Endemic Malacitic Goitre

with notes of seven cases and their treatment.

Robert Gordon
M.B., C.M. Edin (1855)

26 Westonholm Rd
Sheffield
Exophthalmic Goitre is a disease, the
chief symptoms of which are, increased
rapidity of the heart's action, enlargement
of the thyroid gland, protrusion of the
eyeballs and tremors.
It is most frequently met with in
females about twenty to thirty years
of age, and sometimes in males more
advanced in life, occasionally it has
been met with in children.
The pathological lesions which we
have to account for in this disease
may be considered as being connected
with, either,
1. An affection of the sympathetic
nervous system.
2. A toxaemia from hyper-secretion
of the thyroid gland.
3. The introduction into the system of
a poison from without, analogous
that is to say to the poison which is
believed by some to exist in Progressive
Pernicious Anaemia, or in Hodgkin's
disease.
Considered (1) as a lesion of a semi-inflammatory nature of the sympathetic nervous system, there is a very close likeness between nephritic pain and such a picture as is presented by a person suffering from intense terror—a condition in which the somatic nervous system is for the time being almost paralyzed, and in which the splanchnics is unmasked and brought into full and evident play.

In such a state to use the words of Sir C. Bell the heart beats quickly and violently so that it palpitates or thumps against the ribs; there is trembling of all the muscles of the body; the eyes start forward and the uncovered and protruding eyeballs are fixed on the object of terror; the skin breaks out into a cold and clammy sweat, and the face and neck are flushed or pallid; the intestines are affected. Fright, intense grief, and other profound emotional disturbances have long been recognized as immediate causes of this disease.
by Bed and Mackenzie remark that 
we have no knowledge that the thyroid 
gland ordinarily becomes enlarged 
under the influence of fear but it is 
evident that the other chief features 
of exophthalmic goitre temporarily 
result from such emotion. That 
exophthalmic goitre occasionally in a 
well-marked form rapidly follows a 
sudden shock to the nervous system 
indicates that all the symptoms may 
be produced in such a way.

Another argument in favour of the 
nervous causation is that exophthalmic 
goitre mainly affects women and 
has even been known to occur in 
children down to 2½ years of age. 
Again, it may occur in several 
members of the same family. It 
has been observed in three successive 
generations. This pays off, it has 
been recorded that two sisters, their 
father, two of his sisters, and their 
brother were subjects of this malady. 
There is also the well-known case 
where a hysterical woman had ten 
children, of whom eight suffered 
from exophthalmic goitre, and one
of the latter had three children thus affected.  

2. Considered as a disease of the thyroid gland itself, exophthalmic goitre is an auto-intoxication due to the presence in the blood of an excessive quantity of thyroid secretion and this view seems at the present time to be most largely held.  

The study of myxedema has demonstrated most clearly what changes take place in the system when thyroid secretion ceases to be elaborated; the patient shows a near approach to a vegetable existence.  

The administration of thyroid extract rapidly transforms the state, but should over-dosage take place, headache, vomiting, violent pains in the limbs, rapid pulse and flushed skin present themselves, indeed some degree of approach towards the symptoms of exophthalmic goitre.  

Dr. Johnston in the Lancet (30. 4. 1893) states that on taking in health, two tablets of thyroid extract, twice a day for two days, he could count on raising his pulse rate from 70 to 120.
and Dr. Mackenzie and Fox have observed headache, palpitation, sleeplessness and muscular relaxation after over doses of thyroid extract and these are some of the symptoms of exophthalmic goitre.

The coarse and minute changes which are found in the thyroid gland in exophthalmic goitre are very marked and very interesting. There is the enlargement in most cases, and this enlargement is not only a hyperplasia but is associated with a true new formation of the secreting structure of the gland.

In the words of Dr. Red and Mackenzie, "On microscopic examination the striking feature is the great increase of secreting structure. The secreting structure moreover is not merely increased but it is much altered. The epithelium lining the vessels is changed in form from the cubical to the columnar type. There is increased proliferation also, so that the lining membrane becomes convoluted and papillary projections into the spaces are commonly seen. The secretion
contained in the vessels is more viscous than the ordinary colloid and stains much less deeply. Neoplasms of the epithelium is not uncommon so that the vessels contain detached columnar cells. In addition to the changes in the vessels there is the production of a great number of newly-formed tubular spaces lined by a single layer of cubical epithelium.

These columns as Professor Greenfield pointed out closely resemble the tubules of a secretory gland. At a later period the gland may become firmer from the growth of fibrous tissue and the proliferative changes may be observed. Edmunds has shown the great similarity between the gland tissues in exophthalmic goitre and that in an animal which has had a large portion of its thyroid removed by operation. From this he infers that the alteration in the thyroid gland in exophthalmic goitre is of the nature of compensatory hypertrophy. Professor Greenfield has also pointed
but the similarity in appearance of the goitre to a salivary gland. The goitre, according to him, bears the same relation to a normal gland that the mammary gland during lactation bears to the quiescent gland. But, does it not more resemble a papillomatous ovarian cyst in structure and which also secretes a colloid substance?

Before considering the third and last view of the etiology of exophthalmic goitre it would be well to state the objections which can be urged against either of the two theories so far advanced.

As against the sympathetic nerve lesion hypothesis it may be objected that alterations in the sympathetic have been described by some pathologists but it has not been shown that the changes are in any way peculiar to exophthalmic goitre. The sympathetic ganglia it is true in some cases have been found diseased, but this is not a constant feature.
Only some of the symptoms of exophthalmic goitre can be explained by affection of the sympathetic and it is impossible to formulate a satisfactory theory of the disease on this basis. The derangement of the emotional nervous system will explain a good deal but it does not account for the enlargement and overactivity of the thyroid.

Other writers. No constant changes have been found in exophthalmic goitre. Special attention has been paid to the condition of the sympathetic nervous system but neither in the ganglia nor in the nerves are there any changes which can be regarded as constant and peculiar.

The vascular and nervous features might be due to a lesion of the nervous system but it is difficult on any theory to explain all the symptoms of the disease and to bring into line the mental and vascular phenomena, the exophthalmus and the goitre.

Now as to the thyroid gland theory. Under what stimulus does the gland
become enlarged, not from excessive blood supply due to laxomotor changes, because the typical symptoms may be evident before the gland has had time to enlarge, and it has been shown that the increased vascularity is mainly superficial.

Professor Greenfield observes that in cases examined by him there has been no increase in the vascularity of the gland itself but rather a diminution.

According to Professor Coats the condition of the thyroid gland is only part of the morbid phenomena and shows no constant lesion after death. It has been hypertrophied or abnormally muscular or cystic, but also in many cases normal and he goes on to say that the suggestion has been made that the disease is due to a hypertrophy of the thyroid whose excessive secretion leads to the symptoms, but this view has not been confirmed.

Dr. Ord and Mackenzie state that "we think the facts of the case suggest that the thyroid condition is, at any rate, not the primary cause..."
of the disease, and again—a most important consideration—if overactivity or oversecretion of a hypertrophied thyroid were the whole disease, it ought to be possible to produce it by the administration of large quantities of thyroid gland. No one has yet succeeded in causing exophthalmos in this way. It is here that the hypothesis that the disease is due to overaction of the thyroid gland fails.

The supporters of this hypothesis have therefore fallen back on another, viz.: that not merely is the gland overactive but that its secretion besides being increased is also prevented, that of this we have at present no absolute proof.

It will be seen from the foregoing that the pathology of exophthalmic goitre and consequently the etiology is still the subject of uncertainty.

3. The third and last hypothesis is that of absorption of a toxin from without.

Progressive Pernicious Anaemia is now classed by many pathologists
as being probably due to the absorption of an intestinal toxin, and Hodgkin's disease is classified amongst the infective tumours, yet the actual infective agent has never been demonstrated.

Leucæmia is linked with the last-named in causation, and some of the secondary changes found in these diseases should be noted.

In addition to enlargement of the spleen (which under the present line of argument would be held as analogous to the enlargement of the thyroid in exophthalmic goitre) there are enlargements of lymphatic glands, of the liver, of the closed follicles of the intestine, and rounded infiltration of the kidneys. Hodgkin's disease is spoken of as an infective disease having some analogies with tuberculosis but existing itself much more to the systematic system.

In it metastatic new formations are formed in many organs and possessing the structure of lymphadenoma. Coming nearer we find simple
goitre spoken of now as ascribed to an unknown micro-organism.
Whitelegge in his work on Hygiene says that the agency of some organic material is necessary.
Professor Grasset has communicated the results of a study extending over ten years of persons suffering from goitre in one department of France alone. In that region there are places where the disease is endemic, and others where it is entirely unknown.
The affection is observed to develop after menstruation, childbirth, emotional disturbance, or a chill. Often it appears consecutively to a slight fever or an attack of gout. From these facts Grasset concludes that goitre is a general disease with a dominant local symptom, viz. the enlargement of the thyroid gland.
This feature of the affection he regards as analogous to the enlargement of the spleen characteristic of malaria.
He points out that both diseases
have a special geographical distribution, both affect a gland with internal secretion, and both end in cachexia.

In the blood of eight patients suffering from recent goitre (ten to fifteen days) he found special parasitic elements. These he describes as spherical bodies larger than a blood corpuscule, having no nucleus, and containing red pigment. Each has a free flagellum four times as long as a red blood corpuscule.

There are also segmented bodies agglomerated, and separate, and lastly there is a body of irregular contour containing red pigment but no nucleus.

These elements recall Laveran's haematogoon from which however they differ by the presence of the pigment and the absence of crescentic bodies. None of the goitrous patients whose blood was examined was the subject of malaria or has since become affected with that disease.
all this is, of course, a great change from the teaching that simple goitre was due to an excess of caloric and magnetie salts, iron pyrites, i.e., in drinking water, and would point to the fact that simple goitre is not the simple local disorder it is generally supposed to be.

Coats says the lesion is primarily an increase of the normal gland. In other cases the new formed tissue is discontinuous, occurring in the form of isodable tumours in the midst of the gland. To this form the name of adenoma is given. In both forms the tissue is liable to colloidal degeneration.

A few cases are on record in which secondary tumours developed, chiefly in the bones. In one case observed by Coats Rice there were several such tumours in the bones of the skull which presented the typical structure of the thyroid gland.

Sphothalmic goitre shows some very wide circles of diffusion which
show it to be a general disease. Eczema is a prominent symptom in acute cases, as sometimes in mania. Epistaxis, edema of the conjunctivae, fleeting edemas or even general anasarca with effusion into serous cavities; diplopia or lateral movement of the eyes, pulmonary, intestinal, meningeal, and cerebral hemorrhage have all been recorded.

Anemia is a marked feature and points to some grave blood deterioration.

Often there is cough and dyspnea. Acetonemia has been observed by Dr. Breslau in connection with the attacks of persistent vomiting with vomiting also may be intense prostration, restlessness, and the dyspnea or air hunger observed in diabetic coma (Alcott).

Such latter symptoms generally forebode a fatal issue.

Intermittent albuminuria, then headache, cramps and feebleness of the lower extremities almost amounting to paraplegia have been noted.
in some aggravated cases of the disease.

If we add to these occasional manifestations the history of some of the very acute cases of exophthalmic goitre which have been recorded it would appear that this is an infective disorder of uterine origin. Other days two rapidly fatal cases occurred at the Philadelphia Hospital one of which had marked cerebral symptoms.

In another case, a woman aged thirty-nine, who had been considered perfectly healthy was suddenly seized with intense vomiting and diarrhea, rapid action of the heart, and great throbbing of the arteries. The eyes were prominent and staring and the thyroid gland was found much enlarged and soft. The gastro intestinal symptoms continued. The pulse became more and more rapid, the vomiting was incessant, and the patient died on the third day of the illness. This, at least was a picture of acute poisoning and it was a case of exophthalmic
goitre

an endemic disease like simple goitre having been pointedly referred to and its organic miasmatic origin dwelt upon the question naturally arises. Is there any parallelism between the two? So exophthalmic goitre also predominant in certain localities? The answer to this is, yes, it undoubtedly is, although the disease being a comparatively rare one, is not so easily dealt with for purposes of localisation geographically.

Wotey and MacKenzie say: "It appears that some localities furnish more cases than others. Thus certain parts of Kent, Surrey, Wiltshire, and the Thames valley have produced a relatively large proportion of cases under our observation," and they add: "in districts where ordinary goitre prevails the exophthalmic form is also met with." If this is so then it should be met with in the north Midlands, and as Sheffield is on the borders of Derbyshire, cases would naturally gravitate here for advice. Bu
asking our leading medical men if they met with many cases, they all said they met with them frequently. Personally I have had seven cases under my care in the last five years, notes of which and their treatment are appended.

One point further. A strong argument in favour of the sympathetic nervous causation of toxic hyperplastic goitre is its undoubtedly greater frequency in women. If due to an external agency infecting the system, why should not men suffer equally? But why do women show by far the greater number of cases of simple goitre which all agree results from an indubitable cause?

Dr. Thornton, in Dran's dictionary of medicine, notes this and offers the following explanation. Women in this country are much more liable to suffer from bronchocele than men—perhaps it is on account of their being more frequent water drinkers, for in India it has been noticed that both sexes suffer alike.
Certainly in this country we see more cases of this disease in women than in men.

One authority puts down the proportion five to one. But in France Chareot speaks of the disease as being only a little less frequent in men than women, and in Germany Schenck gives the proportion as one male to two females.

All the hypotheses put forward to account for the causation of ophthalmia gravis have been found wanting, but in looking at them impartially, may not The Third, and so far, less accepted theory be the most probable.
Case 1. Mary B—aged 20, unmarried, assisted her mother in housework. Born of Sheffield parents in America and came to Sheffield when two years of age.

I was called to see her in December 1893 owing to an attack of pycnecy. On examination I found she was obviously suffering from exophthalmic goitre, the four cardinal symptoms being well marked.

History. Her father and mother are both alive and in good health. Three brothers and one sister are all strong and healthy. One sister died three years previously from peritonitis.

No member of the family on either father or mother's side, so far as can be ascertained, ever suffered from goitre.

She has always had her food regularly and sufficient in quantity and quality. She is a total abstainer. Her home is comfortable and surroundings good. She has not suffered from any previous illnesses.
Save those of childhood.
Her present illness began about
thirteen months previously and the
first symptoms noticed were slight
swelling of the neck; shortly after-
wards she suffered from palpitation
and slight shortness of breath, then
the muscular tremors, and lastly the
prominence of the eyeballs became
noticeable. Soon afterwards the
jainting attack occurred and she
came under treatment.

The patient is a well-developed girl
with florid complexion, and marked
staring of the eyes.

The alimentary system is in a
healthy condition. Teeth good, appetite
fair, but slight tendency to constipa-
tion.

On examining the heart a loud
murmur was heard all over the
heart, most marked in the bruital
area. It was also heard in the
tissues of the neck, and a soft
blowing murmur was heard over
the enlarged thyroid gland.

Pulse 130 regular, but small and
viry, and badly filled between the
treats.

There was nothing unusual about menstruation, but the amount was scanty and she did not begin until she was eighteen.

On examining the neck the thyroid gland was found to be considerably enlarged, both lobes enlarged but the left slightly more so than the right.

The circumference of the neck was 17 3/4 inches and a murmur was heard all over the guttice.

The eyeballs were very prominent and the eyelids were retracted so that the sclerotic was visible all round the cornea. The lids on being lowered evidently moved slowly and in a jerky manner.

The skin was moist and there was a slight tendency to perspiration. She trembled to a marked extent in both arms and legs.

She simply complained of feeling tired and was utterly unable to do her share of household duties.

No direct cause could be ascertained.
but the disease showed itself shortly after the onset of menstruation. Treatment. I ordered resting, light nourishing diet, and gentle outdoor exercise.

At first I prescribed Belladonna. I continued with it for a month during which time there was no improvement in the heart's action, the thyroïd, or the tremors, and the prominence of the eyeballs became more marked so that the lids could not cover the eyeballs, and conjunctivitis resulted.

I then prescribed strict Atriphanthi and soon afterwards a marked improvement began. This had continued for twelve months when the symptoms had largely abated, and since that time she has kept well.

When I saw her last about a month ago, her pulse was so regular and good, no murmurs over the heart. The prominence of the eyes very slight. The circumference of the throat reduced to 14 inches, and the tremors had entirely disappeared. She is
able to do her household work and says she feels quite well.

Case II. Mary O. — Cutlery manufacturer's daughter aged 29, unmarried. Two years before I saw her she was under the treatment of my late father for exophthalmic goitre.

History. Her father is alive and in good health. Her mother died five years previously from apoplexy. Two brothers, one of whom is strong and in good health; the other suffers from phthisis. Five sisters, all of whom are in good health.

No member of either father or mother's family ever suffered from goitre. Her home is comfortable and cheery and her surroundings good. She is a total abstainer.

She never was robust but she had not suffered from any serious illness previously.

Her present illness began three years before I first saw her, with palpitation which was followed by
tremors of the muscles of the legs. 

But the prominence of the eyeballs 

was noticed and then a month before she came under treatment, 

swelling of the neck was observed. 

The patient is a thin spare woman of medium height. face pale, eyes 

staring. 

The alimentary system is fair, appetite poor but digestion good. bowels fairly regular but liable to diarrhoea on 

any excitement. 

The heart palpitates against the ribs so that no murmur could be detected even if present. 

Pulse 140 small and wiry.  

Menstruation regular up to three years ago when it ceased and has 

not since returned. 

The thyroid gland is enlarged 

equally on both sides and the 

circumference of the neck was 16 

inches. A soft blowing murmur was 

heard all over the enlarged gland. 

The eyeballs were slightly prominent 

but the pectinotics were not visible. 

The skin was very moist and the 

tendency to perspiration was very
marked. The slightest exertion or excitement caused her to be bathed in a profuse perspiration. The tremors were very marked. She could hardly sit still and when she spoke the words were uttered in a jeryy disjointed manner. Without exception she was the most nervous woman I ever saw. She was unable to do any work and could only walk for a short distance without feeling tired. No cause could be ascertained. Treatment. Before I saw her my partner told me he had tried digitalis, bromides, iodide of potassium, iron, and belladonna without any improvement. Change of air to the south coast seemed to do her more good than anything else. At first, bearing in mind the good result I was having in Case 1, with strophanthus, I tried that. The pulse dropped to 120 but no other improvement was evident. Then a mixture containing strophanthus, iron, inositol, and citrate of iron and quinine was given and an improvement in
her general condition set in, but the pulse never dropped lower than 120. The exophthalmos was quite as marked, the circumference of the neck remained the same. The nervousness and tremors were not so marked and she said "she felt better." At this time she went away for change of air but on her return the symptoms became aggravated. The pulse went up to 150. The tremors and nervousness increased, slight intermittent albuminuria showed itself and vomiting occasionally occurred.

The exophthalmos and enlargement of the thyroid remained practically the same.

The symptoms became worse in spite of all treatment and the patient died from syncope three years after the beginning of the disease. Unfortunately no post-mortem examination was permitted.
Case III. Annie G. - aged 27 years, married two years and has one child. Complains of palpitation, and swelling of the throat. She was born in Sheffield and has lived all her life here. History: Father and mother both dead. Former was killed in a railway accident and the cause of the mother's death is unknown but probably was phthisis.

She has one sister who enjoys good health, as brothers. One aunt on her mother's side suffered from goitre. She was at service until her marriage but she never complained of her work being too hard. Since marriage she has had a comfortable home and good food, surroundings healthy. She is a total abstainer.

She only previous illnesses she suffered from were bronchitis five years previously, and gastric catarrh two years previously. Her present illness began about two months before she came under treatment, and the first symptoms...
was the palpitation, followed shortly afterwards by the swelling of the neck. The symptoms first showed themselves three months after childbirth. She had fairly good health during pregnancy and the labour—which I attended—was normal. There was however post-partum haemorrhage which weakened her considerably and she was unable to nurse the child.

She is a tall thin woman and the most noticeable feature is staring of the eyes. She is pale and anaemic. The alimentary system is fairly healthy, tongue clean, teeth good, appetite and digestion fair with a slight tendency to constipation. The heart beats rapidly, but no murmur could be detected. A slight blowing sound was heard over the gullet. Pulse 120 regular, badly filled and weak.

She was regular in the periods up to pregnancy but has not seen anything since.

In examining the neck the thyroid gland was found to be somewhat
enlarged equally on both sides, and the circumference was 14½ inches. A soft bluish discolouration was found all over the gullet.

The eyeballs were obviously prominent but not as much as to render the sclerotics visible round the cornea. There was no appreciable tension. The skin was fairly moist but there was no tendency to perspiration.

Case: It came on shortly after childbirth, and this may have had something to do with the onset of the disease.

Treatment: As she was evidently suffering from anaemia in addition to exophthalmic goitre, I prescribed iron and this was continued for two months when her general condition was much improved but the pulse rate was still 120 and the height was still 4½ inches. I then gave her starch strychnine which she took regularly for four months with very beneficial results.

Her present condition: When I saw her in January last—a pulse 70 regular, well-filled, and good volume: The
enlargement of the thyroid has almost entirely disappeared, the circumference of the neck being 13 inches; the eyeballs are still somewhat prominent, but she says she feels quite well.

Case 10. Ethel M. aged 39. Born in Sheffield and has lived here all her life. Married six years and has had two children.

The complaints of palpitation and prominence of the eyeballs.

History. Her father died, aged 40, from bronchitis. Mother living and in good health. One brother and sister also enjoy good health, and, so far as can be ascertained, no member of either the father or mother's family has suffered from goitre.

Her home and surroundings are comfortable and she has enjoyed fairly good health up to the beginning of the present illness.

Her present illness began about three years ago when she suffered from palpitation. This did not trouble her much at first, but about
Nine months ago the palpitation got worse and with it a trembling of the hands was noticed. Then the eyeballs became prominent and about three months ago the throat began to swell.

She is of average height and weight fairly well developed. The face flushes easily and on looking at her the most marked feature is the prominent staring eyes. The neck is also obviously enlarged.

The alimentary system is in a healthy condition, tongue clean, teeth and digestion good, with slight tendency to constipation.

The skin is moist and there is a tendency to perspiration on the slightest exertion or excitement. On examining the heart a blowing systolic murmur was heard which was also distinctly heard over the gullet.

Pulse 140 regular and small. Her menstrual periods were normal and both labours had been natural. She has had no miscarriages.
on examining the neck the thyroid was found to be enlarged almost uniformly, but very slightly more so on the right side. The circumference was 15½ inches, & the goitre throbbed in a noticeable manner.

The eyeballs were very prominent and staring and the lids were so retracted that the sclerotics were visible all round the cornea. The lids moved in a tacking and jerky manner.

She was able to attend to her ordinary household duties and also to take a moderate amount of walking exercise.

Cause - unknown.

Treatment. At first Digitalis and iron were tried for some weeks without any imperceptible improvement. Then Belladonna, Arsenic, Bromides and Stramonium but without any effect. Next thyroid gland tabloids were tried and she took at first four 6-grain tabloids daily, and later increased the number up to ten or twelve per day, and at the same time ate a large number
of lightly cooked lamb's thymus glands. This was persevered in for eight months during which time her pulse rate hardly ever varied. She then went for a month's holiday to the seaside during which time she took no thymus tabloids or other medicine, and the freedom from household worry together with the change of air and scenery seemed to do her general condition good.

On her return home she resumed the thymus tabloids and persevered with them for seven months longer but at the end of that time her pulse was still 140, the thyroid was just as large—the neck measuring 15½ inches—and the eyes just as prominent and staring, although the patient said she felt better but it was not observable.

Case V. Annie G.—Aged 19, single came under my treatment two and a half years ago, complaining of palpitation, staring of the eyes, and
swelling of the neck.
Born in Boston (Lincolnshire) and has lived there all her life.
History. Her father and mother both living and in good health; two sisters
and one brother all enjoy very good health. Her maternal grandmother
and one aunt suffered from exophthalmic goitre.
Her home is very comfortable and her surroundings good. She has
only to exercise slight supervision in the home and has ample
time and opportunity for outdoor exercise.
Her present illness seems to have
begun about nine months prior
to her coming under my treatment
and at first she only complained
of a fulness in the breast, soon
afterwards the palpitation and
prominence of the eyes presented
themselves, and three months before
seeing me she was treated by her
family medical man, but as there
appeared to be no improvement in
her condition she came to Sheffield
to stay with her sister and I was
asked to see her.
She is a medium-sized, well-developed girl of an extremely pallid complexion, almost waxy in appearance, and one is at once struck with the prominence of the eyes and the enlargement of the throat.
The alimentary system is not in a good condition. She suffers from indigestion, flatulence; in fact from chronic gastric catarrh, and is greatly troubled with constipation.
Her skin is fairly moist but not any particular tendency to perspiration.
In examining the heart a loud systolic murmur was heard, which could also be heard over the enlarged thyroid. Pulse 130 regular but very little volume.
Micturition, normal but scanty.
In examining the thyroid it was found to be considerably enlarged and soft to the touch. The neck measured 16 inches in circumference. Throbbing in the gland was also noticeable.
On extending the arms the hands were found to tremble as in an alcoholic person.

The eyeballs were very prominent and staring, and the lids were so retracted that the pupils were visible round the cornea. The lids on being lowered moved in a slow, dragging manner.

She was able to take a moderate amount of exercise without feeling fatigue.

Cause. The disease seems to have come on gradually without any apparent cause.

Treatment. At first I gave strophanthine and iron without any good result whatever. Then I tried Belladonna, Sodidio, Arsenic, and Digitalis without any benefit.

These remedies were tried for six months during which time she was carefully dieted so that the gastric symptoms disappeared.

She was then consulted by Mackenzie who recommended Hymnos tabloids so she began with three 5-gr. tabloids daily and gradually increased
The number kept on reaching per day and these she has continued taking for nearly two years. Her condition in February was practically the same as when I first saw her two and a half years ago and when I asked her how she felt she said "I suppose I am as well as ever I shall be."

Case 17. Margaret A., aged 32. Born in Bradwell (Derbyshire) came to see me complaining of swelling of the neck, palpitations, tremblings in her limbs.

History. Father healthy, mother has suffered for years from simple goitre, two of her aunts have also had goitres.

Her home and surroundings are comfortable. She is a total abstainer. She first noticed the swelling in her neck when she was fifteen, and that was about three months after menstruation began.

Not much attention was paid to the swelling of the thyroid as it
Seemed to be a "family complaint" and the other members of the family do not seem to have troubled much about theirs.

However when she was about twenty-five years of age she began to complain of palpitations, and trembling in her arms. She was under treatment for some time but, as she said herself, "got no better" so left it off.

When I saw her, I found her to be a tall, rather spare woman, with a marked enlargement of the neck, and a peculiar drooping of the eyelids, but no protrusion of the eyeballs. The alimentary system is fairly healthy but there is a slight tendency to looseness of the bowels.

An examining the heart a loud systolic murmur was heard, and this was also distinctly heard over the thyroid, which also throbbed in a noticeable way.

Pulse 170 regular and good.

An examining the neck the circumference was found to be 16 inches, and the thyroid had a soft fluctuating feel"
menses was regular and normal.
There was no exophthalmos but the lids seemed to half cover the eyeballs.
The skin was moist but no great tendency to persiration.
She was only able to take a small amount of exercise owing to the tired feeling.
Treatment - Stephanothis, Belladonna, Bromide, arsenic and other remedies failed to have any good effect so I tried thymus extract.
for twelve months she took the tableidos regularly beginning with from five grain tableidos daily and gradually increasing the number up to ten per day. She also had some lightly cooked lamb's thymus glands.
She said she felt better, could take more exercise, and learned to cycle. But up to now as I could observe there was no improvement in either the pulse rate, heat or in the size of the Thyroid
The tremblings were not quite so evident but this was the only improvement.
Case III. Mrs. M. D., aged 37. Born and lives in Sheffield; has four children. Complains of swelling of the throat, palpitations, nervousness and tremblings.

History. Her family history is good and no member has suffered from goitre. Her home is comfortable and surroundings good.

Her present illness began six months before she came under treatment, and she first noticed the tremblings and palpitation. This was followed by swelling of the thyroid, and a great tendency to diarrhoea. Then the protrusion of the eyes was noticed. She is a spare, careworn-looking woman, who looks considerably older than she is.

The heart shows an auscultation a loud systolic murmur, which is also heard over the thyroid. Pulse 120, rather irregular, small and badly filled.

Menstruation has always been normal, and her labours were
also quite natural, no history of any miscarriages.

On examining the neck the thyroid was found to be somewhat enlarged and the circumference was 14½ inches. A murmur was heard all over the enlarged thyroid.

The eyeballs were prominent and the lids so retracted that the color of the cornea.
The lids moved in a slow jerky way.

The skin is moist and there is a marked tendency to perspiration. The tremors are also very marked and sometimes painful in character. She has latterly been unable to perform her household duties. Cause, unknown.

Treatment. Stramonium, Iron, Belladonna and other drugs failed to give any marked relief. So in this case Phymus extract was tried.

She took at first four 5 grain tabloids and these were afterwards increased to ten and this was
Continued for twelve months.
She improved to a slight extent so far as her general condition went. The tremblings were less severe and less painful, and the tendency to perspiration and also to diarrhoea was less.
She was able to perform her household duties fairly well but so far as the heart, thyroid and eyes were concerned, I must confess I looked in vain for any improvement.

General remarks. So far as the cause can be learned from the foregoing cases, the nearest we can come to it is that in two cases it was associated with or followed shortly after menstruation, and in one case it followed childbirth.
So far as treatment is concerned it is almost as unsatisfactory. In two cases very great improvement practically amounted to cure, followed the administration of strophanthus. In the other five
no improvement was evident and one case ended fatally. There is still a good deal of discussion as to the beneficial effects of Rhynmus extract but in the four cases in which I tried it, it did practically no good. These cases were closely observed by me and the results noted. I find in the British Medical Journal (January 7, 1899) Dr. Brenchton Parker gives notes of four cases treated by him with Rhynmus extract and the results tally with my own, so I fear he still must look for some treatment which will prove more beneficial than any of those we are at present acquainted with.

R. Neil Gordon
May 13, 1899

26, Hope Street, R.
Sheffield
April 1899