

DEFINITION

1. **Goitre** is the term applied to any enlargement of the thyroid gland. A **multinodular goitre** is one in which nodules have developed within the gland.

CLINICAL MANIFESTATIONS

2. The condition is frequently asymptomatic, the multinodular goitre being detected on routine physical examination. In some cases the patient is aware of enlargement of the gland or the presence of a nodule.
3. Some multinodular goitres enlarge retrosternally, producing pressure symptoms (dyspnoea, cough hoarseness or dysphagia). A significant substernal goitre may lead to jugular venous distension and suffusion of the face. In a small number of cases haemorrhage into a nodule may lead to acute presentation with pain and swelling.
4. Older patients may present with hyperthyroidism. Hypothyroidism is rare.

AETIOLOGY

5. The prevalence of nodules within the thyroid gland varies from country to country. Careful palpation reveals nodules in 4 to 5% of the normal female population over the age of 50 years. Women are more frequently affected than men and nodules are common in areas of high goitre endemicity.
6. Multinodular goitre may be sporadic or endemic. Both types are caused by increased Thyroid Stimulation Hormone (TSH) levels due to decreased production of thyroid hormone.
7. **Sporadic multinodular goitre** occurs in 5 per cent of the population, the female:male ration being 3:1. In some cases the causal inadequacy of thyroid hormone production is shown to be due to an enzymatic defect in one of the steps of hormone production. This is an inborn defect. In most cases no specific cause is demonstrated. It is thought likely that these mild cases of enzymatic deficiency in which the physiological increase in TSH is small and below the sensitivity of TSH immunoassay currently clinically available.
8. **Endemic goitre** is attributed to insufficiency of iodine in the diet. In a few geographical locations ingestion of goitrogens has been implicated. Either of these factors over a prolonged period lead to a fall in serum T₄ level and a progressive rise in serum TSH concentrations. T₃ remains normal or slightly elevated.

CONCLUSION

9. Multinodular goitre is caused by inadequacy of production of thyroid hormone and resulting increase in TSH secretion. In sporadic cases this is endogenously determined. In endemic cases the cause is lack of iodine in the diet or the presence of environmental goitrogens.

REFERENCES

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