

Thyroid Treatment in General Practice.

In the following pages it will be my purpose, *inter alia*, to record sundry cases in which I have exhibited Thyroid Extract. I shall further endeavour to outline the apparent Function of the Thyroid Gland, concluding with an estimate of its bearing on Therapeutics.

My first acquaintance with the above form of treatment was in the autumn of 1893 at which time I was Assistant Medical Officer at the Northumberland County Asylum, Morpeth. My chief, Dr Thomas W. Macdowall had suggested to me that I should make a trial of the treatment in a case of Ichthyosis, the result of which I recorded in the British Medical Journal. I fear however that I was too easily bitten with the *caecities scribeandi* to which youthful zeal is prone & I wrote

B.M.J.
Mar 30: 1895

Somewhat



Somewhat hastily, prejudicing myself in consequence. I hoped for much in the application of the treatment: - but further consideration of the question I shall reserve until dealing with the case as a record. As will appear, I have 'immediate' knowledge of 'Thyroid Therapeutics' in a few cases only, viz:

- 4 of Ichthyosis
- 1 of Myxedema
- 1 of Exophthalmic Goitre
- and 1 of Psoriasis, associated with - - Obesity.

It would be idle & impertinent for me to attempt to draw absolute conclusions from so few cases, but as these represent all on which I have happened, that is, where I was able myself to apply the treatment, I can do no more than give their records for what they are worth. In fine, they represent the 'occasional' labours of the past eight years & represent my personal opportunities only.

To

To supplement my personal observations I shall have from time to time to make reference to the published works of others, and perhaps cannot do better than forthwith shortly trace the history of the special study.

Twelve years ago, the Thyroid gland, along with the Thymus, the Pituitary Body &c &c was one of the *opprobria medicinae*. Its microscopic structure & embryonic history were well-enough defined no doubt: but as to its use or function — that was problematical. In my student days, which after all are but in their adolescence I hope, one of my teachers who was by way of being somewhat facetious was pleased to describe the Vermiform Appendix as a superfluous organ purposely left by Dame Nature for the especial benefit of the Abdominal Surgeon. In like manner might the person referred to, had he further played with his fancy, have described

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the Thyroid Gland as another victim of the mysterious disease, left for the confusion of the theoretical physician!

Brit. med. Jour
1890 Vol. I. p 287

It was left to Victor Horsley - and about the same time to Professor Kocher - to be the first to break new ground. The famous 'grafting' experiments, notably of the former, threw a new light on the hitherto dark subject. Myxoedema, up till then an obscure disease, although already recognized by Sir William Gull in 1873 & further by Dr William Ord in '77 - was attacked & that successfully.

Following upon this Dr George Murray, now one of our greatest authorities on the ^{subject} ~~myxoedema~~, shortly after substituted hypodermic injection of Thyroid matter & later still, introduced a liquid extract, to be given by the mouth, the said liquid being practically identical with the Liquor Thyroidi of the present Pharmacopoeia: of which further mention will be made when dealing with the mode

Brit. med. Jour
1891 Vol. II p. 796

of

Cretinism

of Administration of the Extract.
 Its value was presently demonstrated
 by the same author & since then it
 has been exhibited in a variety
 of instances, principally for the
 above mentioned diseases; but also
 for obesity, psoriasis, syphilis,
 alopecia & many other ailments,
 on the subject of which I shall
 speak in greater detail later on.

Lancet. 1893
 Vol. ij. pp. 1113
 1116
 + 1117

In little more than a decade,
 then, to how many uses have the
 early theories & deductions of
 Kowalevsky & Kocher been put!

The experiments & observations of
 these pioneers closely followed by
 those of Kalkine, Ross, Baumann
 Braumwell, Murray & Edmunds
 have revolutionised our ideas on
 the subject: yet still the medical
 world is without definite light
 & waits expectant for something
 more tangible, something less hypo-
 theoretical & empirical than these
 specialists have hitherto been
 able to give us.

In the cases which I
 shall now place on record, I

(can

can but add my little contribution to the stone of knowledge, my little mite, which has perchance meant so much to me.

Mode of Administration

In '93 I first employed the glycerinated Extract of Thyroid Substance manufactured by Messrs Brady & Martin of Newcastle on the formula of Dr Geo. Murray: who had demonstrated that given by the mouth, its effect was identical with that produced by the hypodermic method & much more convenient. However, as I found some little difficulty in conserving the Liqueur I adopted the tablet form of preparation. In short, I used Burroughs & Wellcome's preparation which is so well known & standardised that I need hardly describe it further, beyond stating 0.324 grammes of the extract i.e. gr. v. practically represents an equivalent of the fresh & doubtless healthy gland of a sheep, this animal having been chosen as a source of

- subby

supply not only on account of its abundance, but also because the sheep is as nearly as possible immune from tuberculosis & diseases of the Thyroid Gland itself.

In addition to this treatment, as the result of mediate as well as of immediate experience, I have always recommended a supplementary course of such a cardiac regulator as *Nux Vomica* or *Strophanthus*; & in cases of *Ichthyosis* & *Psoriasis*, the adjunct of a medicated lubricant, preferably a mercurial or *Ichthyol* diluted with *Lanoline*.

Dosage was always carefully watched, as I had been previously warned concerning idiosyncrasies; & it was in all cases limited to small initial quantities.

Cases I, II, III & IV deal with the application of the above treatment to *Ichthyosis*, a probably hereditary disease of the integumentary system which has been recognised for many years.

— Recently

I recently came across an old volume bearing on the subject, the work of Sir Erasmus Wilson, in which that celebrated author depicted the condition of a typical case with happy fidelity + in which, under the heading of 'Treatment' he recommended the following prescription

Manual of Skin Diseases
 publ'd 1851
 (Sir) E. Wilson

Rx. Copper Sulfate
 Zinc Sulfate of each ʒss
 Elder flower Ointment ad ʒij

In concluding a paragraph on internal medication, wherein by the way, he advocated the use of Donovan's Solution — a drug which I humbly venture to think is not sufficiently appreciated nowadays — he states that — Drs Willan, Bateson + Elliottson prescribed Stockholm Tar of which ʒi ter die sum — a form of therapy not very likely to commend itself to the latter-day physician — nor to his patient.

Case I was that of a General Paralytic — a fairly full description of which I gave in the Brit. Med. Journal loc. cit.

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The patient was a middle-aged man, & there was great difficulty in tracing any history, family or otherwise, on account of ~~the man's~~] his mental infirmity. He was an Irishman of the vagrant class & I believe was reputed to have had syphilis: - but this was uncertain.

Strangely enough, for some time during the course of treatment by Thyroid Extract, his progressive 'mental' symptoms abated or rather, were retarded.

The ultimate result, so far as his skin-disease was concerned, was barely so successful as my youthful zeal depicted it to me and I began to learn the lesson, since borne in on me by subsequent experience, that the effect of this treatment in Ichthyosis ~~was~~ ^{is} transient at the best, and that at most, only a modification of the complaint can be looked for.

The patient died shortly after I left the Institution associated

with

with my memory of him + unfor-
 tunately, the result of what might
 have proved an interesting + in-
 structive autopsy has been de-
 nied me. I have subsequently
 seen the record of the post mortem
 examination; but it threw no light
 on the state, for instance, of the
 Thyroid gland + can be of no inte-
 rest here.

Case II is that of Laura B —, aged 9 years
 She had suffered from a rough,
 scaly, scurfy skin from early
 infancy + in this particular
 was an illustration of atavism,
 her maternal grandfather having
 suffered similarly. The 'doctors'
 had looked on this condition as
 being one of 'leprosy' (sic) - more
 probably 'lepra'. This informa-
 tion was gleaned from the mother.

The areas affected were those
 usually involved in typical cases,
 namely, the folds of the axillae,
 flanks, knees, elbows, and the
 extensor surface of the limbs
 generally. The face was 'chapped'

- the Eyebrows

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the eyebrows & scalp deficient in hair & what hair there was, was thin in texture. From time to time she would peel, as one would after scarlet fever or ordinary dermatitis. Forcible detachment of a tough scale would tend to draw blood, but needless to say this experiment was not persisted in.

I commenced treatment in December 1897 & the following are excerpts from my diary.

Dec 3^d Prescribed half a 5 gr. tablet to be given with each meal, i.e. three daily, crushed, with jam.

Also, a mixture containing Tinct. Nuc. Vom., min. ij. Tinct. Strophanth. min. ij. & Syrup Rhoado a sufficiency.

Temp° 98° Pulse 92. Weight 32.12 lbs.

Dec 7th Pulse 104. Temp° 99.2. No unpleasant symptoms complained of.

Dec 11th Pulse 108. Temp 99.7. Child complains of a 'funny' feeling in the head. Dose increased from 7½ to 10 grains dry extract daily: medicine as before. Weather fairly cold.

Dec 15th Temp° 100° 2. Pulse 116. Child

feels

✓2

feels skin painful. No alteration
in cuticle observable.

Dec 20th Temp° 99. Pulse 110. Dose in-
creased to 15 grains - in thrice.

Dec 24 Temp 99.6. Pulse 108. The skin
is now desquamating more than the
mother has ever known it to do,
especially on the shins. Patient
to return in 10 days. Medicine as before.

Jan 3 1898. Pulse 120. Temp° 100.8° F.
Skin much more supple & faintly
moist. No perspiration. Face al-
most smooth. Fine powdery scales
fall from trunk on lightly rubbing
with my palm. Medicine now
discontinued as tolerance seems
established. Weight 3st. 9lb.

Jan 10th Pulse 126. T° 100° F. Skin
much more supple. Child com-
plains of feeling tired: but all
functions save diaphoresis seem
to be normal.

Jan 24 Skin much improved in
condition. Very little desquama-
tion. Forehead & cheeks are as
smooth as one would wish - also
faintly moist. Skin on shins
& forearms are slightly glistening
: but absolutely

but absolutely devoid of squames
 N.B. Pulse + temp° omitted - as there is no note
 Feb 1st weight 3st. 7lbs. Looks de-
 cidedly thinner all over, face,
 trunk & limbs: but skin is al-
most normal. The child does not
 perspire. Dosage diminished
 to gr \bar{x} daily.
 Case lost sight of.

Case III is that of Richard Jun at 17 yrs.
 Extr. from notes - "Occupation - none, as he
 " has been rejected from all places
 " where he has sought employment."
 Condition on June 4 - 1898.
 Hair scanty on scalp, eyebrows
 & pubis - none in axillae, where
 however, there is a slight sebaceous
 moisture. The tongue & fauces
 are red & inclined to be poorly
 laved with saliva.
 The back is "goose-skinny"
 in appearance & showers of fine
 scales can be easily brushed off.
 The finger nails are brittle & tend
 to fissure transversely rather than
 in long axis. Skin rauhles,
 forearm & wrist covered with typi.

cal Ichthyotic Squames - more suggestive of the Saurropsidae than of the Piscesidae. Weight 6 St. 8 lbs.

Heredity. throws no light on the subject - parents are alive, are nervous & dread hospitals or doctors. Patient is one of prematurely born twins - the other having died when a few hours old. Pulse 88. Temp 98. Weather moist, which suits him better than when it is frosty.

Prescribed Ther. Extr. Tab. Brw. gr 5 with meals also a mixture containing Ferri et Ammon. Citrat. Nuc Vomica & Digitalis. Also to use an overfatted soap & Ointment R. Ung. Hydr. Ox. Flav. ʒij
Aq. Rosae ʒiij
3ij ∴ Apply at night.

June 12. Has taken 24 fableds in all: i.e. ʒij of extract. P 96. Temp 99° Feels skin "itching a bit": otherwise "not any different." Dose as before.

June 19 Desquamation more noticeable, especially of Forehead, cheeks, forearms & skin. Complains of malaise.

Temp. °

Temp° 99° 7. Pulse 96. Dose as before.
June 27th Skin much more easily detached from shins, axillary folds, & wrists. Back is smoother.

Pulse 102. Temp° not taken. Dose increased to gr V = four times daily

July 13. Weight has decreased to 6 st. 4 lbs i.e. he has lost 4 lbs.

Is much better in every way & patient is quite pleased with himself. Appetite has increased; but this is possibly due to the Ferr. et. Am.

Citr - or to the Nux Vomica - or both

A new epiderm seems to have formed especially on the extensor surfaces of leg & fore arm. The ankles are still scaly = also the elbows. The penis, & scrotum are covered with fairly normal skin.

Dosage reduced to grs. V. ter. die. s.

July 26th Much improved as to the skin, but feels very uncomfortable at night ∴ with morning headache. Weight 6 st + 2 lbs.

A new pellicle, rather resembling scar-tissue is developing over the elbows, wrists & ankles. There is now no powdery scabiness of

the back

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the back & sweating is fairly free
in the perinaeum & axillae.

Patient thinks he has found a situation as errand-boy but finds himself very "short-winded": & complains of being taken to task about the scantiness of his hair, the texture & growth of which has not improved. Pulse 100. T_o 99.2 F.
Dosage reduced to gr v. bis die s.

Aug 17th Patient's mother has called to state that he is "just the same in himself" i.e. "easily tired & winded" but that his hands & face —
N.B. exposed surfaces — are painfully tender & are cracking again.

Case IV is that of John W. a cutter single, aged 46, a native of Liverpool. He first consulted me with reference to a Sore Throat, which he attributed to Syphilis & for the which he had been treated for the previous six weeks by a surgeon in the provinces. There was ample evidence of a recent hard chancre, on the dorsum of the penis & about an inch

from

from the root. Patient had exposed himself to risk about three weeks prior to the appearance of the sore, and in my own mind I was fully satisfied that he was recovering from the first stage of Syphilis. What was most evident & palpable about the man was the existence of a wellmarked Ichthyotic condition. This, my patient went on to inform me, had been variously diagnosed and still more variously treated. He had had courses of Arsenic, of Iodide of Potash, baths, lotions, ointments & other things ad nauseam, & not having had advice on the subject for many years, as he had long since lost all hope of cure, had never heard of Thyroid treatment. He was intelligently interested himself & agreed to place himself ~~in~~ ^{my} hands. I promised to relieve him, but pointed out that it would be well not to expect a perfect cure. He informed me that his habits

were

temperament so far as alcohol was concerned. He had never had a venereal complaint until recently although he had only too often exposed himself to risk. He confessed to some musical skill, finding little difficulty with handling the violin: which was surprising when considering the state of his finger-tips, hard dry & chipped as they were with his skin-disease.

The following notes were taken concerning his case on Oct 24-1900.

Family History. Both parents died when he was a child: cause unascertainable. Has been troubled with Ichthyosis since infancy. Has a brother who is not affected by any disease whatever.

Circulatory System. Apparently normal. The pulse rate is 76: regular.

Artery-tension fair.

Respiratory System. Apparently normal. The chest, as is the whole body, is poorly covered. Has never had any cough to speak of.

Digestive System. Appetite Good.
 Bowels regular. Teeth carious
 + deficient. Tongue, bright red
 + whole buccal mucosa is
 flushed + dry. No ulceration
 visible; but general condition
 of mouth + pharynx is devoid
 of natural moisture.
 Height. 5ft. 3in weight. 8st. 4lb.

Hemopoietic System. Patient is
 mildly anemic and states that
 he has "poorly healing flesh". The
 ciliary Conjunctivae furnish no
 indication as there is chronic
 blepharitis + ectropion, which
 give to his eye-rims the appearance
 of raw flesh. Percussion of the
 spleen is fairly easy of accomplish-
 ment owing to his spare frame,
 + that organ is normally situate.
 Temp° Fahr. 98°

Nervous System. Negative. No
 ataxia, no tremors, facial or
 otherwise. Patient has never
 had a headache in his life.

Sight very defective, as there
 is double Keratitis, with almost

total amaurosis of right field - can just distinguish light from dark. The left optic is not so seriously involved, but is also dull, a portion representing the external superior third of the cornea being quite opaque.

Patient finds the greatest difficulty in reading - music especially & has an adjustable apparatus of his own contrivance which he fastens to a table or mantel whereby he can hold printed matter in a convenient position.

In short, it is principally the Integumentary rather than the Nervous System which is here at fault. The chronic Ciliary Blepharitis adds to the repulsive appearance of his physiognomy.

The tactile sense is apparently acute, as he states that he is a good violinist.

Hearing is imperfect. Integumentary System proper.

Hair is thin both in quality & quantity on Scalp. He has a small reddish moustache: but no

Whiskers

whiskers. Eyebrows barely in evidence. The pubes is practically bald & there is no sign of hair on the trunk limbs nor in the axillae which are unaturally dry. The condition of the eyelids has already been described.

The ears, as is the scalp, are encrusted with fine pearly dry scurf, & this condition is continued over the forehead, cheeks & chin.

The Nucha is marked with irregular reticulations in much the same manner as the cured skin of the lizard when made up as a covering for purses or card-cases: &c.

The Shoulders & trunk as a whole are goose-skinned & readily shed a powdery scurf. The extensor surfaces of the fore-arms & legs are covered with large squames, wh. vary from the size of a small husk of lentil to that of a threepenny piece, the larger the size, the more polyhedral or rhomboidal. The mucosa of the glans penis, or what repre.

sents it, is absolutely dry and shiny, as is the skin of the organ itself; and the scrotum.

The appearance of the latter resembles that found for example after orchitis; where, the skin, having been overstretched by the inflamed testicle, on that organ's diminishing, contracts, fissures + peels. Chancere cicatrix visible. Patient has never perspired in his life, which is now verging on the climacteric. Unfortunately he resents, + from his point of view, perhaps, quite properly, the suggestion of being photographed

Treatment was commenced, as stated, on Oct 24. 1900 + I prescribed grs V. Extract (Thyroid) to be taken with each meal i.e. three daily. I furthermore recommended 1/2-grain doses of Hydrarg. Iod. Virid.; combined with 1/3 gr. Pulv. Opii to be taken on an empty stomach. Patient was very amenable + seemed much interested in the prospective treatment.

I further

I further instructed him to take a warm bath every evening, coal-tar soap being used, to be followed by an inunction of Ichthyol diluted with Lanoline.

Medy. Oct 31. '00. Patient has returned to subjective phenomena reported. Weight in one week has been reduced by 8 ozs. Pulse 100. Temp° 100.7

Nov 2^d. Is in much the same state. Temp° 100.2. Pulse 100.

Nov 3^d. There is a tendency in the skin of both legs, the ankles included, to inflammation - in short, a form of dermatitis has manifested itself.

Prescribed: Internal treatment as before, with, in addition, a dusting powder composed of: -

Rx Zinc Oxide
Pulv. Acid. Borici aa ℥i
Hydrag. Subchloridi gr̄ss
Pulv. Angli (arrow root) ad ℥i

Temp° 101. Pulse 108.

Nov 6. I have had to visit patient who is in great distress. A condition to all intents & in appearance, closely similar to

- that of

that of, if not actually, Pemphigus, has appeared. Every squame in the nether limbs & groin, on the Scrotum & root of penis has turned into a pustaceous blister, whence runs with readiness a blob of serous or mucinous fluid. One pound of lint was saturated within 24 hours, despite the dusting-powder.

Strangely enough, only the lower part of the body was affected. Evening temp° was 102.2° without any concurrent phenomena, beyond the pyrexia of metabolism. Pulse 132

Nov 7th Three grains of Opium, administered during the night have not controlled the insomnia of malaise. Patient however, is hopeful, thereby rendering the task of treatment easier in every way. The bullae pour out a clear fluid unceasingly. Pulse 120. Temp° 101.2° F.

Nov 8th Itchiness has been alleviated by a lotion containing Hezeline and Chinocol (1-1000)

the latter

the latter to cover a peculiar smell arising from the serous discharges, much resembling that of the Thyroid Extract when in bulk.

Patient feels decidedly better; but had next to no sleep, the absorption of gr ii Pulv. Opii not withstanding. Appetite has had to be whetted: through the medium of half a bottle of Bass' ale,

after which some fish. Pulse 110.

Nov. 9. 10. + 11th - Patient is steadily improving in every respect.

Thyroid extract increased in dose to gr xx per diem.

Nov 15th. Where the Pemphigus recently was, there is now a new cuticle.

R Lotio Chinizob (1-1000).

Temp° 100.2° F. Pulse 132. Note:

the unaccountable discrepancy between the temperature + pulse-rate: There has been slight diuresis + diarrhoea which may possibly account for same.

No opiate required. Four tab.

loids daily still to be taken.

Nov 19. Visited patient who is

Convalescent from the acute skin-trouble. Squames are being readily shed + that in large quantities - leaving over all, an apparently new skin - not unlike cicatricial tissue. There are practically no signs of the recent Pemphigus at all. Kemp 100.2. P. 126. Has not "touched a stimulant" for over a week.

20th Nov. Received a visit from patient who is however very shaky + shrunken. Weight has dropped to 7st. 6 1/2 lbs : i.e., he has lost 11 1/2 lbs in less than a month. Facial appearance is almost unrecognisable. Fore-head is as smooth as a child's - no scurf on scalp, ears, neck or cheeks. Nucha still shows as it were an outline of the previous lizard-skin. The cuticle on legs + arms still resemble scar-tissue being almost translucent glossy pinky. white-incolour: - The skin on the legs former especially so. The penis is certainly morose, but there is

no increase

no increase in the density, qualitative or quantitative, of the hair. Subjective phenomena are intense shakiness & a feeling of cramp in the muscles of the neck.

Prescribed: gr \bar{X} Extract - concurrent dose of m \bar{X} Donovan's Solution. \bar{t} in die sumendum.

Nov 23^d? Temp^o 99.2. Pulse 120. Skin smooth all over. Patient is rather diastolic, & states that his 'customers' do not recognise him as his old self!

Nov 26. Is still improving, but complains very much of tremors.

R \bar{X} Nucis Vom. & Acid Nitrohydrochlor. Dil \bar{a} m \bar{X} . in aqua \bar{z} i. \bar{t} er. die. sum - also Unguent. Lanolini c Hydrag. Ammon Nitrat^{is} (gr \bar{ij} in \bar{z} i)

Nov 30th Pulse 120. Temp^o 99.6^o. The nails are thickening, but are discoloured. Weight 7st. 3 1/2 lbs. i.e. in five weeks patient has lost exactly 14 lbs. in wt.

Dec 3^d. Pulse 132. Temp^o 99.2. Pt. complains "of slight cold." Fauces red but there are no

ulcers

mucous or other patches apparent.
Skin on forehead faintly roughened.
Doseage reduced to gr V - bis die.

Dec 15. Patient despondent - refusing
Thyroid treatment which he feels
to be causing him 'to tremble all over.'

R_x Fellow's Syrup ʒss t. d. s.
- to continue with the last instruction.

Dec 17. Feels better & has resumed
Thyroid treatment. Pulse 108.

Dec 19. Rep. mist Syr. Hypophos. Co.
& Tablets gr X per diem. Pulse 120
Temp 98°. He states that he feels
warmer when taking the extract.

Dec 24. Treatment still persevered
in: though patient's condition is
retrograde. There is some bronchitis
Sicca. R_x Mist Anna Chloridi.
& Syr. Fellow's. P 116. Temp° 99.2.

Dec 31. There are throat symptoms
possibly specific. Voice husky.
Larynx edematous. No deafness.
There is a mucous patch on
the left edge of the tongue.

R_x Garg. Hydr. Perchlor 1-1500.
Tablets gr V bis die.

Jan 4. 1901. There is a change for the
worse. Patient states that all

Use is going out of his limbs: & that he feels as though he were intoxicated. Pulse flaccid & irregular - 112. Prescribed mixture

℞ Ferri et Ammonii Cit. gr x
℞ Nucis Vom. m̄ vii

℞ Chloroform ℥j. ter d. s.

Tabloids gr v. bis die. Skin on face, arms & shins, is much rougher. There is mental depression
 Aug 7. '01 Weight has gone up to 7 st. 12 lbs - most unaccountably.

Pulse 96. Temp 98.4° Dose as before.

Aug 11. th Pulse 84. Pt complains very much of tremors & of feeling cold. Temp° in axilla is 97.° F. Thyroid treatment discontinued. Throat is better - mucous patch reduced - fauces injected - vocal huskiness, marked.

Aug 22. Patient is lapsing. Arms & legs are covered with pearly squames. Refuses thyroid treatment when resumption was suggested. States that Felleo's Syrup suits him best.

Aug 28. Much the same: though not so tremulous. Subjective sensations not so disagreeable.

Feb 9. '01 "Feb as well as ever he did
 " in his life, except for his Ecthy-
 " osis which is returning". His
 - face (fortunately) is much more
 smooth than formerly

Feb 27. Pt. complains of sorethroat
 which however is not specially
 'specific' in type. There is no
 deafness. Prescribed mixture

Rx. Lig. Donovanii $\text{m}\bar{\text{X}}$: t.d.s.
 + inhalations of R. Benzoin. Co
 - - - - -

This is the last note made
 on the case up to the time of
 writing. All through, the circum-
 stances have, to me, been very
 interesting. There seems to have
 been little, if any doubt, that
 a hard chancre had been contracted
 about 2 months before my first
 note was made. The sparseness
 of his hair, the complicating na-
 ture + structure of his skin disease
 rendered the manifestation of
 secondary syphilitic symptoms
 almost impossible to detect.
 Some throat-trouble certainly ap-
 peared as substantiating evidence.

One very

One very definite point of interest was the appearance of Pemphegus, invariably a late tertiary symptom - & rare at that. - so soon after the inoculation. The pempheg, practically numberless, especially in the lower limbs, corresponded with the ichthyotic squames in every respect - in size, shape & distribution. The most rational explanation of this phenomenon appears to me to be that the Thyroid Extract produced such rapid & profound metabolism that the course of the Syphilis was excitedly hurried on, & that it displayed a selective action relative to the skin in such a manner as to very much modify that disease - although not for a moment would I urge that Thyroid Extract should be recommended in Syphilis at ~~any~~ an early stage.

Dr Menzies* recorded four cases of malignant Syphilis where the symptoms were modified by Thyroid treatment. In concluding

* Brit. med. Jour July 7. 1894

his article

his article he stated that he was inclined to ~~them~~ regard the remedy as a powerful skin-tonic & adjuvant to the mercurial treatment of Syphilis."

Referring back to Case IV: I do not know of another instance on record where the two diseases, Ichthyosis & Syphilis occurred in one & the same Subject.

I tried hard to obtain the consent of my patient in the matter of a photograph: but, as stated, could not obtain his consent.

Cases II & III do not call for special comment, as for the most part they resemble in their course & result, other instances of a similar nature which have from time to time been recorded in various magazines & learned Societies' reports.

D Nathan Raw recorded a case of Ichthyosis in an Epileptic Idiot, where Lipomata occurred as a complication; but the general facts observed, and the result were very similar

Journal of Mental Science
1897 p. 833

to those

to those recorded by myself in Case I. There was transient mental betterment; as well as cutaneous improvement, but the original symptoms tended to recur even after tolerance had seemingly been established.

Case IV was one of Myxedema. This is hardly the place to recapitulate the views of early writers on the subject: nor yet to write up the researches of others whose works & opinions are now established: - suffice it to state that the treatment of this disease by rational methods i.e. by Thy. has & tract had been very well known to me for several years before I was able to apply it - for lack of opportunity.

Mrs Yum first consulted me on November 20 - 1899. She was then a typical example of the disease, which had been diagnosed in the first instance at St Thomas' Hospital. The following notes are from my diary.

married

married: at 40: has had one child which died six years ago: menstrual periods regular, but has "seen very little lately". She finds difficulty - not only in collecting her thoughts but also in uttering or expressing them, her speech being laboured & rather ataxic; somewhat resembling that of a General Paralytic, but without corroborative signs of that disease: there being no facial tremors, actual mental confusion, irregularities of the pupils, syncopal attacks (history of) nor delusions either of grandeur or melancholia.

Mental depression there certainly is, but the cause is reasonable, being attributable to a recent great & irreparable financial loss.

Height. 5ft. 8." weight 15st. 8lbs.
 Patient complains of neuralgic pains in the neck & has recently had to keep enlarging her collar. In fact the dimensions of her clothes generally have had to be increased. She has some difficulty

in swallowing

in swallowing. Hair is dry but fairly abundant. Has been "going down the hill" for the past six or eight months.

Facial expression is mildly vacuous & there is a general puffiness of the eyelids & lips, which however are not soft, nor suggestive of fluid. The Body is bulky - as the weight would denote: but there is no pitting on pressure, as in Anasarca.

The Ears have a tendency to pul. The Nose is blunt, cold & dusky. red, as are also the malar eminences. The forehead is dry, cold, & faintly yellow. The hands are flabby, but hardly to be described as being - club-like, or spade-shaped. The nails are brittle & the skin on the carpal dorsum is puckered. Axillary temp^o is $97^{\circ}7$. Pulse 72. Urine was practically normal: though I had anticipated otherwise. I took much trouble in the process applying the tests especially for albumen with every care. Prescribed Extr. Thyroid gr. V, twice daily. 29 Nov

29 Nov^r Patient seems to look brighter already + not so bulky - weight however has not been taken - She states that she does not feel the Cold so much - thinks "that her mind is clearing"; but that she still stumbles over her words, and feels listless. Utterance is clear + skin moist. Neuralgia pains not so severe. Temp° 97.8. P. 84.

Dose increased to gr V - ter. d. s.

Dec 10. Looks very much better + admits as much herself. Facial expression is more intelligent speech decidedly improved. Has passed several large quantities of urine: a sample of which however is practically normal. Skin on forehead, ears + fingers much more supple: + she thinks that she has perspired. Neuralgia has disappeared. Temp 98.2. Pulse 84.

Bowels open, but has had to use a Sedative powder. Extr^t as before

Dec 17 She is distinctly better. Weight 14 st. 9 lb. i.e. has decreased by 13 lbs. in four weeks. Perspires readily + complains of an

uncomfortable feeling in head + lower limbs. T° 99°. Puls. 100.

Prescribed a mixture containing
℞ Nuc. Vom ℞ Lig. Am Acet.

Dec 21 weight 14st. 4lb^s. She feels a little shaky. Face is thinner + expression much more natural. 'Menses' are present so urine not examined. B.O. Voice natural + demeanour more suggestive of hopefulness + activity. T° 98.6. P. 96.

℞ Ext. Amyr. gr V 4 times daily.

Jan 15. 1900 Appearance much altered for the better. weight 14st. Skin moist + supple - slight scurf in scalp - nose still dusky-red. Can now do a little housework, but is easily tired + feels 'short of breath'. Tabs. gr V ter. die s.

Feb 14. 1900. Patient states that she is "quite her old self". P 96. T° 98.8° F. She still looks puffy in the face + her ankles are oedematous. though not pitting on pressure. weight 13st. 8 lbs. Tabs. gr V bis die + concurrent dosage of Zi Fello's Syrup.

Mar 20. Has still got malar + nasal flush. Subjective sensations

are those

are those of her usual health.
 height 13 st. 9 lbs. Feels quite-
 energetic + wishes to go out of
 town for a month or two. Ad-
 vised one tablet daily

Aug 30. 1900. Has returned reports
 that she has obeyed orders + feels
 very much better, same for occa-
 sional attacks of depression. ^{got daily.}

Nov 20. Feels worse. Weight 14 st. 2 lbs.
 Have recommended Fellow's Syrup
 + 2 tablets instead of one: daily.

Dec 3. She is much improved - +
 have suggested that she should use
 her own discretion, as to dosage,
 judging by sensations + reference
 to weighing - machine

Jan 20 = 1901. Reports progress.
 Looks very much better - has
 only been taking one tablet a day
 weighs 13 st. 6 lbs, her normal standard.
 Has promised to see me in a
 month or two.

In reviewing the above case
 I cannot but regard it with satis-
 faction, a feeling which must
 have come to many before me,
 under similar circumstances.

I can claim

I can claim no originality in my method, but rest quite contented with the result of my treatment + with the fact that a problem which a dozen years ago was only dreamt of is now an established fact and one to the efficacy of which I can subscribe

It is the only case of Myopia which I have met with in general practice + is all the more interesting when one considers the onset, + probable causation - domestic affliction. Patient not only tolerated the treatment, but rapidly improved under its benign influence, + in consequence, I have every reason to anticipate that by allowing herself to remain more or less under observation + occasional treatment, her case may eventually be classed among the Recoveries.

Exophthalmic Goitre

Case VI is that of Miss Susan M. aged 40 who first came under my notice as a parochial patient in May 1900. She had been under

Exophthalmic Goitre

treatment

treatment for many years - six, to be exact - principally at Guy's Hospital - for Graves Disease & at one time the question of operation for removal of the left lobe of the Thyroid gland had been under consideration - but had been abandoned owing to the "weak state" of her heart. For the past four years had not been ~~able~~ to do any work - she was a domestic servant up till then - owing to 'fainting-fits' & 'anemia'.

My notes on the case are unfortunately scanty, but condensed, amount to the following.

In May I prescribed a course of Iodide of Mercury (Aere. nic). She had previously undergone more than one course of Iodide of Potash with Mus Vomica. She persevered for six weeks. I then suggested that she should paint her neck with R. Iodi but this produced no benefit. Her subjective sensations were all along unpleasant. The pulse was jerky & rapid - never

under

41

under 100 per minute. Expression
always anxious. Anemia by
no means marked. Thyroid
enlargement most noticeable on
left side - stated to have been
increasing for the past four years.

Palpitation at times so distressing
as to produce fear of impending
death - as in Angina Pectoris.

June 1900. Family history. Patient's father
died of a kick from a horse, but
her mother had suffered from
heart-disease from her youth & had
succumbed at middle-age.

Two brothers are alive but one died
in a lunatic asylum.

July 17. '00 Prescribed a mixture
containing \mathcal{R} . Strophantli et \mathcal{K} Nucis
Vom. aa in \mathcal{V} : Ferri et Ammon. Citr \mathcal{S} \mathcal{X}
℥j Chloro ad \mathcal{S} ss - to die. sum.
- also Thyroid Tablets - 1 a day
to begin with.

Aug 1st = No appreciable difference.
- - - Patient was erratic
& did not reappear until Dec 28th
when thyroid treatment was
resumed: + dosage increased to
gr $\bar{\mathcal{X}}$ Extract daily.

Aug 4. '01

Jan'y 4th '01. Feels decidedly better

42

11th — 18th — 25: still better.

Feb. 8. Complains of some distress
& palpitation. Mixture as before
& thyroid treatment suspended.

Feb 22. Has asked for 'tablets'
as she thinks "that after all she
felt better when taking them
than now." Gr^o V bis die. Stim-
ulating mixture also given.

Mar 22. Thyroid enlargement undi-
minished, but pulse though
rapid (108) is softer & more
steady in character. Patient
states that she passes much
more water than usual. Looks
much less anxious.

— Still under treatment. Mar 31. 1901.

Case VII. is that of Mrs R. — son, who
came to me in the early part
of 1896: suffering from Psoriasis.
Unfortunately I have mislaid
my notes on her case. I can
only state from memory that
she was very stout — and that
she tolerated Thyroid Treatment
very indifferently. She developed

Psoriasis
with obesity

in a short

in a short time tremors & became troubled with vertiginous attacks. I well recollect that, although the Psoriasis was unaffected, she lost over 14 lbs weight in less than a month, for which she expressed gratitude.

I did not persist with the treatment as I did not feel justified in making the cure worse than the complaint.

The foregoing cases, then, represent the total of my personal experiences in applying Thyroid Treatment. No V - that of Mrs Y - (Myxedema) proved to be almost an unqualified success; but the history of her W - Case of Ichthyosis though perhaps not the most instructive is to my mind the most interesting with which I have dealt.

It will now be my endeavor to epitomise our general knowledge of the Function of the Thyroid Gland.

This organ which in man is a lobed ductless but at the same time a true secretory gland, is probably hypoblastic in origin.

It is relatively much larger in the fetus than in the adult, being in ratio about four times larger in the former than in the latter. In the embryo it is excretory in the full sense, as a small duct, the Thyreo. Glossoal, has been demonstrated.

This canal communicated directly with the dorsum of the tongue, but later on occluded, its use apparently having been dispensed with. The late Dr Kautzack made exhaustive researches on the subject & concluded, as we may well do, that although in the adult the thyroid gland is ductless, though secretory, in the embryo it has been not only secretory but excretory also. On section, a glairy viscous substance exudes, to which the name 'Colloid' has been given. In the live state this material can leave the gland

Journ. Anat & Physiol V. XXV. p 15

only

only by means of capillaries (venous) + lymphatics. Baber in his Researches on the minute Structure of the Thyroid gland demonstrated that "this viscid material is morphologically identical with the normal constituent of the vesicle." In other words, Colloid is secreted by vesicles or follicles, which are lined by cubical epithelium (or endothelium?), there being two types of cell, the Chief + the Colloid. These are for the most part distinguishable by their size, shape, + staining reaction, the latter being smaller + more amenable to reagents.

1881
Part. III
Philosoph. Trans

In concluding the Broadshaw Lec. line of 1893, Professor Greenfield says: - It seems probable that "the skin, mucous membrane of the alimentary tract - possibly the kidneys, are the organs of its excretion."

Brit. Med. Jour. Vol. ij p. 1267

Vassale of Modena, Generali described Parathyroid diverticula in monkeys + proved their high importance, for they were able to

Rivista di Patologia Nervosa e Mentale 1896 (March + July)

show that death soon followed their removal. More recently, Dr Murray demonstrated that where these Parathyroids were not totally obliterated, a condition resembling true myxoedema as it occurs in the genus Homo, resulted in the monkey: & that a rabbit, so treated, would live & even procreate. He also corroborated Vassale's evidence that when the Parathyroids were totally enucleated, death soon followed.

Goulstonian
Lecture. Lancet
Mar 11 1899.

The Innervation is from middle + inferior sympathetic ganglia - a fact of very great importance

Composition of Colloid substance.

Dr William Carpenter in his "Principles of Human Physiology" quoting from the analyses of one Dr Beale, stated that the fluid albuminoid plasma (of the Thyroid gland) "does not contain true albumen in solution but some albuminous compounds, the nature of which is unknown." For over forty years the matter remained

Published
1853: p 466

practically

practically uninvestigated until
 Dr. Roos + Baumann separated
 a substance to which they gave
 the name Iodothyroxine. They
 discovered that in composition
 it was remarkably stable, a
 temp^o of boiling point + strong
 mineral acid not affecting
 it — thereby disposing of any idea
 that it might be a ferment.

Zeitschrift für
 Physiologie und
 Chemie: Apts
 1896

This substance was ascertained
 to be an Albuminoid, somewhat
 resembling a salt of Iodine, save
 that the base is Proteid + not
 metalloïd. It is naturally nitro-
 genous, containing in addition
 nearly 10% of Iodine + .5% of
 Phosphorus. Prior to this, Pro-
 fessor Nothke had formulated
 the idea that the active prin-
 ciple, so to speak, of "Colloid"
 was a proteid pure + simple
 + that it acted by itself.

Semaine médic.
 Apts 3. 1895

Fränkell disbelieved the
 theories of Dr. Baumann + Roos
 as to Iodothyroxine, + stated
 that Thyres. antitoxine was
 the active principle.

Therapeutische
 Monatschrift
 Juli 96.

Fränkell

For myself I should feel inclined to support the views of Ross & Baumann for Thyro-Iodin when introduced artificially into the system produces results practically similar to those found when Thyroid substance is given internally. In all probability it is the principal function of the gland to eliminate from the general circulation certain substances, but chiefly Iodin & to a smaller extent, Phosphorus - thereafter causing these inorganic elements to combine in an assimilable form, with a proteid, albuminous base.

The Action of Thyro-Iodin is dual, if not multiparous.

It is certainly eliminative, as witness its effect in a case of myxoedema & possibly Obesity.

Eliminative Action

That it is nutritive & stimulant is demonstrable by its action in Cretinism. Dr. Mur. Ray in his recently published work on the subject, illustrates

"Diseases of the Thyroid Gland Part. I

a case

a case with two photographs which showed abundantly, satisfy us on this point. These will be found opposite pp. 94 + 107 of his Manual & a good glance at them will prove more convincing than many written words, a knowledge of the context being of course assumed. Apropos, it seems truly wonderful that Nature can be set in motion after having lain dormant for many years in the person of a sufferer from this disease.

The mental as well as the physical, processes have, *pari passu*, been proved to have been rejuvenated & stimulated.

Not only does the stunted dwarfish frame receive a new impetus but even the higher centres of the brain would appear, under the benign influence of the treatment, to try & make up for lost time.

Iodothyronin, then, seems to have a peculiar action on metabolism & nutrition.

a diabetic

Brit. Med. Jour.
Oct 10-1899

A diuretic action was noted by Harry Fenwick in a case of Myxoedema, which had been treated by hypodermic injection of Thyroid Juice with distilled water.

This action I have myself noted in Case VI - Miss M - Exophthalmic Goitre & Haig recorded a similar experience, but the manifestation is on the whole rare. These remarks however serve to prove the eliminative properties of the Thyroid substance & support the statement made by Prof Greenfield, that the kidneys were instrumental in its excretion.

Bull. Lond.
Sept 23. 99

vide p. 45. ib.

In animals where complete extirpation of the gland has been effected, toxic symptoms have supervened. These would seem to substantiate Fränkel's view that a Thyres. antitoxine was the active principle developed in Colloid; but in all probability these symptoms have been similar to those occurring in Uremia & it is possible

Victor Horsley
loc. cit.

that

that the non-elimination of the Phosphorus present in the form of toxic Pentoxide is the cause of this effect. This product would act especially through the nervous system - probably through the cervical ganglia of the Sympathetic Plexus.

Quite recently I had to perform a post-mortem examination on an infant a few days old where the apparent cause of death was Trismus. There was almost complete absence of the Thyroid gland, and I take this opportunity of placing the circumstance, which after all may have only been a co-incidence, on record.

Dr Edmunds shewed that one may with impunity remove as much as three fourths of the original gland in a dog, & still find compensation. As a result however of thus tampering with nature, structural changes occur both in the alveoli & the gland cells proper,

Journal of Pathology. Vol 3. 96

the cubical



the cubical shape of the latter being replaced by a rather columnar type of cell. The Colloid alters in consistence though it has still, I take it, to be proved that its chemical constitution is affected. Roos found that in normal animals, the output of nitrogen, chloride of Sodium & Phosphorus Pentoxide was increased by doses of the gland.

loc. cit

In animals however, where the gland had been enucleated while the excretion of Nitrogen & NaCl is greater, that of Phosphorus Pentoxide was less by 50%; & on giving doses of extract to these abnormal animals the excretion of PO_5 became greatly increased.

Referring back to the experiments of Baumann & Roos, Iodothyrim, as stated before, in its action produced results practically similar to, if not identical with, those found on giving the juice of the gland internally.

loc. cit

Horsley as a result of his early investigations formulated the idea that the function of the Thyroid gland was to control what in the old days, physicians would have described as the "mucinous humours." This theory would certainly seem to receive support when considering the myxoedematous dyscrasia. For in the disease, associated with this condition, where as a consequence of fibrosis, an atrophic condition of the gland is the result, the mucinous elements of the body are enormously exaggerated or proliferated. A, to me, natural deduction, is that by ~~a process~~ the same when we may argue that in the normal state, where there is neither atrophy of the gland nor excess of Mucin in the organism, an important function for the maintenance of equilibrium can be claimed for the Thyroid gland.

Against this inference however, one might urge the fact that

in Cretinism

in Cretinism, where the congenital symptoms for the most part are very similar to those occurring in myxoedema, a disease of mid. life, there is no mucinous excess. If I might hazard the suggestion, the explanation is to be found in the fact that in the latter case, the thyroid gland has fulfilled its normal function (until late in life), whereas in the former it has never acted at all. As in a certain abstract condition which I need hardly specify, with a little alteration of terminology, we may assume for the thyroid gland, that it were better to have functioned + ceased so to do than never to have done so at all: for though the Cretin's Condition, thanks to Thyroid Treatment, is partially ameliorable the sufferer from myxoedema is, by the same means, practically entirely curable. In the former the vicarious extract or its derivative Thyro-Iodin acts

as a stimulant + nutrient + in the latter as a stimulant + eliminant. In both instances it is stimulant. I am not prepared to say whether it acts directly on the heat centre in the Medulla, but one thing is certain + that is - metabolism is profoundly affected or controlled by it.

Temperature is almost invariably raised + a glance at a chart bearing on a case under treatment requires little verbal amplification. When pushed, or where specially ~~in~~ idiosyncrasy exists a condition of Thyroidism is induced the principal phenomena being tremors, nuchal pain, cephalalgia, a weak or rapid pulse with a tendency to syncope, emaciation + malaise. Between the uncomfortable tremors such as these described by my patient (Case IV) + a profound nerve-storm is only a question of degree after all. Professor Stabel, a German authority, noted that in a case of Obesity which

Lancet. Mar. 28-'96

he had been treating with moderate enough doses of Thyroid Extract, Mania supervened.

It would naturally occur to one interested in the subject that there should be a certain similarity in action between Iodo-Thyrim & such a drug for instance as Iodide of Potash. They both contain the elemental Iodic base, & act very similarly under many identical circumstances - yet the latter cannot be regarded as a satisfactory substitute for the former in treating not only diseases where the gland is primarily at fault, as for example in Cretinism or in Myxedema, but also in certain other conditions such as Psoriasis or Ichthyosis, which have no apparent connection with the gland. A comparison may not be devoid of interest.

In Iodism there is mental depression & diminution of muscular energy - not in all cases, of course, but comparatively frequently.

In Thyroidism similar symptoms are not unusual.

In the former much mucous irritation is occasionally observed. in the latter case - not so much so. On the skin. In Acute Iodism we may look for erythema, papulous rashes etc; & Dr Duffey described a case where purpura supervened. Dr Fox noted "a quasi-bullous disease," very much resembling in its character the condition described by myself in Case IV., where perhaps it will be remembered the Thyroid treatment was profoundly searching in its action.

Bluf. 1880
Vol. I. p 626

Quain's Dict.
Med. 1890 p. 769
v. p 24. ante.

On the Nutritive & glandular systems they act again somewhat similarly, for when both are typically acute, we may find emaciation, nervous palpitation, malaise, insomnia & more rarely diuresis.

where they begin to diverge is difficult & probably impossible to say. In a broad sense, Iodide of Potash is practically non-beneficial in Cretinism

or Myxedema, whereas Thyroid Extract is as nearly as possible a specific remedy.

Several of my patients - viz. Cases II + IV (Ichthyosis) + Case VI, Grave's Disease, had at one time or another been under the influence of Pot. Iod: without any benefit, whereas under a 'Thyroid' course, they had improved, if only for a time.

The only logical conclusion I can arrive at, is that Thyro. iodine acts where Iodide of Potash fails, by reason of its Protein element: whereby it is more soluble or assimilable in constitution.

Some months ago it occurred to me that in connection with the foregoing, I should investigate the apparent causation of Endemic Cretinism. I had already in my own mind formulated a suggestion, which will follow presently, when, as has doubtless frequently happened to others, I discovered in the course of my reading,

that

Lancet
July 6. 1895

that

my theory had been forestalled.

In short, I found a mirror of my views in the Lancet, Dr Morris having suggested an answer to the till then unsolved question -

"Why is potable water a probable cause of Goitre + Cretinism in districts where these diseases are endemic?" I concur with

Dr Morris in thinking that 'lime or magnesium' which are abundant in the suspected water, being present in abnormal quantities prevent the assertion of Iodine.

In the former disease the degeneration is hypertrophic, while in the latter it is atrophic.

Both these diseases are very much more prevalent in districts remote from the sea, or salt-lakes. It is rational

to conceive that the lime + magnesium which are known to be abnormally abundant in Derbyshire, a well watered but inland county, where the bulk of recorded cases of Goitre + Cretinism exist - + which will serve as an example -



may

may form in the tissues an in-
soluble combination, which, entering
the Thyroid gland of the foetus
as ordinary plasma, prevents
the dialysation of 'Colloid'—which
for the sake of argument we
may allow to contain Iodine.

Iodide of Potash as I have
indicated, though it has been
tried again & again, has failed
to cure either of the conditions
referred to. One consideration
being taken with another, I should
feel inclined to urge that a
still more soluble or assimilable
form of Iodine is necessary—
+ this can only be obtained
from the healthy gland—or its
prepared extract.

I am not aware whether
the lower animals in districts
where Thyroid Disease is endemic
are similarly affected as is
the genus 'homo'; + I regret that
I can find no literature on the
subject. The following conclu-
sions may, in this connection,
be rationally assumed:

[That where

I That where drinking-water is concerned with the causation of Atthyroidism or with the symptoms of Thyroid Disease, no assimilable, & probably no soluble secretion finds its way from the Thyroid gland into the circulation.

II. That Iodide of Potash is possibly quite soluble but probably not assimilable &

III that Thyroid gland juice, or Iodo-Thyrim its derivative, is not only soluble and assimilable but also acts when introduced into the system whether by hypodermic injection or by the mouth & alimentary tract i.e. vicariously, as would the normal secretion of the healthy gland

Again; looking at the apparent function of the gland, what light can be thrown on the question of selective properties - if any - of Thyroid substance in connection with diseases of the skin.

In myx edema

In Myxedema, where the subdermal layers are very profoundly affected (the mucinous infiltration having multiplied them fiftyfold) the true epidermis atrophies - The hair + Nails suffer similarly. Where true or normal thyroid secretion does not enter the circulation, in this disease at least, the superficies proper are selected as the dumping ground for the mucinous refuse. The surfaces or capsules of the various internal organs are not primarily affected, although in advanced cases they may form part of the final Anasarca.

In Ichthyosis, an intercurrent disorder, the appearance of which reminds me more of the Saurian than of the fish, + which is in all probability hereditary, one can almost see, + that without an abnormal imagination, an apparent or quasi-arrested development of the skin: - at least, so it has occurred to me. This fancy is all the more borne

in on me when I recall the condition of the embryonic gland.

In the early fetal days, the liquor amnii which laves the skin, contains the excretion which has passed through the Thyroglossal Duct. At this stage of development it will be remembered that the gland is relatively a large organ. There is perfect continuity between the any acinus of that body through this duct & by means of the buccal orifice right on to the superficies proper.

As whatever changes occur do so in early uterine life, an enormous difficulty naturally presents itself in one's mind. Your to determine what their purposes and nature are.

The thyroglossal duct occludes, as has been demonstrated & its original orifice persists as the Foramen Cecum, but the reason of this metamorphosis, pure yet anything but simple, seems destined until

the occasion

the occasion not only 'sit' but 'rest', to remain one of Nature's secrets. I can only throw out the suggestion that in this embryonic connection between the epiblastic skin & the secretory surfaces of the Thyroid-glandular acini, lies the key which will open the hitherto locked door of yet another of Her crypts.

It would be idle, however, pleasing, to speculate, without more definite data, in so uncertain a matter. For the present, I take it, we must content ourselves with the reflection that despite our having not actually grasped the substance, the shadow in its application has proved beneficial to mankind: that although we cannot say when the Thyroid gland has altered its proportions to the human body, in the early fetus as compared with adult man, its supplementary use by artificial methods in cases such as I have recorded, has

been attended

been attended by results often palliative, sometimes remedial & curative, and lastly, always intractive.

For the present I must content myself with the belief that the Thyroid gland is indefinitely active in the embryo; & that mucin which is abundantly found even in the connective tissue of the fetus - infinitely more so than in the adult - at this stage undergoes no necessary morphological changes but that this elemental tissue, the matured gland being brought into play, is thereby rendered otherwise fit for physiological & economic purposes.

Geo: Manual of Physiology p 43

An Estimate of the Value of Thyroid Treatment in General Practice.

Of its value in Myxoedema there is now no question. I trust that my case No V will have abundantly proved as much. Since the days of Victor Horsley's

In Myxoedema.

Prattin

grafting experiments⁽¹⁾ many suc-
cessive observers have added
their quota to his monumental classic.

66
B. M. J. 1890
Vol. 1. p. 287
Vol. 4. p. 201

The modern modification is a
rational treatment if ever there
was one, & must rank with Cocain
& Antipyrin, each in their own
separate sphere, as the three
greatest therapeutic discoveries
of recent years. In utility
it is facile princeps among
the 'animal-extracts'.

In Sporadic Cretinism⁽²⁾
& cachexia developed from
destruction or extirpation of the
gland⁽³⁾ results so striking have
occurred that the success atten-
dant on the treatment of these
conditions must compare very
favourably with ~~the~~ ^{its} value of
the treatment in hypoadema,
where as I have endeavoured
to indicate its remedial ac-
tion is practically a specific.
As I have already touched on
its stimulant & rejuvenating
properties, I need scarcely
dilate further on the subject.

(2)
Bramwell Blk J.
Jan 6 - 1894

3 Angere
Münch. Med. Woch.
July 10 - 1894
Maragliano
-Gazeta degli
Ospedali Oct 20
1894

Wharney Blk J
June 21 1894

Murray loc. cit

The results

The results of its administration
in cases of endemic goitre¹⁾ tend
to demonstrate that benefit may
be expected of it— especially
in young people with recent
thyroid enlargement.

63

Mikulicz
April 22. 95
Berlin Klin. Woch.
Schrift.
Marie - Sennine
Méd. Nov 13. 95

In case VI. Grave's disease,
where there was no exophthalmos,
& a not very marked enlarge-
ment of the gland - the left lobe
was more noticeably affected -
some benefit did attend its
use -; but evidence on the
matter is conflicting. Professor
Greenfield² very much doubted
its value & aided in supporting
this antagonistic view recorded
a case where "symptoms of
thyroidism were aggravated by
thyroid treatment." In my
case, that of Miss M., all I
can state is that her subjective
sensations were of a more plea-
surable character while under
its influence than when she
was without 'her tablets'.
Dr Cunningham's experience was similar.

² Bk. J.
9 Dec 1893

Bk. J. 1894
July 7th

Cunningham
New York Med. Rec.
May 15 95

Jerusalem Bul.
Oct 20-94

of its

Of its value or otherwise in certain forms of Insanity I have some passing knowledge & I tried it in several cases of simple Mania (chronic) & dementia, but as I left Asylum work shortly after commencing my experiments my observations were not such as to warrant their serious publication.

In the Journal of Mental Science are sundry tables of "Recoveries following Hydrop Treatment in Mental Cases". These were compiled by Dr Farquharson, Legg & May & to put matters briefly, they observed that out of 58 Cases so treated, there were 17 permanently successful results. Some months after, in the same journal Dr Cross recorded the result of a series of 20 cases but he could only point to one successful sequel. There seems to be a great disparity between the findings of these gentlemen. All I can say is that had the hopes of the former

1897
No. 654-661

Gentlemen

gentlemen been confirmed by general subsequent observation, the 'Returns' of the Lunacy Registrar would read differently from what they do at present. In my first case where Ichthyosis was the primary affection (to which the treatment was being given, but where General Paralysis was present there was a slight improvement in the mental symptoms, but these were only transient.

In the insanity associated with myxodema & cretinism, mental symptoms clear up concurrently with the disappearance of the other pathological conditions. Speaking generally, I fear that no great hopes may be expected of the treatment in ~~the~~ mental conditions not associated with a thyroid abnormality: - for though it is partly stimulant & trophic, its action in many respects resembles that of alcohol save that it is more slowly induced & still more slowly eliminated.

Brno.
 Jour. Ment. Sci.
 1895 p 80.

In Chronic Skin Diseases, it has a faintly selective action. I have quoted four instances which came under my personal observation, of Ichthyosis. Many other records there now are, but I take it that I am right when I state that its ^{action} ~~value~~ is but transient & palliative.

In Psoriasis it has been frequently tried & with very various results. Hartley following the lead of Dr. Byron Braumell recorded a case which he claimed to have cured: & the latter authority - at the Annual Meeting of the B. Med. Assocⁿ at Newcastle in 93 - shewed three cases where the results were exceptionally good. I found Jones however records a case where the Psoriasis, thus treated, was anything but cured - far from it. The disease spread to the patient developed cardiac troubles & lost so much flesh that he was enormously emaciated.

In my opinion, as the result

Thibridge. 1895
 Sem. Med. Aug 17
 Wilson Bluff
 Feb 16 '96
 Sarahin. "Vratch"
 1896 No XXV & XXVI
 Hartley Bluff
 Sep 30 1893
 Braumell
 Bluff. Oct 28
 1893

Bluff. Dec 30. 93

of past experience, one can fairly soon discover if there is an idiosyncrasy in which event the less the treatment be pushed or the sooner it be withdrawn the better for the judgment of the physician & the welfare of the patient.

Of its value in Syphilis, I am in a state of doubt. Dr Meuzies recorded four cases, where the symptoms were acute & in which he gave the treatment a fair trial. He concluded by saying - "I am inclined to regard the remedy as a powerful skin tonic & adjuvant to the mercurial salt. A true treatment of Syphilitis."

Brit. Med. Jour
July 7 1894

It will be remembered, on referring to my case No IV in which Syphilis in an early secondary stage was associated with Ichthyosis, that a quasi-bullous state which I assume to have been a true Pemphigus, appeared soon after the patient commenced full treatment. What is a rare tertiary symptom

was seen

would seem to have been induced, while my patient was still in a very early stage of the disease. The conditions however were so complex that any definite conclusion would be unwarrantable but at the same time I was so struck with the idea, expressed in my notes on the case, that I shall certainly make further trial of the treatment in Syphilis, where obstinate complications may be present.

p 31. ante.

Its effects in Eczema & Lupus are fairly favourably mentioned - but I have not tried the treatment in these diseases.

Barclay, B.M.J.
Oct 24. '96
Bramwell.
B.M.J. Apr. 14. '94
Hanson Bluff
Mar. 21. '96

Scatchard recorded a case of Eczema complicated with Pityriasis Rubra, in which the latter condition improved but the former was not affected

Bluff. Mar 30 1895.

Byron Bramwell recorded a very interesting & instructive case where Tetany which had followed Thyroidectomy was cured

Brit med Jour
June 1. 1895

by

by Thyroid Extract. I have already alluded to a case of Trismus in which there was almost complete absence of the thyroid gland. It occurred in the case of an infant whose somewhat sudden death became the subject of a coroner's inquest. The deficiency of the gland + the presence of the tetanic condition may have only been coincidental as I have stated elsewhere; but the fact was noteworthy.

Hugh Beevor mentions a case of general Alopecia which was very much benefited by its use, but Mackenzie doubted its efficacy.

B.M. Journal
July 13 - '95

B.M. J.
July 20 - '95

Peromegaly has been similarly treated, but 'improvement' was the best result mentioned.

Lancet. Vii
1896 p. 614

Its metabolic stimulant action are noticeable in treating Obesity but my experiences in Case VII quite convinced me that the distress to the patient

was

was likely to be greater from the treatment than the discomfort of the infirmity itself. To produce any benefit - which would probably be only temporary - the remedy would have to be pushed & in such patients, who generally have weak hearts - this would entail unnecessary danger.

MacKenzie. 1874
 B.M.J. July 21

In all cases there is more or less tendency to relapse. I found this especially so in my 'Ichthyosis' patients. To borrow a metaphor, we might in such cases compare the extract with the Silver Nitrate film of the photographer, who having exposed his plate, develops the presentment which he subsequently fixes, practically for ever, by the agency of Soda Hyposulphite. In the case of thyroid treatment, up till now, we lack the power of fixing or rendering permanent the good results which have so often appeared, only to fade.

To Sum up, in Conclusion, an Esti-
 mate of its value in General
 practice I venture to express
 the opinion that it is com-
 mendable in Myxoedema, Cretinism
 & Cachexia the result of destruc-
 tion of the gland - whether by
 injury (operation) or not: but that
 its value is doubtful in diseases
 not immediately connected with
 the identity of that organ -
 such as Lupus, Eczema, Psoria-
 sis, & Ichthyosis among Skin-
 affections, general Mental dis-
 orders, & in Obesity: - and
 lastly in Exophthalmic Goitre
 or any other condition where
 intolerance is demonstrated to
 exist even early in the course
 of treatment of the most cau-
 tiously handled case.