neurology defects about 6.6 million due to hormone deficiency. The incidence of both hyper and hypothyroidism are very high in women as compared to men (Ratio 10:1 for hyper and 20:1 for hypothyroidism). About 7.5% of women are also having subclinical hypothyroidism (T3 and T4 normal, TSH elevated).

Many of the cutaneous findings are detected only during physical examination and it is rare for the patients to present with a cutaneous manifestation referable to hypo or hyperthyroidism. Some signs are very rarely seen as pretibial myxederma in Graves’ disease (in my experience incidences is only below 0.5%). This only means that the skin manifestations are protean in nature. Besides dermopathy, other cutaneous manifestations of hyperthyroidism are skin erythema and hyperhidrosis, onycholysis, hyperpigmentation, pruritus and thinning of hair. Dermopathy, Ophthalmology and hyperthyroidism, go hand in hand. In hypothyroidism the common signs are coarse hair, cold, dry and pale skin, hair loss, brittle nails and hyperkeratosis. Myxedematous skin is due to the deposition of glucosaminoglycan produced by the fibroblasts.

One should not forget that metastatic cutaneous manifestations can occur in thyroid malignancy, hyperthyroidism can be associated with thyroid malignancy especially follicular Ca and even anaplastic carcinoma. Nodular mucinosis similar to gouty tophi may be seen in Graves’ Disease. Vitiligo can be seen in both hyperthyroidism or hypothyroidism, a manifestation of autoimmunity. Dermatomyositis is also reported in autoimmune thyroiditis. Drugs used against hyperthyroidism can rarely produce -cutaneous manifestations- PTU induced ANCA Positive Vasculitis and carbimazole induced aplasia cutis in neonates. Some of the signs and symptoms are related to the cause of the disease. Hyperthyroidism could be due to Thyroids (suppurative, viral or autoimmune). Graves Disease, Drugs, Gestational and the manifestations may be different. Vitiligo may be more associated with autoimmune thyroiditis while dermopathy may be seen in Graves’s disease. The extent of pretibial myxederma can be assessed by infra red thermal imaging or high resolution Ultrasonography.

In this issue of the journal Samson etal publishes an article on the prevalence of various cutaneous manifestations of both hyper and hypothyroidism. One can see the marked discrepancies in the prevalence of various manifestations seen in Kerala as compared to other reports. The authors detected cutaneous changes in 54% of the patients, women showing more manifestations than men. One doesn’t know whether this increased incidence is due to the difference in aetiology of the thyroid disorder (myxederma V/s Hashimotos, Graves v/s Plummer’s Disease).

References:

