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Thesis
On the Therapeutical value of Mineral
Springs with especial reference to the
Chalybeate and Thermal Baths at
Caledon,
South Africa.

by
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The value of a medicinal agent depends on:—

A.

Its capability of counteracting the pathological changes present

B.

Its power of restoring the organs and tissues to their normal condition.

C.

Its containing the therapeutical agents indicated by the case.

D.

The presentation of these agents in a readily assimilable form.

E.

The normal and hygienic influences exerted on the patient, which increase the value of the therapeutical agent.

These conditions appear to be fulfilled by mineral springs and their value is increased, when situated in a climate and amidst surroundings which take the patient's thoughts away from himself and his ailments.

Mineral Waters may conveniently be classified into:—

I Ferruginous { astringent-
non astringent

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2. Aperient saline $\left\{ \begin{array}{l} \text{Sodium Sulphate in excess} \\ \text{Magnesium sulphate in excess} \end{array} \right.$
3. Acidulous saline.
4. Alkaline.
5. Thermal.
6. Sulphuretted.

In this Thesis it is desired to draw attention to the Thermal and Ferruginous Springs of Caledon and to give some cases which have been treated at Caledon.

The springs at Caledon are seven in number and yield about one hundred and eighty thousand gallons (180,000) per diem at a constant temperature of 120° Fah.

Their value as therapeutical agents has been known for over two hundred years (200) (Valentyn, Dordrecht: 1724) the natives used the waters in cutaneous, rheumatic and pulmonary affections with good results.

Vallaut in 1750 advocated the use of these waters and after 1806 the Dutch and English East-India Companies sent their invalided officers to take the waters at Caledon.

The waters contain about 12.2 grains per gallon.

gallon of which 2.5 grains are Ferrous Carbonate.

1.054 Magnesium sulphate and .862 grains sodium sulphate and the waters are highly charged with Carbonic acid gas. There is no more active form of iron than Ferrous Carbonate (Weimeyer) and Cervello states "that there is no object to be gained in administering organic compounds of iron" (B. ch. J. Ep. 273. 1897)

The Caledon springs contain more Ferrous Carbonate and have a higher and more uniform temperature than any other Ferruginous Springs (von Zimmerns Balneo-therapeutics)

Thermo-therapeutics shows "that the effects of hot water in the form of a bath, applied for a brief period, causes a diminution in the temperature of the body, by dilating the cutaneous capillaries and thus favouring heat-radiation, at the same time retarding heat-pro-duction by diminishing oxidation."

On the other hand a longer application of heat raises the temperature of the body, not only by checking the normal radiation of heat, but also by adding to the surface of the body, a higher temperature.

Therefore we can at will, decrease or increase the temperature of the body by a warm bath, by the length of time to which the patient is exposed to it.

"Cold refreshes by stimulating the functions, heat by physically facilitating them, and in this lies the important difference between the cold water system and the thermal method

method of treatment."

In rheumatic and gouty patients the after effects are very valuable, free and copious perspiration may be produced by a prolonged hot bath, followed by placing the patient in bed, wrapped up in flannel blankets and allowed to perspire freely for a period, thus relieving his circulation (by the skin) of morbid and effete products.

We can produce either a sedative or a stimulating effect on the patient by warm baths; the stimulating effect is the result of Reflex Stimuli from the peripheral nerve endings; in the case of the weak and feeble, supplying heat, adding to the vital powers, improving the circulation and reflexly through the nervous system, improving the tone of the muscles and internal organs.

The sedative action of the bath is best produced by a lower temperature, between 85° and 95° Fah.

care should be taken to avoid any vigorous reaction; the patient should be allowed to cool gradually under a blanket.

Gouty patients should especially be enjoined to stay sufficiently long in the water to produce diaphoresis.

The Caledon mineral waters contain a large quantity of Carbonate of Iron and salts, which correct any slight constipating effects of the iron and promote its assimilation.

In addition the water contains a large quantity of free carbonic acid gas, which makes it useful externally in chronic gout and rheumatism.

"Carbonic acid gas is an excitant to the skin, producing tingling, redness, a sensation of warmth and increasing diaphoresis; but after a time the gas acts in some measure as an anaesthetic lessening the sensibility of the skin and removing or diminishing pain.

Carbonic acid water is useful in painful and irritable conditions of the stomach, easing pain and checking vomiting" (Ringer)

In persistent cases of anaemia the free dilution of the iron is of the greatest importance and this can be best obtained at a chalybeate spring (Fothergill)

The advantages of the Mineral Waters of Caledon may be thus stated:—

1. They are non-astringent and non-irritating.
2. Their free dilution promotes absorption.
3. Presence of carbonic acid gas acts as a sedative to the gastric mucous membrane and a stimulant to the skin.
4. They contain saline constituents.
5. High temperature, 120° Fah.

The waters drunk freely from the springs cause a rise and acceleration of the pulse, increase the temperature of the body and excite the secretions increasing the appetite; When used as a bath, there is a grateful sensation of warmth, the pulse is increased in frequency, the temperature of the body raised, the flow of urine is increased and the skin acts freely, but there is no depression or languor, which often follows the use of ordinary warm baths.

Patients suffering from rheumatism or other painful affections are at once relieved and the steam from the water, especially if inhaled, when using the needle bath, is very beneficial in chronic bronchial and laryngeal diseases.

The chief morbid conditions in which the Caledon waters are good for are:—

- I Anaemia, chlorosis, and convalescence from acute diseases.
- II. Chronic rheumatic affections.
- III Gout and rheumatic gout.
- IV Neurosis, neuralgia, chorea, neurasthenia &c &c &c.
- V Chronic diarrhoea.
- VI. Cutaneous affections.

VII. Hepatic diseases.

VIII. Chronic respiratory troubles.

IX. Gout.

The statement of Prousscau "that whatever may be said of them, mineral waters are not simple medicaments and whatever may be the predominant-mineralising agent, as demonstrated by analysis, it acts not alone.

Nature in combining with more or less notable elements, which Chemistry may isolate and other exceedingly variable ingredients and principles which have not yet been discovered, has done for the mineralising agent, that which we seek to imitate, each day in our prescriptions, when we endeavour to re-enforce or diminish the effects of medical substances by associating others with it.

In making due allowance always for the particular phenomena which may result from the action of such and such elements, that may enter into the composition of a mineral water, we should not attribute to a single principle - however dominant it appears in the chemical analysis, all the properties of the waters, as chemical experience can only permit us to judge."

gouty patients especially those suffering from Lumbago, and other forms of muscular rheumatism are relieved

a few minutes after entering the Caledon water, and by a systematic course of baths are permanently cured.

The internal use of the waters is also invaluable on account of the anaemia and general weakness which is almost the inseparable accompaniment of chronic rheumatism, especially in the state of dilution in which the salts of the waters are found.

Dr. Fuller speaking of chronic rheumatism says:-

"There cannot be a doubt that free dilution, exercises a most important influence on the action of almost all the remedies which prove useful in this class of disorders and that a dose which would excite nausea and irritation of the stomach when taken in a concentrated form, is often productive of excellent results, when aided in its action by water.

Hence probably the wonderful efficacy of the natural mineral waters and hence, also the superior effects which often ensue after taking the weak infusion of teas which are the favourite remedies of the poor and the nostrum of the so-called herbalists. I am firmly convinced that our medicines frequently fail in their operation for lack of sufficient dilution."

The Climate of Caledon is all that can be desired. The air is free from dust and excessive damp; there is abundance of sunshine, without excessive heat, so that patients can spend their time in the open air.

A temperature without extremes, so that the body is not

exposed to the risk of great variations of heat and cold. There is an absence of violent very hot or very cold winds involving the elements of local shelter (Quai)

Cases.

Case I.

M. H. Dressmaker, living at Caledon, aged 21 years.

Date of examination . January 6th 1897.

Complaints:— complains of a sense of weight and oppression at the stomach, constipation, palpitation of the heart, scanty menses, listless and feeling of laziness and breathlessness.

Duration of illness — 4 months.

Family history — both parents alive, two brothers alive and healthy.

Habits. — Often disinclined to eat, works rather late with sewing machine, workroom stuffy.

Previous illnesses: had typhoid fever two years ago and troublesome cough.

Present illness, gradual for the last four months the stomach troubled her a good deal, latterly she noticed breathlessness and palpitation on the slightest exertion; never quite strong since the attack of typhoid fever.

State on admission:— Height—normal; fairly well developed; expression wistful; pale, face

Face somewhat puffed; conjunctivae pale, skin pale and cold; ears waxy look; slight oedema of ankles. Temperature normal.

Alimentary system

Lips pale; teeth rather bad; gums bloodless, pale; breath tainted, tongue somewhat flabby and indented, appetite bad, during fasting does not feel desire for food, after eating has a sense of weight and oppression at the pit of the stomach, once or twice a slight feeling of pain after meals in the stomach and flatulence; bowels very costive, often has to take pills.

Haemopoietic system:

Blood: on the 10th January the blood was examined, the corpuscles were estimated by means of Gower's Haemocytometer and the haemoglobin by his haemoglobinometer, I will here state the conditions found before, during and at the end of the treatment.

<u>Date</u>	<u>Red Corpuscles.</u>	<u>Haemoglobin p.c</u>
Jan'y 10 th	3,500,000 300,000	34.
Feb'y 8 th	3,600,000	40.
March 6 th	4,900,000	74.

Circulatory system

Palpitation of heart, on auscultation, mitral systolic murmur in the pulmonary area, bruit de diable audible in the neck; pulse rapid.

Urinary system: - urine pale, copious, acid

Reproductive system:

Menstruation, scanty.

Treatment - will be considered at end of cases.

Condition on leaving as will be seen from the above estimation of the blood in march, the blood improve considerably, although not quite up to what is considered the normal standard, the patient felt better, her constipation was relieved, appetite was good, palpitation gone and she had a healthier colour.

Case II.

G. S. Schoolmistress on a farm; aged 19.

Date of examination January 15th 1897.

Complaints: complains of not having seen her changes for over a month, loss of appetite, costive, languid feeling.

Duration of illness about two and a half months.

Family history: good

Habits: - hard worked in connection with studying for teachers' examination, and remaining too long in badly ventilated school room; often has only two meals a day.

Previous illnesses: - had measles as a child.

Present illness: The second last period was very scanty and the last not appeared yet, nearly two months now; appetite has been very bad lately and is very costive, and feels tired

Present state: rather thin; face pale, skin yellowish.

conjunctivae, pale.

Temperature normal.

Alimentary system: teeth fairly good, gums somewhat pale, tongue slightly furred, appetite bad, no inclination for food after meals, bowels constipated.

Haemopoietic system:

Blood examined as in case No. I.

Date	Red corpuscles	Haemoglobin p.c
Jan'y. 15 th	4,200,000	48
Feb. 3 ^d	4,650,000	66
March 17 th	5,100,000.	78.

Circulatory system: bruit-de diable present.

Pulse: rapid.

Urinary system: urine pale, acid.

Reproductive system:

Menstruation scanty, absent seven weeks now.
treatment see later on

condition when last seen menstruation restored, and patient looks and feels better.

Case III.

J. S. Farmers daughter, aged 17.

Date of examination: - March 1st 1897.

Complaints: complains of scanty and irregular menstruations, constipation and atonic dyspepsia

Duration of illness three months.

Family history mother died of uterine disease, other relatives healthy.

Habits: is a great coffee drinker, imagines her bad digestion due to this habit.

Previous illnesses: had no severe illness that she remembers.

Present illness: has suffered from indigestion and constipation for some time, is somewhat irritable and often has a headache

Present state: is somewhat pale and thin, skin pale.

Alimentary system: lips thin and pale teeth bad, gums pale, breath foul, tongue large and flabby, thirsty, appetite bad; great distress after food with flatulence, bowels constipated

Haemopoietic system:

Blood examined as before

<u>Date</u>	<u>Red Corpuscles</u>	<u>Haemoglobin p.c.</u>
March 1 st	3,900,000	46
" 25 th	4,500,000	72
May 12 th	5,400,000	80.

Circulatory system:

Palpitation of the heart, pulse, small, rapid.

Urinary system urine pale acid.

Reproductive system

Menstruation scanty, normal

Condition when last seen. Has a healthy colour and menstruation normal

Case IV

A.B. aged 22, no occupation

Date of examination: June 3rd 1897.

Complaints: complains of breathlessness and palpitation and bad colour.

Duration of illness: 2 1/2 months.

Family history: good.

Habits: does a lot of sewing with the machine and eats a lot of sweets.

Previous illnesses: had measles and whooping cough and often troubled with the throat. (Tonsillitis)

Present illness: about two months ago she noticed her bad colour and she got breathless on walking a distance, got palpitation when she lay down on her left side, has been taking maltine for a fortnight.

Present condition: skin ~~and~~ conjunctivae pale,

Alimentary system: lips and gums pale teeth fairly good, tongue normal, appetite good, sometimes depraved, craving for sweets, bowels somewhat constive sometimes.

Haemopoietic system:

Blood examined:

Date	Red Corpuscles.	Haemoglobin p.c.
June 3 rd	3,500,000	42.
" 30 th	4,300,000	64.
Aug. 6 th	5,400,000	80.

Circulatory system

Palpitation of the heart, Haemic murmurs at apex and angle of left scapula.

Pulse. Full.

Reproductive system; menstruation scanty
Other systems normal.

Condition when last seen: colour good, no palpitation
or breathlessness present.

Case V.

et. 20. aged 20, no occupation.

Date of examination: May 1st 1897.

Complaints: Complaints of pain over the heart, palpitation
and breathlessness; headache, giddiness, leucorrhoea, cold feet.

Duration of illness: five months.

Family history: good.

Habits fairly regular.

Previous illnesses: About six months ago had a severe
attack of influenza.

Present illness: never felt well after the influenza
and suffered from palpitation, headache, and
giddiness; soon after the influenza and later on pain
over the heart and breathlessness and cold feet.

Present state: skin and conjunctivae pale.

Alimentary system: lips and gums pale, teeth good, Tongue
flabby, appetite poor and digestion weak; bowels alternate-
ly confined and then loose.

Haemopoietic system:

Blood examined as before.

Date.	Red Blood Corpuscles.	Haemoglobin p.c.
May 1 st	3,000,000	45
" 29 th	4,100,000	60.
July 9 th	5,000,000	76.

Circulatory system:

Pain over heart, slight dilatation; Bruit-de diable well marked;

Pulse feeble, 100.

Urinary system: urine acid, pale.

Nervous system: headache and giddiness.

Reproductive system: menstruation scanty, leucorrhoea.

Condition when seen last, feels all right.

Treatment: On first-waking in the morning a pint of the water is slowly sipped. This I find keeps the bowels from getting costive; rest in bed for the first fortnight is encouraged as much as possible; about 10 a.m. the hot mineral bath combined with the douche and massage, especially of the abdomen, is practised, and four meals are taken per day, and each patient is made to take at least half an hour exercise per day.

The yolk of eggs which is very rich in organic iron is also included in the diet.

If the patient suffers from atonic dyspepsia, as in case III, Hydrochloric acid is first given, before meals for a short time, and in cases where the symptoms point to an excess of acid (pyrosis), I first give Sod. Bicarb.

10 grains, before meals; and then the Chalybeate water treatment is commenced.

The amount of iron in these waters is no doubt small, but it is now generally understood that small doses act equally well.

The improvement is not only due to the drinking of these waters but the hot baths have also undoubtedly something to do with the cure. Dr. Fred. Schottz (Lancet Jan 24th 1891) published a work on chlorosis in which he says, "that the cause was to be found not in the deficiency of iron or of haemoglobin or of red blood corpuscles primarily but due to contraction of the blood vessels and he quotes successful cases by treating them with hot baths, together with gentle friction, with the view of acting directly on the skin."

Hot baths diminish the plethora, by relaxing the tension of the vascular system, which is high, quickening the circulation and thus relieving the palpitation, dyspnoea, and other symptoms."

I therefore maintain that the prescribing of the Calecton hot baths in addition to the internal administration is not to be lost sight of in the treatment of anaemia.

Malarial Cachexia.

Anaemia, wasting of the body, cachexia, the result of exposure to malarial conditions, or the result-

of exposure of a long residence in a tropical climate, is generally greatly benefited by a course of these waters.

As stated at the commencement of this paper, the officials of the Dutch India Company often used to come to use the Caledon waters; and the English-East-India Officers also came to these waters until the water route via the Suez-Canal was opened, then they mostly went home (Europe).

Still a good few invalids from malarial districts of South Africa especially from Mashonaland continue to come to use these waters,

The characteristic anaemia and wasting, due to repeated attacks of malarial fever, after using the waters both internally and externally for a time, together with the change in whom great improvement is to be seen.

The water beside acting as a tonic, is also a dilutant, carries from the system waste matter from the blood and tissues, flows through the hepatic portal circulation, and assists biliary flow.

The anaemia and debility arising from protracted illnesses, such as diphtheria typhoid and other fevers, functional disorders, mental tensions, excessive wear and tear derive great benefit from the use of these waters.

Case b. O. aged 28 years, gold prospector,

lives at Zoutpansberg South African Republic.
 Date of examination: March 3rd 1895.

Complaints: complains of great weakness, low-spirits, slight dropsy and wasting of the body.
 periodic neuralgia ^{over} the brow.

Duration of illness: one year.

Family history: satisfactory.

Habits: been exposed a good deal to all sorts of weather and lives in a malarial district.

Previous illnesses: twice had a gae, and slight attack of dysentery.

Present illness: since the attacks of a gae, got worse, never quite well, languor, weak, low spirited, sometimes ago noticed puffiness below eyelids and ankles.

State on examination

Thin, wasted, pale face, skin cold and dry, very slight oedema of the ankles and below the eyelids

Temperature: normal

Alimentary system:

Lips and gums pale tongue somewhat furred, breath foul, appetite feeble, often thirsty bowels often diarrhoea present.

Hæmopoietic system:

Spleen: is enlarged.

Blood: Hood corpuscles disintegrated, pigment granule seen.

Circulatory system: , breathlessness on exertion.

with palpitation.

Pulse: weak.

Urinary system: urine somewhat scanty, sp: gr: 1015, acid, slightly albuminous.

Nervous system: neuralgia of the supra-orbital branch of the Fifth nerve

Other systems normal

State after a stay of three months at the waters: appetite good, bowels normal, dropsy disappeared; has put on flesh; headaches gone.

Rheumatism:

This is one of the most prevalent and commonest disease to be found in South Africa, and owing to the great benefit derived from these thermal waters, it has been quite renowned throughout South Africa, hence there are always numerous cases coming and going.

It is marvellous to see them arriving having perhaps to be carried, and in a few days they may be seen walking about, perhaps only with the aid of a stick.

I will only give a case of each kind, lately under my care.

Case of Sub-acute Rheumatism:

H. B. aged 38. Clerk.

Date of examination: Jan'y 16th 1897.

Duration of illness: 5 years.

Complaints: complains of pain in different joints and

stiffness of knee and ankle joints.

Family history: Father suffers from rheumatism for years.

Habits travels about a good deal and got wet several times, habit of taking whiskey daily.

Previous health: Had an attack of acute rheumatism about six years ago and another about three years ago.

Present illness: never been quite free since attack six years ago and nearly every year gets a mild (sub-acute) attack now.

Present state: somewhat pale, skin dry.

Temperature: 99° Fah.

alimentary system: no appetite bowels constive.

Urinary system: urine scanty, acid with deposit of urates.

Locomotor system:

Joints slightly swollen and tender, both elbow joints affected, left knee and both ankles, soles of feet tender, pain in the small of his back.

Treatment:

A week in bed with Alkalies & salicylates brought the temperature normal but the joints remained very stiff; especially are the ankles and knee joints still swollen.

The waters were now commenced with both internal and external, together with massage. The patient was quite well in four weeks & for the last six months has had no further attacks.

Case of chronic rheumatism:

Ellis F. aged 50, no occupation.

Date of examination: March 4th 1897

Duration of illness: 7 years.

Complaints: complains of rheumatism, pains and swelling of joints, especially of the elbow knee and ankle, also lumbar pains, moving was attended by pain.

Family history: no rheumatism in the family.

Habits: fairly regular.

Previous general health: good.

Present illness:

About seven years ago sat in a draught whilst in a state of perspiration and a severe attack of acute rheumatism followed, pain and swelling considerable, which condition never entirely subsided. Another attack but less severe occurred about three years ago, the pain affecting the lumbar region; never been free from pains since first attack.

Height 5 ft 4 in. Body well nourished, cheerful disposition, complexion fair.

Locomotor system:

The elbows, knees and ankle joints enlarged, stiff and on movement accompanied with distinct crackling, joints painful especially on movement.

Other systems: normal

Treatment: Baths, massage, diet, time six weeks.

If there is any febrile disturbances it is not advisable

to submit any cases of rheumatism to the treatment:

Gout:

When the disease is any way acute or recent the treatment at the baths should be avoided, but when there is a weakened state of the circulation and nervous system, when there are passive or indolent swellings of previously inflamed parts; when there is a threatening of kidney disease in which the free action of the skin proves of much service, then the treatment is undoubtedly of great benefit; it often lengthens the interval between the attacks.

amenorrhoea:

Case

Mrs. S. aged 16 years

Complaints: complains that she menstruated for the first time in May and again in October, rather nervous and pale, has frontal headache and a dull pain in the lumbar region.

Family history: good.

Habits: rather sedentary.

Previous illnesses: had scarlet fever four years ago.

Present illness: first menstruated in May and again in August then three months ago, not since. Headache troubled her for the last three months and paleness for some time.

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Present state: tall, thin, pale girl, skin pale

Alimentary system:

gums pale appetite fairly good bowels regular only occasionally constipated.

Nervous system:

nervous, excited, frontal headache lumbar pains.
Menstruation seen last three months ago.

treatment:

The use of the waters both internal and external in the form of baths and hot-douches together with massage. results very satisfactory.

Pruritus Vulvae et- Auzi:

A case of diabetes mellitus was sent to the baths when I was there, who suffered most distressingly from an attack of pruritus vulvae and was completely relieved after the use of the baths.

The cause is sometimes due to excessive coffee drinking, the Cape Colonist are great coffee drinkers.

Functional Neurosis:

a form of numbness of the extremities occurring in different parts sometimes in both upper extremities, sometimes in the lower extremities, or in both upper and lower extremities.

The sensation is a numbness and tingling; generally occurs in persons of past middle life but also in younger. Causes sometimes stomaehic when it yields readily to

to treatment, sometimes neurotic, or toxic i.e. caused by rheumatism, alcoholism, syphilitic anaemia or malaria. & then the waters are good.

Case of Fibroid tumour:

Miss J. 28 yrs. single

Complaints: complains of severe and frequent bleedings together with weakness and a foetid vaginal discharge.

Family history:

Father died two years ago from Cancer of the throat; two Brothers dead, one from pneumonia; one Brother alive, had a suspicious nodule removed from his upper lip ten years ago. one sister died from Abscess in her side; three sisters alive, one subject to epileptic fits; mother alive 78 yrs old.

Habits: helps in the house

Previous general health: weak eyes otherwise healthy.

Present condition:

Fairly well developed

Integumentary system: pale yellow colour especial ears and lips, slight oedema at ankles.

Alimentary system: lips pale waxy, teeth good, gums pale tongue dry; thirsty, appetite often sensation of a feeling of sickness and faintness on the stomach; flatulence, bowels irregular, more often costive.

Circulatory system:

Heart weak, Bruit de diable.

Reproductive system:

Menstruation commenced at age of fifteen, some

sometime ago menorrhagia set in and then metrorrhagia, often slight-leucorrhoea, after 6th day of metrorrhoea symptoms of typhoid fever set in, running a general mild course, during which a fibrous tumour size of a goose's egg came down spontaneously and thus this case came to the baths for the debility and anaemia resulting from the severe loss of blood, for which she was treated at the baths and is now well and strong.

Hysteria:

Case:

H. W. aged 40, unmarried dressmaker.

Complaints, complaints of pain in the left thigh and leg and paralysis

Duration of illness: five months

Family history: good.

Habits: somewhat sedentary

Previous health: always been weakly and pale, sometimes has a troublesome cough.

Present illness:

About four months ago took to her bed, with pain in her left thigh and leg and then paralysis set in, her appetite also became bad and she became very emotional.

Present state: skin pale

Alimentary system: lips and gums pale, tongue normal, bowels regular.

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Circulatory system: Haemic murmurs audible in the neck.

Urine: Pale acid.

Reproductive system: menses irregular and scanty.

Nervous system: partial anaesthesia of the whole of the left leg, muscles slightly wasted; the left lower limb - was completely paralysed and she could not move in bed.

Treatment -

massage baths etc etc; recovery.

Dyspepsia:

Gastro-intestinal:

In gastro-intestinal dyspepsia with difficult digestion and tympanitis the passing of glairy mucus and frequent colic and often constipation alternately with diarrhoea, these waters have been used by me with success.

In Dyspepsia (Neurosthenic) with want of gastric juice and in which digestion is difficult:

There is no doubt that the rest change of air and scene, suitable dieting, have a great deal to do with the cases.

Constipation: Case:

J. T. aged 26 Clerk.

Complaints: complains of long standing constipation

Family history: good

Habits has been somewhat irregular.

Previous illnesses: as a boy had typhoid fever.

Present illness: For a few-years suffered from Constipation.

Present-state: looks ill, suffers greatly from dyspepsia feeble circulation, cold hands and feet- skin cold and clammy

alimentary system: tongue foul and furred; appetite bad, cannot eat, no inclination for food, bowels very constive

Pulse: feeble 66. p. m.

Treatment: Massage & the waters internally and by enema-ta and baths, eight-weeks course. At first- no improvement but after a time it got better and by the eighth week bowels acted regular and dyspepsia cured, and has increased in weight and eats well

The laxative effects of these waters are not produced at once but only after a certain time, according to the obstinacy of the case.

About a pint of the waters is sipped slowly early in the morning, combined with massage of the abdomen for 15 min: each time.

Haemorrhoids:

Treatment-: Injections at first of very hot water and gradually less hot and at last cold; also massage of the abdominal muscles and the bath, also by taking the hot-mineral water early in the morning to lessen the constipation. Exercise is very important. Daily action of the bowels should be solicited at a certain hour of the day; sponging the parts after each act of defecation. Diet Fruit

should form a large part of the diet.

Liver diseases and portal congestion:

Congestion of the liver, so frequently in the Anglo-Indian, in Catarrhal jaundice it seems to act beneficially. The treatment consists of massage, baths & internal use of the waters.

Renal disease:

The high temperature of the baths is useful in diverting the blood ~~from~~^{to} the surface in cases of renal congestion, deficient secretion of urine and engorgement of the more deeply seated vessels generally; especially good where there is anaemia: contra-indicated in urgent uraemic symptoms.

The treatment of syphilis at the Caledon Baths:

The method is more or less the same as that which has made Aix-la-Chapelle so famous throughout the world for the treatment of syphilis.

No doubt the climate of Caledon has something to do with the cures and there is no doubt that the immersion treatment is the best and most efficient. I am writing now with an experience of over 12 years, in 10 of which I was District Surgeon and had to carry out all the provisions to D. Surgeons of Part II of the Contagious Diseases Prevention Act, 1885; and thus had a considerable number of Syphilitic cases under my treatment, especially with the natives of Namagualand where I resided over five years. The method at the baths is "the patient takes a bath at a temperature of 100° Fah., soaping the body well and remaining in the bath 20 min.: He then comes out and is well rubbed and then a dr. of the Ung. Hydrag:

is carefully rubbed in by an experienced rubber with his hands, for 20 min.:, using considerable pressure. Different parts of the body are taken systematically. After rubbing the patient lies down for an hour and can then go out.

Proper hygienic dieting and surroundings must be attended to; diet simple nourishing, avoid salt pork cheese, raw fruit no alcohol avoid colds and attend to condition of mouth and teeth

The method of treating chronic heart-disease; generally called "the Schot-System" or the "Nauheim treatment" can be carried out at these baths to perfection.

There can be no doubt, but, that as the baths, as Prof. Beneke says, cure other effects of rheumatism inflammation so they will also be beneficial to the Cardiac-Valvular diseases. At Caledon I have had good effects in heart-disease especially in functional of the anaemic & neurotic kind.

A case of Cardiac asthenia; with dilatation, following influenza. Man, aged 28. had always good health until suddenly attacked with dyspnoea and palpitation of the heart about 3 months ago, chief symptoms were very irregular pulse and heart-beat; anasarca of the lower extremities, albuminuria, great enlargement of liver, ~~for~~ no pain, no fever, tongue clean, appetite good bowels regular. No evidence of valvular disease. Had influenza last year

recovery after a course of treatment at the baths.

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Cape of Good Hope April 1899.