

RESOURCE 1:

DIARY OF PRINCE ALBERT'S ILLNESS.

- November 22nd - Inspection of the buildings at Sandhurst.
Weather cold and raining. "enetzlicher Regen."
Complained of rheumatic pains, feeling cold and wet.
- November 23rd - Difficulty in getting up, quiet.
- November 24th - Severe feverish cold, sleeplessness.
"Am full of rheumatic pains and feel thoroughly unwell. Have scarcely closed my eyes at night for the last fortnight."
Faint and weak, pinched and ashen, unable to eat dinner.
- Recurrent sickness, diarrhoea, inability to digest food, wan appearance, loss of energy, irritability and changed character. Unable to eat.
- November 25th - Bitterly cold day. Uncomfortable from pains in the back and legs.
"Bin recht eland."
Dr Jenner becomes concerned, trouble appeared to be a feverish cold, utter exhaustion, and nervous strain.
- November 26th - Bad night, rheumatic pains, weary and weak.
- November 28th - Slept well and feeling better, but aching and feeling chilly.
"noch immer recht miserable"
Looked unwell, walking slowly and wrapped up on a warm day.
- December 1st - Could hardly hold the pen whilst writing the Trent memorandum.
Shivering with cold, could not sleep.
- December 2nd - Depressed and in discomfort.
- December 4th - Snatches of broken sleep.
Nausea, vomited chicken broth.
No temperature.
Restless and haggard after walk. Panting state.
Ordered to eat by Dr Jenner.
- December 5th - Seemed better.
- December 6th - Restless nights, wandering.
Choked on cup of tea.
Rose spots appeared. Gastric fever (Typhoid) diagnosed.
- Parched mouth, brown tongue, pallid sweating skin, no agonising headache.
- December 7th - Pulse good.
- December 8th - Well, but listless and irritable.
Bulletin: "His Royal Highness has been confined to his apartments for the last week, suffering from a feverish cold with pains in the limbs. Within the last two days the feverish symptoms have rather increased and are likely to continue for some time longer; but there are no unfavourable symptoms."
- December 9th - Wandering mind.
Dr Thomas Watson joined the medical advisors.
- December 10th - Slight improvement. Pulse good. Confused.
- December 11th - Slight improvement. Taking beef tea.
Restless, feverish, irritable, and mind wandering.
Sir Henry Holland, Physician in Ordinary to the Queen and the Prince Consort, asked to see him.
Bulletin: " His Royal Highness the Prince Consort is suffering from fever, unattended by unfavourable symptoms, but likely from its nature to continue for some time."
- December 12th - Fever increased. Listless and impatient. Shortness of breath, respiratory rate 60 per minute. Cyanosis.
Severity of illness realised by Dr Watson.

"the malady is very grave and serious in itself."

Bulletin: "His Royal Highness the Prince Consort has passed a quiet night. His symptoms have undergone little change."

December 13th - Congestion of lungs, Breathing worse. In evening, pulse good, rallied.

Bulletin: "His Royal Highness the Prince Consort passed a restless night, and his symptoms have assumed an unfavourable character during the day."

Bulletin: "His Royal Highness the Prince Consort is in a most critical state"

December 14th - Seemed better, pulse keeps up.

A dusky blue hue (Cyanosis) of face and hands.

Breathing very rapid. Bathed in perspiration.

10:50 breathing became gentler, soft sigh and passed away.

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RESOURCE 2:

TYPHOID AND INFLAMMATORY BOWEL DISEASE

TYPHOID.

Cause:- *Salmoella typhi*.

Carriers:- 30% of sufferers have a persistent infection of the gall bladder.

Source:- Carriers excrete bacteria in faeces.

Route:- ingestion of contaminated water or food.

Incubation:- 14-21 days +

Symptoms:- Septicaemia, febrile illness, headache, toxæmia, dullness, apathy, cough, sore throat, altered behaviour, rose coloured spots as a rash on the abdomen, splenomegaly, hepatomegaly, cervical lymphadenopathy, right iliac foss tenderness, some soft abdominal swelling and discomfort, leucopaenia, constipation followed by diarrhoea.

Duration of illness:- 4 weeks.

Complications:- relapse, intestinal perforation and haemorrhage, osteomyelitis, meningitis, urinary tract infections, peripheral neuropathy, acute cholecystitis, myocarditis, pneumonia.

Treatment:- Chloramphenicol, or Ciprofloxacin 500mg twice daily, for 2 weeks. Also Co-trimoxazole 960mg, or Ampicillin 6g daily.

ULCERATIVE COLITIS.

Theory:- An antigen caused stimulation of immune or inflammatory responses which are exaggerated or abnormal.

Pathology:- Reddened, inflamed colon with a tendency to bleed and extensive ulceration.

Clinical features:- Aged 20 -40 years; women > men.

Symptoms:- Diarrhoea, blood and mucus, lower abdominal discomfort, malaise, lethargy, anorexia, distended and tender abdomen. Severe attack:- Frequency of defecation, fever >37.5°C, tachycardia >90 beats/min.

Character:- mild, moderate or severe; remissions and exacerbations.

Complications:- perforation, toxic dilatation.

Course:- 10% have chronic symptoms, some patients only have a single attack.

Prognosis:- 15-25% mortality with the severe fulminating disease.

Treatment:- Mild attacks - rectal Prednisolone, or Hydrocortisone. Moderate attacks - Oral Prednisolone 20-40mg daily. Severe attacks - Prednisolone 60mg, Hydrocortisone 100mg I.V. 6 hourly or Corticotrophin 1-2mg I.M. In remission - 5-aminosalicylic acid daily.

Surgery:- Colectomy is curative.

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RESOURCE 3:

THE PHYSICIANS.

Sir James Clark, Baronet.

22B Brook St, Grosvenor Sq.W. M.A., M.D. Edinburgh 1817; M.R.C.P. London 1826; F.R.S.; Honorary Fellow. K.Q.C.P. Ireland 1849; Member Royal Academy of Science Gottingen; Member of Senate University of London; Physician in Ordinary to Her Majesty the Queen and H.R.H. the Prince Consort.

He spent the early part of his career in the Navy, in Canada, North America and the West Indies. He then practised for several years in Rome where he developed an interest in the role of climate and mineral waters in disease. In 1835 the Duchess of Kent appointed him Physician in Ordinary, where he was also responsible for the care of the Princess Victoria. On her ascension in 1837, he became Physician in Ordinary to H.M. the Queen, and his practise and reputation soared. In this year he was also made a Baronet. On the Queen's marriage, he was also employed as physician to Albert. He was known to use spas in the treatment of disease. He studied the art of prescribing, administering drugs sparingly. He also employed repeated trials. [1788-1870]

Thomas Watson.

16 Henrietta St, Cavendish Sq.W. M.D. Cantab. 1825; F.R.C.P. London 1836, Consiliarius 1836-40-44-46-54-54; Censor 1828-37-38; F.R.S.; Physician Extraordinary to the Queen; Consultant Physician King's College Hospital; late Member of the General Medical Council; formerly Fellow of St. John's College Cambridge; and now Member of Council King's College London; formerly Physician Middlesex Hospital.

His lectures on the principles and practice of medicine placed him in the first rank of physicians. In 1859 he was appointed Physician Extraordinary to the Queen, and in 1861 was called to attend Prince Albert during his final illness. In the years 1862-7 he was president of the the Royal College. He was made a Baronet in 1866, and appointed Physician in Ordinary to H.M. the Queen in 1870. The whole medical profession esteemed this man. [1792-1882]

Sir Henry Holland, Baronet.

25 Brook Street, Grosvenor Sq.W. M.D. Edinburgh 1811; F.R.C.P. London 1828; Physician in Ordinary to the Queen and H.R.H. the Prince Consort; F.R.S.; D.C.L. Oxon.; LL.D. Cambridge, Massachusetts.

In 1814 he was appointed as Domestic Physician to Caroline, Princess of Wales. Later, in 1835 he was named as Physician Extraordinary to King William IV. On Victoria's accession in 1837 the role was continued, and on the marriage of Queen Victoria, he was appointed Physician Extraordinary to Prince Albert. In 1852 he became Physician in Ordinary to the Queen, and was made a Baronet the next year.

He was a well travelled man, having visited the United States, Canada, Jamaica and most of Europe. He enjoyed the society of the rich and famous, and was well known in polite society. The Quarterly and Edinburgh Reviews published frequent contributions from him. [1788-1873]

William Jenner.

8 Harley Street, Cavendish Sq.W. M.D. London 1844; F.R.C.P. London 1857; Physician of Hospital for Sick Children; Physician University College Hospital; Assistant Physician London Fever Hospital; Special Professor of Clinical Medicine University College.

In 1850 he published work which distinguished typhus and typhoid as being separate diseases. In 1861 he was appointed Physician Extraordinary to the Queen, and attended Prince Albert in his fatal illness. Ten years later, in 1871, he attended the Prince of Wales with the same illness. He was appointed Physician in Ordinary to H.M. the Queen in 1862, and in the next year to the Prince of Wales. He became a Baronet in 1868. At the height of his medical career, he was the undisputed leader of his profession. He was a good general physician who called upon specialist knowledge of fevers, diseases of the heart, abdomen and skin, and rickets, tuberculosis, diphtheria and emphysema. [1815-1898]

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Brown. (1955). Lives of the Fellows of the Royal College of Physicians of London.

RESOURCE 4:

THE CONTENTS OF THE CHEST.

The main description is taken from contemporary books of the 1800s. Alternative names and lists of ingredients are given in brackets (). The information in brackets {} is the use of the named drug, or its active ingredient in the 1990s.

Mindererus Spirit (Solution of Ammonium Acetate).

Increases the secretions of the skin. Used as a diaphoretic and refrigerant in febrile and inflammatory conditions. Relieves dysmenorrhoea.

Dose: 15-60 minims.

{Solution of Ammonium Acetate. Used as an expectorant, and as a pH buffer of foods.}

Tincture of Arnica.

A stimulant of the brain and nervous system. It is irritant to the stomach and bowels. Used in debilitated or typhoid states. Externally used for bruises, wounds, and pain after tooth extraction.

Dose: 1-4 drams.

{Used in herbal and homeopathic preparations.}

Bicarbonate of Soda.

An antacid, antilithid, and resolvent. Used to relieve acidity of the stomach, gout and dyspepsia.

Dose: 10-30 grains.

{Used for treating metabolic acidosis, and as an antacid.}

Antimonial Wine.

Tartarated antimony in Sherry. An expectorant, diaphoretic, depressant and emetic. Used in pneumonia, bronchitis and as a febrifuge.

Dose: 15-60 minims as a diaphoretic.

{Antimony Potassium Tartrate. Used for treating shistosomiasis and leishmaniasis.}

Tincture of Henbane.

A narcotic and sedative. Used in irritation of the bladder. Prevents the griping pain of purgatives.

Dose: 15-16 minims.

{Contains an antimuscarinic, used as an antispasmodic to reduce intestinal mobility, reduces bronchoconstriction, and as a mydriatic.}

Tincture of Hemlock.

An alkaloid conine. A narcotic and sedative. Applied externally to glandular swellings.

Dose: 1/2-1 dram.

{An ingredient of cold and sore throat remedies.}

Precipitated Chalk.

An astringent and antacid. Given in diarrhoea with acidity, scrofula, and rickets. Used externally on burns and ulcers.

Dose: 10-100 grains.

{Calcium Carbonate. Used as an antacid in combination with magnesium salts, and as a calcium supplement.}

Powder of Turkey Rhubarb.

Cathartic and astringent. Used in dyspepsia with constipation, diarrhoea, cholera infantum, chronic dysentery and typhous.

Dose: 1-5 grains as a stomachic; 10-20 grains as a purgative.

{Rhubarb. Used as an anthraquinone stimulant laxative. Also used in Homeopathy.}

Comp. tincture of Rhubarb.

Various recipes, including Rhubarb with Cardamoms, Saffron and Coriander.

Dose: 1-2 drams as a stomachic; 1/2-1 oz as a purgative.

{as above}

Sulphate of Quinine.

May be used as a substitute for chichona. Used in intermittent fevers, chronic and pulmonary catarrh, chronic diarrhoea, scrofula, and neuralgia.

Dose: 1-5grains 3 times daily as a tonic.

{Quinine Sulphate. An antimalarial, also used to treat nocturnal leg cramps, as a mild analgesic and antipyretic in cold and flu remedies.}

Tincture of Squills.

Used as an expectorant and diuretic.

Dose: 15-30 minims.

{An expectorant used in cough syrups.}

Dover's Powder (Pulvis Ipecacuanhae cum Opio).

Contains: Ipecacuanha powder, Opium and Sulphate of Potash.

An anodyne diaphoretic, used in dysentery and diarrhoea for raising a perspiration.

{see Ipecacuanha and Morphine

Sulphurated Potash. Used in acne, skin disorders and in Homeopathy.}

Spirit of Sal volatile (Spiritus Ammoniae Aromaticus).

Contains: Carbonate of Ammonium, Strong Solution of Ammonia, Volatile Oil of Nutmeg, Oil of Lemon, Rectified Spirit, and Water.

A stimulant, sudorific, antacid and expectorant.

{Ammonium Carbonate. Has been used as an expectorant. Ammonium Bicarbonate is now given instead.

Nutmeg. Used as a carminative and flavouring and in Homeopathy.

Lemon Oil. Used as a perfume, flavouring, rubefacient and in Respiratory tract disorders}

Essence of Camphor.

Firstly a stimulant, then a sedative. An antispasmodic and diaphoretic. Produces mental exhilaration, and increases the heat of the skin. Allays nervous irritation, and causes a disposition to giddiness and sleep. Used in diarrhoea, and gonorrhoea.

Dose: 5 minims every 10-15 minutes until diarrhoea ceases.

{Camphor. Externally used as a rubefacient and analgesic, internally used as an irritant, carminative and expectorant in cold remedies.}

Tincture of Orange Peel.

An aromatic tonic, carminative and stomachic.

Dose: 1-2 drams.

{Orange Peel. Used as a flavouring and carminative.}

Tincture of Colchicum Flowers.

Increase the secretion action of organs including the skin. Used in gout, rheumatism, imperfect liver action and dropsy.

Dose: 10-20 minims.

{Colchicum. Contains colchicine, used in acute gout and the prophylaxis of familial mediteranean fever.}

Paregoric Elixer (Tinctura Camphorae cum Opio).

Contains: Opium, Benzoic acid, Camphor, Oil of Anise and Proof Spirit.

Contributes to the relief of spasmodic coughs in bronchitis.

{see Camphor and Morphine

Benzoic Acid. Has antibacterial and antifungal properties. Used as a preservative.

Aniseed. A carminative and mild expectorant.}

Ipecacuanha wine.

An expectorant, emetic, diaphoretic, and laxative. Given in agues to prevent spasm.

Dose: 5-40 minims as an expectorant; 3-6 drams as as emetic.

{Ipecacuanha. Used as an expectorant and as an emetic. Used in Homeopathy.}

Tincture of Chirayta.

A substitute for Gentian. Used as a tonic, and in debility of the digestive organs.

Dose: 10-40 minims.

Tincture of Hops.

A tonic, stomachic, and moderate narcotic. Used in local debility, nervous derangement and to produce sleep.

Dose: 1/2-2 drams.

Tincture of Capsicum.

Used as a stimulant in fevers, diarrhoea, cholera, dyspepsia and sea sickness. Used as a gargle in sore throats and scarlet fever. Externally applied as a rubefacient.

Dose: 10-20 minims.

{Capsicum. A carminative. Used externally as a counter irritant, and in some cough syrups. Used in Homeopathy and cooking.}

Calomel.

An alterative, cholagogue, purgative and antiphlogistic. Used in syphilis, chronic skin diseases, scrofula, chronic hepatitis, jaundice, bilious headache, hepatic dropsy, malaena, inflammation of the brain, apoplexy and inflammation of membranes e.g. iritis, pleurisy.

Dose: 1/2-1 grain 3 times daily in skin disease; 2-8 grains as a purgative and cholagogue

{Contains Mercurous Chloride. No longer used clinically due to toxicity.}

Solution of Bi-meconate of Morphia.

A sedative.

Dose: 15-30 minims.

{Morphine. Principal alkaloid of Opium. Used as an analgesic in pain of moderate to severe nature. Also depresses the CNS and relieves anxiety.}

Acid Hydrocyanicum dilutum.

A sedative and antispasmodic. Used to allay vomiting, gastrodynia, and dyspepsia. Relieves itching when applied externally. Very dangerous POISON.

Dose: 2-8 minims.

{Hydrocyanic acid. Used as a rodenticide. A very dangerous poison.}

Purified Nitre.

Refrigerant, diuretic, and diaphoretic which decreases the pulse. Used in acute inflammation, as a gargle in sore throats, and with Tartar emetic and Calomel to increase to secretions of the skin and liver.

Dose: 5-20 grains as a refrigerant or diuretic; 20-30 grains as a sedative.

{Nitre/Potassium nitrate. Used in dilute solution as a diuretic.}

Tincture of Aconite Pl.

An anodyne. Used to relieve acute rheumatism, gastrodynia, and carcinoma. Reduces expectoration in tuberculosis of the lung.

Dose: 10-15 minims 2-3 times daily.

{Aconite. Used as a liniment in neuralgia, sciatica, rheumatism and in Homeopathy.}

Blistering fluid (Cantharides).

A rubefacient, irritant and vesicant fluid. Used externally in inflammation.

{Cantharides. Used as a rubefacient, counter irritant, vesicant and in Homeopathy.}

Tincture of Belladonna.

A narcotic diuretic, and diaphoretic. Used to alleviate convulsions, whooping cough, paralysis, and neuralgia.

Dose: 5-10 minims.

{Belladonna. Contains an antimuscarinic, used in biliary and intestinal colic, with laxatives to prevent griping, and in Parkinsonism. Used in Homeopathy.}

Astringent Pills.

To counteract animal fibre, arresting fluxes, haemorrhages and diarrhoea.

Contains:- Pulv. Ipecacuanhae cum Opio and Extract of Gentian.

{see Ipecacuanha and Morphine.

Gentian. Used as a bitter and in Homeopathy.}

Alterative Pills.

Remedy to gradually re-establish the healthy habit, functions, secretions, etc.

Contains:- Hydragyrum cum Creta (Mercury and Prepared Chalk. Used to increase secretions, as a cholagogue, alterative and purgative.) and Extract of Gentian.

{see Calcium Carbonate and Gentian

Mercury. Hazards of toxicity outweigh any therapeutic benefits.}

Stronger Aperient Pills.

A mild purgative, gently opening the bowels.

Contains:- Extractum Colocynth Compositum (Colocynth, Extract of Socotrine Aloes, Scammony, Hard Soap powder, Cardamoms, Proof Spirit. A cathartic used in obstinate constipation.), Powdered Rhubarb and Extract of Rhubarb.

{Cardamoms. Used as a carminative and flavouring.

Aloes. Used as an anthraquinone laxative and in Homeopathy.

Scammony - Contains ipomoea, a laxative, but superseded by less toxic laxatives.}

Alterative Aperient Pills.

Contains:- Hydragyrum cum Creta, Powdered Rhubarb and Extract of Rhubarb.

{see Calcium Carbonate and Rhubarb}

Bicarb. Potash.

An antacid, antilithic, diuretic and powerful alterative. Used in dyspepsia and urinary affectations with deposition of uric acid. Useful in acute rheumatism.

Dose: 10-20 grains as an antacid or antilithic; 1-2 drams as a diuretic, 30-40 grains every 4 hours in acute rheumatism.

Astringent Powders. (1 to be taken after every action of the bowels.)

Contains:- Precipitated Chalk, Pulv. Cinnamom Compositae (Cinnamon, Nutmeg, Saffron, Cloves, Cardamoms, Refined Sugar.), and White Sugar.

{see Calcium Carbonate, Cardamoms and Nutmeg

Cinnamon. Used as a carminative, astringent and flavouring.

Saffron. Used as a food and cosmetic dye, and as a flavouring.

Cloves. Used as a carminative and flavouring.}

Stomachic Powders.

A stomachic strengthens and stimulates the stomach.

Contains:- Powdered Rhubarb, Sodium Sesquicarb, Pulv. Cinnamom Compositae.

{see Rhubarb, Cinnamon, Cardamoms and Nutmeg}

Niter Powder.

A diuretic. Used to relieve sore throats etc.

{see Nitre}

THE PRESCRIPTIONS.

January 26th 1861: Quinine Sulphate and Extract of Gentian.

Rhubarb Draught: Rhubarb, Soda, Oil of Nutmeg and Sulphur.

Sulphur. A laxative, diaphoretic and and resolvent. Used in haemorrhoids, chronic rheumatism and skin diseases.

{Sulphur. Used as a keratolytic, mild antiseptic, mild antifungal and parasiticide in creams for acne and dandruff.}

October 5th: Cold Draught: Bicarbonate of Soda, Ticture of Henbane, Tincture of Colchicine, and Camphor Mixture.

December 4th 1850: Cold Draught: Spirit of Mindererus, Ticture of Henbane, Tincture of Colchicine, and Camphor Mixture.

October 24th 1839: Saline draught, Bicarbonate of Soda and Sal Volatile.

Draught for Diarrhoea: Compound Chalk, Powdered Rhubarb, Ticture of Cardamons and Cinammon Water

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Cox. (1862). A Companion to the Family Medicine Chest.

Reynolds, James E.F. (1993). Martindale. The Extra Pharmacopoeia. Ed.30. The Pharmaceutical Press.

RESOURCE 5:

**NAMED DRUG ENTRIES IN PETER SQUIRE'S RECORD BOOK . FROM JULY 11TH
1956**

1856

July 11th - Medicine Chest Purchased.
August 17th - Rhubarb draught.
August 25th - Aperient Pills, Astringent Pills, Alterative Pills, Alterative Aperient Pills,
September 17th - Potassium Bicarbonate Powders
November 23rd - Tincture Aconite, Tincture Camphor
December 6th - Stronger Aperient Pills

1857

January 21st - Astringent Pills, Stronger Aperient Pills, Alterative Pills
February 1st - Acid hydrocyanicum dilutum
February 25th - Tincture Arnica
March 17th - Alterative Pills
March 27th - Potassium Bicarbonate Powders
April 2nd - Stomachic Powders
April 21st - Quinine
May 2nd - Stomachic Powders
May 4th - Quinine
May 9th - Alterative Pills, Potassium Bicarbonate Powders, Nitre Powders, Rhubarb Powder
July 4th - Nitre Powders, Potassium Bicarbonate Powders, Stomachic Powders.
Replenishing Chest
August 4th - Stomachic Powders
September 22nd - Potassium Bicarbonate Powders
September 23rd - Stomachic Powders, Quinine
September 23rd - Quinine
November 30th - Stomachic Pills
December 7th - Alterative Pills, Astringent Pills, Aperient Pills, Stronger Aperient Pills
December 12th - Ipecacuanha wine

1858

January 5th - Stomachic Pills
January 20th - Rhubarb powder and Magnesia, Bicarbonate of Soda
February 1st - Quinine
February 6th - Quinine
February 25th - Bicarbonate of Soda
March 20th - Stomachic Pills
March 14th - Camphor
May 3rd - Nitre Powders, Bicarbonate of Soda
May 6th - Quinine
July 4th - Stomachic Powders, Potassium Bicarbonate Powders,
July 5th - Powdered Rhubarb
July 24th - Powdered Rhubarb
July 30th - Pepsin
August 1st - Pepsin
August 2nd - Pepsin
September 2nd - Stomachic Powders
October 3rd - Stomachic Powders
November 3rd - Stomachic Powders
November 24th - Potassium Bicarbonate Powders
November 27th - Ipecacuanha wine
December 23rd - Glycerin
December 25th - Epsom Plasters
December 30th - Colochicum

1859

January 8th - Lotio Zinc
March 14th - Stomachic Powders, Potassium Bicarbonate Powders
April 6th - Nux Vomica
April 30th - Stomachic Powders,
May 21st - Stomachic Powders
June 6th - Camphor
August 25th - Potassium Bicarbonate Powders
August 28th - Astringent Pills
October 28th - Potassium Bicarbonate Powders
December 2nd - Potassium Bicarbonate Powders
December 9th - Calomel
December 23rd - Bismuth
December 24th - Calomel
December 29th - Bismuth
December 31st - Bismuth, Calomel

1860

January 4th - Bismuth
January 13th - Stomachic
January 16th - Alterative Pills, Stomachic
January 21st - Stomachic
February 4th - Applicatio Chloroform
February 27th - Chloroform
March 4th - Quinine
March 14th - Stomachic Powders
April 3rd - Potassium Bicarbonate Powders
April 9th - new pills to all boxes.
May 26th - Camphor
July 31st - Chirayta, Stomachic Powders, Astringent Pills
August 2nd - Chirayta
September 29th - Pils assafoetida
November 17th - Potassium Bicarbonate Powders
November 23rd - Graduated glass
December 15th - Alterative Pills, Alterative Aperient Pills
December 30th - Stomachic Powders, Aperient Pills.

1861

January 26th - Quinine
February 6th - Ginger, Camphor
February 16th - Quinine
February 17th - Potassium Bicarbonate Powders
April 6th - Stomachic
April 8th - Stomachic
April 12th - Stomachic
April 13th - Stomachic, Acid Nitre
April 22nd - Acid Nitre
April 25th - Acid Nitre
May 17th - Camphor
May 18th - Camphor
May 25th - Stomachic Powders
June 2nd - Quinine
June 18th - Potassium Bicarbonate Powders
July 25th - Pill cases replenished
August 19th - Potassium Bicarbonate Powders
August 20th - Potassium Bicarbonate Powders
October 11th - Alterative Pills, Alterative Aperient Pills, Astringent Pills, Stronger Aperient

Pills

November 5th - a minim measure, Aconite, Hops,
November 26th - Sea salt
November 29th - Sea salt
December 3rd - Potassium Bicarbonate Powders

1861 and 1993 uses of the drugs.

Magnesia

Antacid, laxative and antilithic. Used in dyspepsia, sick headache, gout and other complaints. Generally combined with other purgatives such as rhubarb.

{Magnesium Oxide. An antacid and laxative, often given with aluminium antacids. Also used in hypomagnesaemia.}

Pepsin

Taken from animal stomachs. Used in deficiency of gastric juice causing atonic dyspepsia.

{A proteolytic enzyme secreted by the stomach. Given with dilute hydrochloric acid in gastric hypochloridia.}

Glycerin

Used as a solvent. Internally taken as a nutrient, demulcent and sweetening agent. Used externally for emollient and undrying properties, in pityriasis, leprosy, herpes, eczema, psoriasis and lichen. Provides a moist dressing for wounds and chilblains.

{An osmotic agent with lubricating and moisturising properties. Used orally to reduce intraocular pressure in acute glaucoma, and topically to reduce corneal oedema. Administered rectally as a hyperosmotic laxative.}

Epsom Plasters

This could not be found in any of the reference books. Epsom salts (magnesium sulphate) were taken internally as a purgative. It could be speculated that these salts, or mud taken from the town of Epsom could have been prepared as a plaster. Perhaps a more reasonable explanation is a transcription error from Peter Squire's record book.

Lotio Zinc

Zinc acetate. An astringent. Also used in gonorrhoea.

{Zinc acetate. Used with erythromycin in the treatment of acne, or as a zinc supplement.}

Nux Vomica

A homeopathic remedy containing strychnine. A tonic and laxative which stimulates the bowel. Used also in paralysis, chorea, atonic dropsy, and debilitated conditions of the alimentary canal.

{Strychnine. Causes convulsions, leading to death from respiratory arrest. Used as a rodenticide and in multi-ingredient preparations for ophthalmic and urinary disorders.}

Bismuth

Used in epigastric pain, vomiting, irritative dyspepsia, diarrhoea, and chronic skin diseases.

{An antacid, and mild astringent. Used in diarrhoea and ulcerative colitis. Topically applied to skin disorders, wound, burns haemorrhoids, and anorectal disorders.}

Chloroform

Sedative, narcotic and antispasmodic. Externally applied as a stimulant to senile gangrene and sloughing ulcers. Vapour may be administered to the eye, rectum or vagina. Produces anaesthesia for operations by inhalation.

{An inhaled anaesthetic, rarely used due to toxicity. Used as a flavouring and carminative. A rubefacient when applied externally.}

Pils assafoetida

A moderate stimulant, antispasmodic, expectorant, and laxative. Used in flatulence.

Ginger

An aromatic, stimulant and carminative. Given in dyspepsia, flatulence and with purgatives. May also be used as a gargle in cases of relaxed uvula and tonsils.

{A carminative, used in the prophylaxis of motion sickness, and as flavouring. Used in Homeopathy.}

Acid Nitre

(? Acidum Nitricum.) A corrosive and caustic applied to ulcers and chancres. When diluted, acts as a refrigerent, tonic and antiseptic. Very diluted, used as a drink in fevers, or an injection in phopatic calculus.

{Nitric Acid. A corrosive, applied with caution to warts and tattoos.}

Sea salt

In small doses, a stimulant, tonic and antihelminthic. In larger doses, a purgative and emetic. May be used as a salt-water bath (1lb - 4 gallons) as a tonic and excitant of the system.

{Sodium Chloride. Used in the treatment of extracellular volume depletion, dehydration, and sodium depletion.}

REFERENCES.

Squire, Peter. (1866). A Companion to the British Pharmacopoeia.

Reynolds, James E.F. (1993). Martindale. The Extra Pharmacopoeia. Ed.30. The Pharmaceutical Press.

RESOURCE 6:

CONTENTS OF A TYPICAL VICTORIAN MEDICINE CHEST.

Drugs.

Aether. Aloetic wine. Alum. Antimonial powder. *Antimonial wine. Bark. Borax. *Calomel. *Camphor. Castor oil. Chamomile. Chloride of Lime. Chloride of Soda. Crystallised Lemon juice. Cream of tartar. Dentifrice. *Dover's powder. Eau de Luce. *Elixer Paregoric. Elixer Vitriol. Friar's Balsam. Female pills. Ginger powder. Epsom salts. Goulard. Gum arabic. Indian Pink powder. Ipecacuhana powder. *Ipecacuhana wine. Jalap powder. Laudanum. Magnesia. Manna. Nitre. Oil of Aniseed. Basilicon ointment. *Blistering ointment. Brown ointment/Turner's cerate. Spermaceti ointment. Opening pills. Opium. Opodeldoc. Peppermint. Diachylon plaister. Burgundy pitch plaister. *Rhubarb. Spermaceti. Spirit of Hartshorn. Spirit of Lavender. *Spirit of Nitre. *Spirit of Sal volatile. Spirit of Wine. *Sulphate of Quinine. Sulphur. Tamarinds. Tartar emetic. Carbonate of Potash. Tincture of Bark. Tincture Stomachic. Vitriol Blue. Vitriol white.

Equipment.

| | |
|-----------------------------|--------------------------|
| Spatula - for mixing pills. | Graduated Glass. |
| Tile - for mixing on. | Lint. |
| Glass Funnel. | Scales and Weights. |
| Glyster Pipe and Hood. | Glass Mortar and Pestle. |

CATEGORIES OF DRUGS FROM TYPICAL CHEST.

Purgatives:

Aloetic wine. Calomel. Castor oil. Cream of tartar. Epsom salts. Ipecacuanha wine. Jalap powder. Magnesia. Manna. Opening pills. Rhubarb. Sulphur. Tamarinds. Tartar emetic.

Stimulants:

Aether. Eau de Luce. Elixer Vitriol. Ginger powder. Spirit of Hartshorn. Spirit of Lavender. Spirit of Sal volatile.

External application:

Alum. Borax. Camphor. Chamomile. Chloride of Lime. Chloride of Soda. Friar's Balsam. Goulard. Basilicon ointment. Blistering ointment. Brown ointment/Turner's cerate. Spermaceti ointment. Opium. Opodeldoc. Diachylon plaister. Burgundy pitch plaister. Vitriol Blue.

Fever:

Antimonial powder. Antimonial wine. Bark. Calomel. Dover's powder. Elixer Vitriol. Nitre. Rhubarb. Sulphate of Quinine. Sulphur.

Emetics:

Antimonial Wine. Ipecacuhana powder. Ipecacuhana wine. Tartar emetic. Vitriol white.

Anodynes:

Laudanum. Opium. Opodeldoc.

Anti-convulsants:

Anti-diarrhoea:

Rhubarb. Sulphate of Quinine. Carbonate of Potash.

CATEGORIES OF DRUGS FROM PRINCE' ALBERTS CHEST

Purgatives:

Powder of Turkey Rhubarb. Comp. tincture of Rhubarb. Ipecacuanha wine. Calomel. Stronger Aperient Pills. Alterative Aperient Pills.

Stimulants:

Tincture of Arnica. Spirit of Sal volatile. Essence of Camphor. Tincture of Capsicum.

External application:

Tincture of Hemlock. Precipitated Chalk. Tincture of Capsicum. Acid Hydrocyanicum dilutum. Blistering fluid.

Fever:

Mindererus Spirit. Tincture of Arnica. Antimonial Wine. Powder of Turkey Rhubarb. Calomel. Dover's Powder. Essence of Camphor. Ipecacuanha wine. Tincture of Capsicum. Purified Nitre. Tincture of Belladonna. Sulphate of Quinine.

Emetics:

Antimonial Wine. Ipecacuanha wine.

Anodynes:

Tincture of Henbane. Tincture of Hops. Solution of Bi-meconate of Morphia. Tincture of Aconite Pl.

Anti-convulsants:

Acid Hydrocyanicum dilutum. Tincture of Belladonna.

Anti-diarrhoea:

Precipitated Chalk. Powder of Turkey Rhubarb. Sulphate of Quinine. Astringent Pills. Bicarb. Potash. Astringent Powders.

REFERENCES.

Squire, Peter. (1866). A Companion to the British Pharmacopoeia.

Cox. (1862). A Companion to the Family Medicine Chest.

Mortimer Young, Anne. (1994). Antique Medicine Chests. Vernier Press.

Crellin, J.K. (1979). Domestic Medicine Chests - Microcosms of 18th and 19th Century Medical Practise. *Pharmacy in History.* 21(3):122-131.

STATISTICAL COMPARISON OF CONTENTS.

χ^2 test of the categories of drugs.

X = Drugs not in that category. A = Prince Albert's Medicine Chest. C = Cox's Companion.

PURGATIVES.

| Actual numbers of drugs. | | | Expected number of drugs. | | | | |
|--------------------------|----|----|---------------------------|---|----|--------|----|
| | P | X | Totals | P | X | Totals | |
| A | 6 | 30 | 36 | A | 7 | 29 | 36 |
| C | 14 | 47 | 61 | C | 13 | 48 | 61 |

Totals 20 77 97 Totals 18 78 97 $\chi^2 = 0.38$ not statistically significant.

STIMULANTS.

Actual numbers of drugs.

| | S | X | Totals |
|---|---|----|--------|
| A | 4 | 32 | 36 |
| C | 7 | 54 | 61 |

Totals 11 86 97

Expected number of drugs.

| | S | X | Totals |
|---|---|----|--------|
| A | 4 | 32 | 36 |
| C | 7 | 54 | 61 |

Totals 11 86 97 $\chi^2 = 0$ not statistically significant.

EXTERNAL APPLICATION.

Actual numbers of drugs.

| | E | X | Totals |
|---|----|----|--------|
| A | 5 | 31 | 36 |
| C | 17 | 54 | 61 |

Totals 24 85 97

Expected number of drugs.

| | E | X | Totals |
|---|----|----|--------|
| A | 6 | 30 | 36 |
| C | 14 | 47 | 61 |

Totals 20 75 97 $\chi^2 = 1.13$ not statistically significant.

FEVERS.

Actual numbers of drugs.

| | F | X | Totals |
|---|----|----|--------|
| A | 12 | 24 | 36 |
| C | 9 | 52 | 61 |

Totals 21 76 97

Expected number of drugs.

| | F | X | Totals |
|---|----|----|--------|
| A | 8 | 28 | 36 |
| C | 13 | 48 | 61 |

Totals 21 76 97 $\chi^2 = 4.14$ significant at $p=0.05$.

ANODYNES.

Actual numbers of drugs.

| | A | X | Totals |
|---|---|----|--------|
| A | 4 | 32 | 36 |
| C | 3 | 58 | 61 |

Totals 19 78 97

Expected number of drugs.

| | A | X | Totals |
|---|---|----|--------|
| A | 3 | 33 | 36 |
| C | 3 | 58 | 61 |

Totals 6 91 97 $\chi^2 = 0.73$ not statistically significant.

ANTI-CONVULSANTS.

Actual numbers of drugs.

| | AC | X | Totals |
|---|----|----|--------|
| A | 2 | 34 | 36 |
| C | 0 | 61 | 61 |

Totals 2 95 97

Expected number of drugs.

| | AC | X | Totals |
|---|----|----|--------|
| A | 1 | 35 | 36 |
| C | 1 | 39 | 61 |

Totals 2 95 97 $\chi^2 = 2.10$ not statistically significant.

ANTI-DIARRHOEA REMEDIES.

Actual numbers of drugs.

| | AD | X | Totals |
|---|----|----|--------|
| A | 6 | 30 | 36 |
| C | 2 | 59 | 61 |

Totals 8 89 97

Expected number of drugs.

| | AD | X | Totals |
|---|----|----|--------|
| A | 3 | 33 | 36 |
| C | 5 | 56 | 61 |

Totals 8 89 97 $\chi^2 = 5.23$ significant at $p=0.025$.

REFERENCES.

Barrett, Jenny. (1994). Medical Statistics Course Book.

RESOURCE 7:

THE RATIONAL TREATMENT OF TYPHOID.

{ } - contains drugs in Prince Albert's Medicine Chest.

[] - contains symptoms not specifically mentioned, but complained of by Prince Albert.

1. To neutralise the poison and improve the state of the blood.

Use of Hydrochloric, Sulphuric, and mineral acids, with Quinine.

{Quinine.}

2. To promote elimination.

Maintaining the action of the kidney and skin using tea, coffee and salt.

Sponging with cold water 2-3 times daily.

If constipated for more than 4 days, an enema or Castor Oil given.

3. To reduce temperature and the action of the heart.

Reduction of the pulse and temperature by cold affusions, and sponging.

4. To sustain the vital powers.

Wine or brandy after the first 10-12 days of illness.

Food - milk, beef tea, arrowroot.

Stimulants - Chloric and Sulphuric Ether, Quinine, Liquor Chiconae, Musk, Camphor.

{Stimulants: Quinine, Camphor.}

5. To relieve distressing symptoms.

Diarrhoea - Starch and Laudenum enema, Liquor Opii Sedativus.

If acids are not tolerated by the stomach give Acetate of Lead and Acetate of Morphia.

Opiate enema at bedtime or Dover's powder and Hydrargyrum.

Apply linseed poultices, wet flannels, Turpentine stupes or Compound Camphor liniment to abdomen.

Give Ipecacuanha and Phosphoric or Sulphuric Acid.

Give Alum Whey after bowels opened.

If diarrhoea is not great, give Saline laxative, Sulphate of Soda, or Seidlitz Powder.

{Ipecacuanha Wine. Solution of Bi-meconate of Morphia. Dover's powder.}

Astringents - Logwood and Catechu.

{Astringent Pills. Astringent Powders}

Haemorrhage - Give a Starch and Opium enema, a Sulphuric acid and Opium enema or an Opium enema.

Give Gallic acid, Acetate of Lead and Morphia, Tannine, Rhatany or

Turpentine.

{Solution of Bi-meconate of Morphia}

Vomiting - suck on ice, apply turpentine stupes to abdomen.

Tympanitis - Apply turpentine stupes.

Give Peppermint Water, Confection of Rue, Infusion of Chamomile.

Give Acetate of Lead and Morphia, or Turpentine.

{Solution of Bi-meconate of Morphia}

Abdominal pain - Give Opium, Morphine.

Apply turpentine stupes or 2-6 leeches over right iliac region or around anus.

{Solution of Bi-meconate of Morphia}

Headache - Apply 2-4 leeches to the temples, or blistering fluid to the forehead or nape of neck.

{Blistering Fluid}

Sleeplessness, delirium - Give Battley's solution, Muriate of Morphia, Compound Soap Pill.

Apply ice cap, cold affusions, or 2-6 leeches to the head.
{Solution of bi-meconate of Morphia}

Drowsiness - Give an infusion of coffee.

Apply mustard poultices or use dry cupping over the kidneys.

Apply Blistering Fluid to the scalp or nape of neck.

Give cold affusions.

{Blistering Fluid}

Convulsions - Apply Blistering Fluid.

Give Croton Oil or a Turpentine enema

Give saline diuretics if urine is reduced, or apply dry cupping over kidneys.

{Blistering Fluid}

[Rheumatic pains, pains in the back and legs.]

{Essence of Camphor. Tincture of Colchicum Flowers. Tincture of
Belladonna. Tincture of Capsicum.}

[Severe feverish cold. Feeling chilly and cold. Shivering with cold.]

{Antimonial Wine. Tincture of Capsicum.}

[Faint, weary and weak. Unable to eat. Loss of energy.]

{Spirit of Sal volatile. Tincture of Chirayta. Tincture of Hops. Tincture of
Orange Peel.}

[Wandering.] {Tincture of Henbane. Tincture of Hemlock.}

6. To obviate and counteract local complications.

Peritonitis - Give opium every hour to paralyse the bowel.

Apply leeches, turpentine stupes, linseed poultices and warm fomentations.

Give beef tea or iced brandy and water every 15-30 minutes.

{Solution of Bi-meconate of Morphia}

Bronchitis - Give Vinum Ipecacuanha with each acid mixture.

Give expectorants such as Squill.

Give Dover's powder, James powder, Ammonia or Potash salts.

{Ipecacuanha Wine. Squill. Dover's Powder. Bicarbonate of Potash.}

Pneumonia - Give Acetate of Lead, with or without Opium.

Give stimulants, expectorants, Turpentine.

Apply counter irritation - painting iodine over chest, or cupping.

{Solution of Bi-meconate of Morphia. Quinine. Camphor. Squill.}

Pleural effusions - Paint Iodine over chest.

Give diuretics, Iodide of Potassium.

If purulent, give Quinine and acids.

[Breathing very rapid. Shortness of breath. Congestion of lungs = Pleural effusion]

{Quinine.}

Laryngitis - Apply blistering fluid to the angle to the jaw.

Give an insufflation of Alum, apply Silver Nitrate.

{Blistering fluid.}

REFERENCES

Murchison, Charles. (1884). A Treatise on the Continued Fevers of Great Britain. Ed.3.
Longmans, Green and Co.

Prince Albert was the consort of Queen Victoria. Although born in Germany, was a great statesman to England. It was a sudden and devastating loss to the country and the Queen, when he died on the 14th of December 1861. At the time it was recorded that typhoid was the cause of death.

One of the objectives of this report is to speculate as to the treatment of this fatal illness. The Thackray Medical Museum has a medicine chest in its possession which belonged to Prince Albert at the time of his death. An analysis of its contents may reveal which drugs were available at that time, and the general state of the Prince's health.

The Death of Prince Albert.

Several biographies of the prince include accounts of the last weeks of his life. These vary, as different writers will have different criteria of importance. The outline given [Resource 1] is a compilation of the facts written. Since 1861 there has been some discussion as to whether the illness was typhoid.

D.Bennett is unconvinced that the illness was caused by typhoid because of 4 factors:

1. evidence that Prince Albert was in declining health for some time.
2. evidence that his health was being undermined, and he appeared thin with a swollen abdomen for some time before the last illness.
3. the final phase of the illness showed no high fever, no prostration, no delirium.
4. no evidence as to the source of infection, and no epidemic at that time.

These arguments can easily be themselves undermined. The Prince may have had a long term illness, but that does not exclude typhoid. The ill are more likely to succumb to infectious diseases than the healthy. In itself typhoid is an unpredictable disease, and variations in the course of disease are common. Typhoid was endemic at the time.

J.W.Paulley offers a possible alternative diagnosis, Inflammatory Bowel Disease [Resource 2]. The Prince had been intermittently unwell with abdominal symptoms for several months before the terminal stage of his illness. This fits with the character of exacerbation and remission pattern of ulcerative colitis. The evidence for the prolonged abdominal illness is also provided by the records of the Prince's pharmacist, Peter Squire, and the contents of the medicine chest. Both of which will be discussed in further detail later. There is medical evidence that the course of Ulcerative Colitis is influenced by psychological factors. If the Prince did have this disease, then the events of November 1861 would have been significant. It was then that Albert heard that an enquiry had confirmed the truth of the scandal of the Prince of Wales' affair with an actress, Nellie Clifden. The fellow officers of the Prince of Wales had secretly conveyed the actress to his bed whilst they served at the Curragh. This would have been a devastating blow to a father with the morals and upright standing of Prince Albert. It is said that since that incident he lost faith in his son and was unable to sleep. Even the Queen is said to have blamed the Prince of Wales for her husband's death. In that month the Trent affair also threatened a war with the United States. This was averted by conciliatory amendments of the Prince's to a memorandum to the United States.

If the Prince had died of something other than typhoid, the mistaken diagnosis was probably not malicious or negligent. The hindsight in which the physicians are doubted makes use of modern day understanding of disease. As an autopsy was not performed, and the causative bacterium, *Salmonella typhi* had not yet been identified, the precise cause of death will never be guaranteed.

The ability of the physicians who attended the Prince during the illness has also been questioned. Lord Clarendon in a letter to the Duchess of Manchester on the 17th December 1861, wrote "...it is sad to think...that he had not the benefit of the best medical aid. Holland and

Clark are not even average old women and nobody who ws really ill would think of sending for either of them...One cannot speak with certainty, but it is horrble to think that such a life may have been sacrificed to Sir J.Clark's selfish jealousy of every member of his profession...they are not fit to attend a sick cat."

In the case of William Jenner, his qualifications were the best [Resource 3]. He worked as the Assistant Physician to the London Fever Hospital, and in 1850 had published work distinguishing typhoid and typhus as separate diseases. The information on typhoid at that time is taken from a book that cites Dr Jenner as a source, frequently. At the height of his career he was the undisputed leader of the profession. Thomas Watxon was also held in high esteem by the whole profession. It is likely that whoever had attended the Prince would have faced criticism because of the fatal outcome.

The Medicine Chest.

According to the record book of Peter Squire, the chest was purchased on 11th July 1856 for the sum of 15 shillings. Also documented is a list of the contents of the box, accompanied by a sketch. It is amazing that the list is so similar to the actual contents in 1995. It is also fortunate that Peter Squire wrote a companion to the British Pharmacopoeia. This gives us an accurate picture of his beliefs on the use of drugs, and the advice that he may have given to others. Using his book, the contents of the chest have been analysed [Resource 4].

The record book also gives a day by day account of purchases made on behalf of the Prince. Many of the entries are not detailed, for example only the word tonic or the amount of a substance, but not its name. Also the importance of some entries cannot be determined due to their illegibility. However, in the time that the medicine chest was in use, several new clues as to the health of Prince Albert have emerged.