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# INDEX TO VOLUME XVII.

## CORRESPONDENCE.

A Friendly Word .....	316
Diphtheria, Typhoid and Scarlet Fever Returns for 1904 .....	121
Dr. Carveth and the Christian Scientists.— Dr. Carveth's Statement .....	192
"Havergal Ladies' College and Its Staff of Specialists." .....	121
The Medical Inspection of Schools .....	193
The Therapy of Anti-Streptococcic Serum. ....	279

## EDITORIALS.

A Further Addition to Our Staff. ....	55
Are Christian Scientists Making Proselytes of Physicians? .....	112
"Being Done Good" .....	336
Divergent Opinions on Matters Relating to Small-Pox Infection. ....	403
Dr. Osler's Opinions on the Cause of Greatness in Men .....	261
Editorial Notes.....57, 114, 178, 268, 339, 408	408
Epidemic Cerebro-Spinal Meningitis from the Public Health Standpoint .....	328
Fresh Air, with Beef, Eggs and Milk, of the First Importance in the Treatment of Consumption .....	325
Good Showing for Contagious Diseases in Toronto, but Typhoid Fever is Not Reported by the Hospitals .....	110
No Admittance to Diseased Immigrants... ..	266
On the Extent of Tuberculosis in Canadian Cattle .....	49
Personal.....62, 119, 183, 273, 315, 413	413
Reciprocity in Medicine Between the Provinces of Canada.....	173
Reciprocity in Medicine Between The United Kingdom and the Rest of the British Empire.....	176
Something About the Etiology of Beri-Beri .....	46
Surely Not an Attempt on the Part of Christian Scientists to Subsidize the Medical Press! .....	332
The Garcia Centenary.....	331
The Indications and Therapeutic Value of Prostatectomy .....	43
The Medical Aspect of Malt Extract .....	406
The Medical Press Not Lackadaisical .....	167
The Physician and Mental Therapy .....	107
"These are All Honorable Men"—Who Pay for Chaperones?.....	51
The Whitney Gift Towards a University Residence .....	55
Toronto's New Medical Library.....	56
Undesirable Immigrants to Canada are Deported .....	261

## MEDICAL JURISPRUDENCE AND TOXICOLOGY.

Erzino vs. Toronto General Hospital .....	151
---	-----

## MEDICINE

Acute Meningitis .....	298
------------------------	-----

## NEWS OF THE MONTH.

A Library, a Laboratory and a Nursery ...	347
A Loving Cup Presented to Dr. O'Reilly..	423
A Measles Hospital in the Near Future Possible .....	274

Another Munificent Gift to Toronto General Hospital .....	65
Banquet to Dr. Osler in New York.....	414
Canadian Medical Association .....	317
Canadian Medical Dinner in London.....	428
Course of Instruction in Public Health....	188
Deaths, in the Province of Ontario for October, 1904 .....	63
Deaths in November, 1904 .....	132
Deaths for December, 1904 .....	188
Dr. Charles O'Reilly's Resignation.....	418
Dr. Osler's Successor .....	349
First Quarterly Meeting of the Provincial Board of Health of Ontario .....	181
Formal Opening of the New Ontario Medical Library in Queen's Park .....	127
Golden Wedding of Dr. Anson Buck and His Helpmeet .....	131
Government Asked to Establish a Provincial Department of Pathology.....	421
Is Toronto to Have a New Million Dollar Hospital?.....	425
Items of Interest.....66, 133, 189, 275, 356,	429
New Wing of the Woodstock Hospital ....	274
Ontario Hospitals Association .....	348
Ontario Medical Association .....	133
"Our Regius Prof.".....	417
Professor William Osler's Address before the Canadian Club .....	122
Secure Proof of Death and Thus Prevent Premature Burial .....	350
The Ontario Medical Association.....	428
The Thirty-eighth Annual Meeting of the Canadian Medical Association.....	130

## OBITUARY.

Dr. Thomas H. Munley's Death.....	281
-----------------------------------	-----

## ORIGINAL CONTRIBUTIONS.

A Case of Malignant Endocarditis in a Child. By W. H. Pepler, M.D., C.M., L.R.C.P. (Lond.) .....	9
A Case of Multiple Neuritis with Ataxia, Simulating Tabes Dorsalis; Recovery. By Campbell Moyers, M.D. ....	145
A Case of Multiple Sebaceous Cysts. By Alexander McPhedran, M.B., Toronto. ....	295
Cleaning Milk by Centrifugal Force. By Professor F. C. Harrison.....	84
Coughs and Colds. By William F. Waugh, M.D., Chicago, Ill .....	13
Diphtheria Complicated by Subcutaneous Emphysema. By W. J. Wilson, M.D., Toronto .....	239
Medical Men and the New Provinces. By John Hunter, M.B. ....	150
Niels Ryberg Finsen—His Life and Work. By Charles R. Dickson, M.D., Toronto. ....	217
Some Observations Upon the Treatment of Lupus Vulgaris by Phototherapy, Radiotherapy and Otherwise. By Charles R. Dickson, M.D., Toronto....	1
Syphilitic Gangrene. By R. B. Ewan, M.D., C.M. (McGill), Chentu, China ...	235
The Mamma: Its Physiological Purposes. By Thomas H. Manley, M.D., New York.....	18

The Necessity of Physical Health in Acquiring an Education. By Alexander Thompson, M.D., Strathroy..... 363

The Orthopedic Treatment of Deformities and Disabilities Resulting from Paralysis. By B. E. McKenzie, B.A., M.D., Toronto..... 73

The Treatment of Catarrhs, especially Post-Nasal Catarrh. By Wm. Erwin, A.M., M.D., Philadelphia, Pa..... 356

The Treatment of Tuberculosis in Ontario. By J. H. Elliott, M.B..... 289

**PHARMACOLOGY AND THERAPEUTICS.**

Iodipin: Its Physiological and Therapeutic Importance. By Ludwig Hesse..... 372

Diabetes Mellitus. By Charles H. Powell, A.M., M.D., St. Louis, Mo..... 377

The Value of Lacto-Globulin in Whooping-Cough, Infantile Dyspepsia, etc..... 371

**PROCEEDINGS OF SOCIETIES.**

The Canadian Association for the Prevention of Tuberculosis..... 250

Clinical Society of the New York Polyclinic Medical School and Hospital..... 21

Fifth Annual Meeting of the Canadian Association for the Prevention of Consumption..... 316

**SCHOOL HYGIENE.**

A School Hygiene Department..... 381

The Dundee Social Union..... 380

**SURGERY.**

Notes on Local Anæsthesia..... 241

**SELECTIONS, ABSTRACTS, ETC.**

Abstracts..... 394

An Advance Toward Better Household Sanitation..... 172

Dr. William Osler on Age..... 253

Dr. William Osler, the New Regius Professor: His Life and Work at Johns Hopkins..... 87

"Glenwood," a Private Institution for the Treatment of Epileptics on the Cottage System, at Dan-ville, N.Y..... 101

Harcourt Chloroform Inhaler..... 103

Height and Weight..... 106

Mastication, The Quadruple Importance of, for Gastric Digestion..... 104

Much Ado About Nothing..... 255

Peroxide Solutions in Otolgical Practice..... 171

Phil Gilhooly's Opinion of Christian Science..... 309

Recent News as to the War on Tuberculosis..... 391

Refrigerating Plant at London Hospital... 258

Sanitary and Medical Work in the Japanese Army. By Major Louis L. Seaman, M.D..... 383

The Alkalometric Primer..... 162

The Alternating Lighting Current in Therapeutics..... 95

The International Magazine of School Hygiene..... 259

The Internal Treatment of Diseases of the Bladder..... 156

The Louisiana Purchase Exposition, the Neurasthenic and the Brain-tired..... 30

The Position of the Kidney After Nephropexy..... 313

The Vernon Harcourt Inhaler..... 256

The Use of Mechanical Apparatus in Surgical Treatment..... 170

Three Infants Treated with the R-II. Lymph-Compound..... 99

**THE PHYSICIAN'S LIBRARY.**

Accidents and Emergencies. By Charles W. Dullis, M.D..... 269

A Compend of Diseases of the Eye and Refraction, Including Treatment and Surgery. By George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. 205

A Compend of the Practice of Medicine. By Daniel E. Hughes, M.D..... 198

A Dictionary of New Medical Terms. By George M. Gould, A.M., M.D..... 206

A Manual of Personal Hygiene. By Walter L. Pyle, A.M., M.D..... 136

An Introduction to Dermatology. By Norman Walker, M.D..... 212

An Introduction to Chemical Analysis. By Elbert W. Rockwood, M.D., Ph.D... 438

A New Edition of Webster's International Dictionary. By W. T. Harris, Ph.D., LL.D..... 195

A Practical Treatise on Nervous Exhaustion, Neurasthenia. By George M. Beard, A.M., M.D..... 435

A System of Physiologic Therapeutics. Edited by Solomon Solis Cohen, A.M., M.D..... 438

A System of Practical Surgery. By Drs. E. von Bergmann, P. von Bruns, and J. von Mikulicz..... 204

A Text-Book of Clinical Diagnosis. By L. Napoleon Boston, A.M., M.D..... 70

A Text-Book of Human Histology. By Drs. A. A. Bohm, M. von Davidoff, and G. Carl Huber, M.D..... 142

A Text-Book of Legal Medicine. By Frank Winthrop Draper, A.M., M.D..... 288

A Text-Book of Obstetrics. By Adam Wright, M.D., M.R.C.S., etc..... 433

A Text-Book of Practical Therapeutics. By Hobart Amory Hare, M.D., B.Sc... 200

A Text-Book of the Practice of Medicine for Students and Practitioners. By Hobart Amory Hare, M.D., B.Sc..... 410

Atlas and Epitome of General Pathologic Histology. By Dr. H. Durck..... 144

Atlas and Epitome of Operative Ophthalmology. By Dr. O. Haab..... 284

A Treatise on Bright's Disease and Diabetes. By Jas. Tyson, M.D..... 205

Bacteriology and Surgical Technic for Nurses. By Emily M. A. Stoncy..... 285

Beauty Through Hygiene. By Emma E. Walker, M.D..... 210

Bit and Spur..... 432

Blood-Pressure as Affecting Heart, Brain, Kidneys and General Circulation. By Louis Feuges Bishop, A.M., M.D.... 212

Books, Pamphlets, etc..... 442

By the Queen's Grace. By Virna Sheard.. 211

Chemical and Microscopical Diagnosis. By Francis Carter Wood, M.A..... 439

Chirurgie Orthopedique. Par Le Professeur Paul Berger et Le Docteur S. Banzet .....	196	Pathological Technique. By F. B. Mallory, M.D., and J. H. Wright, M.D.....	139
Clinical Chemistry and Microscopy. By Francis Carter Wood, M.D.....	353	Practical Pediatrics. By Dr. E. Graetzer ..	441
Clinical Hematology. By John C. Da Costa, Jr., M.D. ....	195	Progressivo Medicina. By Hobart Amory Hare, M.D.....	136
Clinical Lectures on Appendicitis, Radical Cure of Inguinal Hernia and Perforating Gastric Ulcer. By G. R. Turner, F.R.C.S.....	436	Progressive Medicine. Edited by Hobart Amory Hare, M.D., and H. R. M. Laidis, M.D. ....	436
Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden .....	263	Refraction and How to Refract. By James Thorrrington, M.D.....	213
Clinical Urology. By Alfred C. Croftan. Diet in Health and Disease. By Julius Friedenwald, M.D. ....	137	Saunders' Question Compend. By Lawrence Wolf, M.D.....	212
Diseases of the Ear. By James Kenhore, M.D. ....	214	Saunders' Question Compend. By W. R. Williams, M.D. ....	139
Diseases of the Liver, Gall-Bladder and Bile-Ducts. By H. D. Rolleston, A.M., M.D. ....	200	Self-Propelled Vehicles. By J. E. Homans, A.M.....	213
Diseases of the Nose, Throat and Ear and their Accessory Cavities. By Seth Scott Bishop, M.D., D.C.L., LL.D. ....	203	Surface Anatomy. By T. Gillman Moorehead, M.D.....	436
Elementary Microscopy. By F. Shillington Scales, F.R.M.S.....	432	The After-Treatment of Operations. By P. Lockhart Mummery, F.R.C.S. (Eng.) ..	67
Enlargement of the Prostate. By Mansell Moullin, M.D. ....	141	The American Year-Book of Medicine and Surgery. By Geo. M. Gould, M.D.....	353
Essentials of Bacteriology. By M. V. Ball, M.D. ....	143	The Diagnosis and Modern Treatment of Pulmonary Consumption. By Arthur Latham, M.A., M.D.....	437
Eye, Ear, Nose and Throat Nursing. By A. Edward Davis, A.M., M.D.....	431	The Diseases of Society. By G. Frank Lydston, M.D. ....	208
First Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By Andrew Balfour, M.D., B.Sc. M.R.C.P. ....	257	The Doctor's Recreation Series. By Chas. Wells.....	440
Gallstones and Their Surgical Treatment. By B. G. A. Moynihan, M.S. ....	144	The Doctor's Recreation Series. By Ina Russelle Warren.....	201
Gynecology: Medical and Surgical. By Henry J. Garrigues, A.M., M.D. ....	285	The Houseboat Book. By William F. Waugh.....	215
Hand-Book of Diseases of the Ear. By Richard Lake, F.R.C.S. (Eng.) .....	71	The International Medical Annual.....	358
Hand-Book of Surgical Anatomy. By G. A. Wright, B.A., M.B.....	110	The Marriage of William Ashe. By Mrs. Humphry Ward .....	359
Hand-Book of the Anatomy, and Disease of the Eye and Ear. By D. B. St. John Roosa, M.D. ....	209	The Medical Examination for Life Insurance and Its Associated Clinical Methods. By Chas. Lyman Greene, M.D.....	281
Hare's Practice of Medicine. By Hobart Amory Hare, M.D., B.Sc. ....	211	The Naked-Eye Anatomy of the Human Teeth. By Thos. E. Constant.....	353
How to Study Literature. By B. A. Heydrick, A.B.....	200	The New International Encyclopedia.....	359
International Clinics. By A. O. T. Kelly, A.M., M.D.....	204	The Physician's Pocket Account Book. By J. J. Taylor.....	201
Law of Coroners. By William Fuller Alves Boyes, Junior County Judge of Simcoe.	434	The Practical Medicine Series of Year-Books. By Gustavus P. Hend, M.D.....	354
Light Energy. By Margaret A. Cleaves, M.D.....	67	The Preparation and After Treatment of Section Cases. By W. J. Stewart McKay, M.B., M.Ch., B.Sc. ....	202
Manual of Operative Surgery. By John Fairbairn Binnie, A.M., C.M.....	196	The Principles and Practice of Aecypsis. By A. S. Vallack, M.B., Ch.M., J.M.....	442
Medical Diagnosis. By Austin W. Hollis, M.D. ....	361	The Prospector. By Ralph Connor.....	143
Medical Electricity. By H. Lewis Jones, M.A., M.D.....	203	The Surgery of the Abdomen. By Bayard Holmes, B.S., M.D.....	142
Mental Defectives. By Martin W. Barr, M.D. ....	361	The Surgery of the Diseases of the Appendix Vermiformis and Their Complications. By William Henry Battle, F.R.C.S.....	139
Neoplasms as Seen Under the Microscope.	143	The Surgical Diseases of the Genito-Urinary Tract. By G. Frank Lydstone, M.D.....	437
Normal Histology and Microscopical Anatomy. By Jeremiah S. Ferguson, M.Sc., M.D.....	137	The Surgical Treatment of Bright's Disease. By Geo. M. Edebohis, A.M., M.D., LL.D.....	138
		The Treatment of Syphilis. By F. J. Lambkin, Lieut-Col. R.A.M.C. ....	210
		The Urine and Feces in Diagnosis. By Otto Hensel, Ph.G., M.D., and Richard Whirl, A.M., M.D. ....	441
		The Vermiform Appendix and its Diseases. By Howard A. Kelly, A.B., M.D.....	431
		X-Rays: Their Employment in Cancer and Other Diseases. By Richard J. Cowen, L.R.C.S.I., L.R.C.P.I. ....	213

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## *Original Contributions.*

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### **SOME OBSERVATIONS UPON THE TREATMENT OF LUPUS VULGARIS BY PHOTOTHERAPY, RADIOTHERAPY AND OTHERWISE.\***

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BY CHARLES R. DICKSON, M.D., TORONTO,

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Ex-President of the American Electro-Therapeutic Association and Delegate  
of the Association to the International Electrical Congress,  
St. Louis, Mo., U.S.A., 1904.

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UNTIL a comparatively recent period the treatment of lupus vulgaris had not been attended with brilliant results, and it remained for electro-therapy, as on so many other fields of conquest, to point the way to a more hopeful outcome.

This brief paper will not deal with the varied procedures of the past, dignified by the name of treatment, nor yet with all the minute and interesting details of modern scientific technique in such happy contrast with former methods. No striking, novel, original theories will be advanced, but merely a few unpretentious observations, particularly with regard to cases of long standing and unusual obstinacy, as a contribution to the literature of a subject which is deservedly attracting much attention at the present time.

In the treatment of lupus the X-rays scored their first therapeutic triumph, and a most notable one it was. To Finsen is due the credit for compelling the medical profession to recognize the therapeutic efficacy of light in affections of the skin, and this led to the employment of X-rays in the treatment of lupus, the result

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\* Read before International Electrical Congress, St. Louis, Mo., September 12-17, 1904, at a joint session of Section H with The American Electro-Therapeutic Association.

being that to-day phototherapy and radiotherapy are admittedly the most potent means at our disposal for combating and conquering a most distressing condition.

Each method has its advocates. In America, radiotherapy has claimed the allegiance of the greater number of investigators, probably due to the fact that nowhere has the static machine reached such perfection of development and use as here, and nowhere has more enthusiastic admirers, and for the possessor of such a machine the necessary X-ray apparatus involves but comparatively slight additional outlay, while the Finsen light is an expensive luxury, occupying much space and demanding more valuable time than the average practitioner can afford to give it.

Many very ingenious devices have been resorted to in the endeavor to overcome the difficulties which militate so seriously against the popularity of phototherapy. A form of apparatus which I have found of much service in many cases is a condenser spark lamp, with iron electrodes, known as "The Ultra." It is used with the alternating current drawn from an ordinary incandescent lamp socket. The diminutive arc of this lamp emits comparatively few light rays, but is very rich in violet and ultra-violet rays, as may readily be demonstrated. Being richer in the ultra-violet rays than the Finsen light, it is more powerfully and more rapidly bactericidal, and thus the time of exposure is materially lessened, so that from three to ten minutes only is required, instead of the half-hour, hour or more of the Finsen lamp.

While the ultra-violet rays emitted by the iron electrode arc are of shorter wave length, more refrangible, and not so penetrating as the rays of greater wave length—the longer ultra-violet, violet and blue of the large Finsen lamps—yet they have a wide field of usefulness in lupus, and my remarks upon phototherapy will refer to this branch of the subject alone, demonstrating some of its possibilities.

The treatment of lupus vulgaris in its more aggravated forms is far from a simple process; many considerations are involved and much of the success will depend upon the skill, resourcefulness and patience of the operator, not to mention the faith and perseverance of the patient. Fixed rules cannot be laid down, and yet there are certain preliminaries and adjuvants to treatment, attention to which may be of very material assistance, and these apply to both photo and radiotherapy.

The production of artificial fluorescence of the tissues by administering some fluorescing substance before raying, as elaborated by Morton, is an undoubted advantage. From five to ten grains of bisulphate of quinine may be given one hour before each raying for this purpose. Many other substances may be similarly employed—fluorescin and others.

In very obstinate cases the internal administration of creosote in a form which can be tolerated and readily assimilated, may prove of great value in hastening a cure, and attention should be paid to the general condition of the patient, if necessary.

The diseased tissues should be subjected to as little irritation as possible by manipulation in removing crusts or otherwise, and should also be kept as quiescent as possible in the intervals between treatment in order that extension of the disease may not be favored. If crusts or scales are present they should be removed before treatment if possible, and the parts cleansed. For this purpose, glycerin, to which has been added 25 per cent. of oil of eucalyptus, may be applied, but should it not soon cause loosening of the crusts further attempts at removal should be desisted from for the present and raying proceeded with, allowing the eucalyptus-glycerin to remain on. If the crusts are still adherent at the conclusion of the treatment, they should be kept covered with white vaselin until the succeeding treatment, when they will probably be found softened sufficiently to be removable by forceps or absorbent cotton.

The patient should avoid the use of water or of aqueous solutions for cleansing affected areas if the skin is broken; the parts should be wiped off with vaselin instead, and kept as dry and as clean as possible.

The eucalyptus-glycerin, varying the strength to individual needs, if necessary, may with advantage be applied to ulcerated or broken surfaces and a border of surrounding sound tissues before each raying in inveterate cases. It is quite transparent to ultra-violet and X-rays. In cases where the edges of an ulcer are healing very slowly, but the disease is not deeply seated, the application of a very thin layer of vaselin to the edges before raying has seemed to accelerate healthy granulation, and as white vaselin fluoresces a brilliant violet under the ultra-violet rays, while ordinary vaselin fluoresces a greenish blue, and to a much less degree, and, moreover, being of a yellow color, absorbs the greater portion of the rays, the former is preferable. Creosote, oil of cloves and oil of cinnamon are opaque to the rays; oil of winter-green fluoresces blue.

Rays of short wave length are absorbed and neutralized by those of greater length, and the greater the disparity the greater the amount of absorption; hence the short ultra-violet rays are thus affected to the greatest degree by those at the opposite end of the spectrum, the long red orange and yellow. For this reason the removal of crusts before phototherapy is employed is especially necessary, for the color of the crusts, reddish or yellow, will not permit the action of the ultra-violet rays upon the parts beneath.

Blood on the surface or circulating in the capillary vessels

has the same effect to a greater degree, and to counteract this effect the surface should be cleaned and adrenalin chloride applied to constrict the capillary vessels and drive the blood out of them, thus blanching the tissues, repeating the application as often as necessary during the sitting. The adrenalin may conveniently be added to the glycerin and applied before arranging the apparatus to be used; it will thus be afforded the few minutes necessary to its complete action before beginning operations, and raying should not commence until the parts are well blanched. It is rarely necessary to employ the adrenalin full strength (1-1,000), in fact weaker solutions may be more readily absorbed. This blanching of tissues and removal of crusts is also of benefit in radiotherapy.

In phototherapy a lens of rock crystal is sometimes employed to press upon the parts to make them anemic, and pieces of ice have also been used for the same purpose, but with the ultra-violet rays, which act so powerfully upon the surface, pressure is to be avoided as far as possible, as causing unnecessary irritation, and more reliance is to be placed in adrenalin. Rock crystal and ice are transparent to the ultra-violet as to the X-rays, while glass is opaque to both, a fact which is sometimes made use of.

If practicable, a margin of sound tissue about one-quarter of an inch in width surrounding the diseased areas should be left exposed to the rays, all other sound tissue in their range should be shielded; in the case of X-rays, thin sheet lead, or the tinned lead composition known as "X-ray metal," may be used, stellate apertures being cut to correspond with the areas to be rayed, and the points turned back. For the ultra-violet rays the metal is also applicable; oiled muslin is likewise convenient, offering sufficient protection to sound tissue, the rays being absorbed by the yellow muslin.

The eyes of both operator and patient must especially be protected when exposed to either ultra-violet or X-rays. An exposure of a few seconds to the direct action of ultra-violet rays will provoke a very smart conjunctivitis or worse, and it must not be forgotten, also, that these rays are readily reflected by metal or even the skin itself. Large goggles afford a convenient protection, glass being impervious to both varieties of ray, but in the case of the ultra-violet it is safer to protect the patient's eyes with oiled muslin closely fitted to guard against reflected rays.

Where the skin is broken, ulcerated or crusted over, the affected areas and surrounding tissues should be kept in as clean and healthy condition as possible. Immediately after treatment the parts should be cleaned off with vaselin and a very thin layer of some emollient ointment spread upon fine gauze (or, better still, on sterilized linen as being less irritating and more readily removable); this being applied to the crusted or ulcerated patches alone,



carefully avoiding covering sound tissues, which should be kept dry and clean. This dressing may be changed twice or thrice daily, depending upon the amount of discharge. Where the discharge is slight, the dressing may remain twenty-four hours or more. Should the tissues become sodden at any time, the dressing should be discontinued until they recover their tone.

After experimenting with a number of applications, which proved more or less unsatisfactory and were discarded in turn, the preference was given to compound thuya ointment. The indications were for a bland, emollient, antiseptic preparation, of sufficient consistence to remain in close apposition to parts to which it was applied; something that would soften crusts, facilitate their removal and retard or prevent their reappearance, that would inhibit or antagonize the action of the bacillus and check extension of the disease, that would protect denuded surfaces, favor healthy granulation and cicatrization, be antiseptic in character while unirritating, readily absorbable and of such degree of consistence that while it could be spread without difficulty at all seasons in a thin layer, it would not be softened too freely by the heat of the body and flow over sound skin, but would keep the discharge and consequent crusts from the sound margins. Oil of thuya in vaselin (1-16) having afforded satisfaction as a dressing in some broken-down cases of epithelioma which were being rayed, was resorted to in the lupus cases and combined in the same proportion with an emollient ointment consisting of lanolin (oz. iii., dr. iii.), white vaselin (oz. v., dr. v.), white wax (oz. iiss), oil of pinus sylvestris (dr. iv.), oil of juniper (dr. i.).

If the discharge be very profuse, a dusting powder may replace the ointment until the discharge is under control. For this purpose boro-chloretone or bismuth-formic-iodide will be found convenient and efficacious, but should be discontinued as soon as practicable on account of the tendency to form hard crusts.

Resinol ointment will be found of service in combating the erythema of surrounding tissues. Lanolin is also useful for this purpose.

As between phototherapy and radiotherapy for lupus vulgaris, the former is to be preferred in cases in which it is applicable, but a combination of the two methods is to be commended.

In cases to which it is suited, phototherapy possesses the advantage of requiring a less extended course of treatment; small circumscribed patches may disappear after two or three vigorous exposures. Better cosmetic results can probably be obtained by phototherapy, the extent and degree of action is more under control and reaction is less prolonged. It is the preferable method for indurated marginal areas, such as the lobe of the ear or other parts liable to break down under vigorous X-raying, also

where tissues are thin, as the cheek and all other places where deep penetration is not required. For the eyelid it is the more commendable procedure, and the lid will protect the eye better from the effects of a short ultra-violet exposure—four minutes being sufficient—than from a longer and more penetrating X-ray exposure; also, there will be no fear of epilation of the lashes as would result from exposure to the X-rays, and there is the same recommendation with regard to the brow, lip, head or other parts on which there is hair. Phototherapy is also of great value in toning up broken-down tissue and promoting the healing of ulcerations.

On the other hand, radiotherapy is preferable when the area involved is extensive, as a larger portion can be exposed at one time with radiotherapy; also where greater penetration is required, as when the tissues are tumefied, hypertrophied or pigmented, as in these conditions the greater proportion of the ultra-violet rays will be absorbed and neutralized before reaching the seat of the disease, and where much tumefaction, hypertrophy or pigmentation occur in a course of phototherapy, the treatment should be changed to radiotherapy at once, or much valuable time may be lost. Radiotherapy is also more applicable where mucous membranes are involved, not easy of access to ultra-violet rays, such as the nasal mucous membrane.

Where there is fibrous or cicatricial tissue, this may sometimes be broken down by vigorous but judicious X-raying, which being accomplished, the rest may be left to phototherapy. Where there is ulceration, this may be stimulated by radiotherapy, and here again phototherapy resorted to if it is a suitable case.

Illustrative of these latter points the salient features of a couple of cases might be cited. In a man, aged seventy years, the disease had been present for twenty-five years, and had undergone all the classical treatment, applications innumerable, curetting, excision, galvano-puncture, *et al.* It was situated at the back of the neck, towards the shoulder, and was of ovoid shape, two and five-eighth inches in its longer diameter, one and one-half inches across, fibrous in character, and with a much depressed cicatrix running down the central portion, around which lupus was much in evidence. The sites of galvano-puncture were the only locations where recurrence had not taken place. Ten exposures to the ultra-violet rays alone, from ten to fifteen minutes each, and seven more with the static brush discharge, in addition, showed that progress would be slow. All but the fibrous tissue was then carefully screened, and X-rayed at close range—from four to six inches—on nine consecutive occasions for fifteen minutes each with a fairly high tube, following each treatment with the brush discharge to the surrounding parts. This caused the fibrous tissue to soften and break down, and after thirty-six

further exposures to ultra-violet rays all ulcerated patches had healed, leaving a surface almost level, very unlike the former depression. Some further ultra-violet raying was done as a precautionary measure, as the skin was very thin where subject to pressure by the neck-band of the shirt, and showed proneness to chafe.

In another case, a man aged fifty-five years, the lupus was of fifteen years' duration involving portions of the forehead, brow, both upper and lower lid, cheek, ear, and all of the temple, running well into the hair; an area four and a half inches vertically and two and a half inches across, with all these tissues and those underlying immovably adherent to the bones beneath, inability to open the jaws wide enough to eat a banana, and marked flattening of the prominences of the brow and cheek, denoting bone involvement. There was a crusted, ulcerated portion, measuring three inches vertically, one and a half inches across the narrowest portion, and two inches across the widest. The ulcerated portion only was exposed to the X-rays for fifteen minutes each on ten succeeding days, the static brush discharge being used on the surrounding parts meanwhile. Twenty-four exposures to the ultra-violet rays followed; then the patient was allowed to return home, and directed to continue a daily application of the ung. thuya co., the ulcer having become much smaller. Four weeks later the ulcer was one and fifteen-sixteenth inches vertically, one-half inch across the top, five-sixteenth inches across the centre, and three-quarter inches across the bottom. After thirty-six more ultra-violet exposures, all ulceration was completely healed, and the skin and underlying tissues freely movable, except a small portion over the malar prominence and outer part of the lower lid.

Cases may arise in which the X-ray, after a prolonged course of treatment, seems to lose its former good effect, or sometimes the parts become abnormally sensitive to it. In the event of either of these contingencies, recourse may be had to the ultra-violet ray for a time until the parts recover their tone, when a return may be made to the X-ray.

In some patients the reaction after exposure to ultra-violet rays, even for very short periods, is so exaggerated that this form of treatment cannot be employed. Such cases should be exposed cautiously to the X-ray.

In a case of long standing, which had been under the care of a great many physicians, and where a great many expedients had been resorted to in addition by the patient himself, the nose being the part involved, the X-rays effected a remarkable improvement for a time; then, seeming to lose all their efficacy and the case being at a standstill, more vigorous X-raying resulted in ray erythema. When this had passed off, an exposure to the ultra-violet rays of five minutes to each side of the nose, caused a very severe reaction, erythema extending over the cheeks and

eyelids, tumefaction of the tissues affected, very acute coryza, with burning sensation about the nostrils and upper lip, lachrymation and pain. An ultra-violet exposure of the back of the neck for eight minutes on the same occasion, to abort an incipient carbuncle, of which the patient had had a number, was eminently successful in attaining its object, but also resulted in blistering the neck quite extensively, as from a severe sunburn, and the patient declared that he preferred the disease to the cure in this case. The neck had never been X-rayed. In the same case the application of adrenalin chloride was attended with such discomfort, even in 1-10,000 strength, that it had to be discontinued; it also intensified both ultra-violet and X-ray action very greatly. This case did better when the X-ray was returned to, with short sances of eight minutes.

The advent of erysipelas in a part apparently cured, may start up fresh foci of the disease to greater vigor than formerly, and may cause the disease to spread and also to appear in parts hitherto free from it. In such cases the X-ray will be the preferable treatment.

The duration of exposure to either rays will depend largely upon the state of the skin, the size of the lupus, and the extent and degree of the reaction. Unless reaction is too pronounced, daily exposures are preferable. From three to ten minutes is the usual time for exposing one portion to the ultra-violet rays. X-ray exposures vary from eight to fifteen minutes with a fairly high tube not usually nearer than six inches from the part exposed. With the ultra-violet ray the lens of the lamp should be as near as possible to the part being treated.

When tissues are breaking down under X-raying, or erythema is becoming too marked, the brush discharge from the static machine is sometimes of assistance to restore tone.

In view of the fact that ultra-violet rays induce fluorescence, convert the oxygen of the air into ozone, cause chemical combination, give rise to oxidation and decomposition, possess a direct and vigorous bactericidal action, have a powerful effect upon capillary circulation, producing not a more transitory but a persisting dilatation of the capillary vessels, promoting osmosis, influencing nutrition and favoring absorption, is it too much to expect that "photolysis" and "photophoresis" may open up fields of research as yet comparatively unexplored, and may come to mean much to suffering humanity, dealing with the power of light, and more especially of the ultra-violet rays, to break up medicaments into elementary forms, or produce new combinations more absorbable, and to carry such into the system as ammunition in the battle against disease, thereby on the one hand assisting the therapeutic action of light, and on the other hand utilizing the lytic and phoretic action of light to aid the therapeutics of external and internal medication?

**A CASE OF MALIGNANT ENDOCARDITIS IN A CHILD.**

BY W. H. PEPLER, M.D., C.M., L.R.C.P. (LOND.).

Assistant Physician Toronto General Hospital, Pathologist Hospital for Sick Children, Toronto.

*History.*—J. H., aged eight years; sex, female; Canadian; family, unimportant. Previous: Had scarlet fever about three years ago, following which a severe attack of rheumatism. Has been troubled since with palpitation of the heart. Present: Has been ill for about three weeks with cold and general malaise. About five days ago, after some exposure, she became much worse. Some pain in the limbs, not in the joints, which was relieved by rubbing. Has had a severe cough; no expectoration. Some pain in the chest, especially on left side. On admittance to the Hospital for Sick Children, on January 8th, 1904, the temperature was 104 deg. F., pulse 138, respiration 38.

*Examination.*—Patient lying on her back in an easy attitude; cheeks flushed; eyes bright, expression anxious; accessory muscles of respiration at work; lips dry and glazed, of dusky hue; tongue coated; breath foul. Heart: Area of visible pulsation very large, from sternum to an inch beyond the nipple line; apex beat, one and one-half inches beyond nipple in sixth interspace; thrill to be felt over pericardium; percussion fails to define much hypertrophy, save that apex is displaced, as above mentioned. Auscultation: A double murmur is to be heard all over heart, transmitted to back, and heard loudest over the apex. Lungs: Left side of chest larger than right which shows very limited movement and some retraction of lower interspaces on inspiration. Vocal fremitus increased on right side, where also some tactile fremitus can be felt after patient coughs. Percussion: Some flatness, but no absolute dulness to be made out on left side; right side is dull as high as the upper border of the middle lobe, and above this line there is hyper-resonance. Auscultation: Right side, upper lobe gives crepitant râles. At the lower border of the lower lobe are to be heard fine crackling râles, occasionally; between these areas all the sounds are diminished and distant. Left side: upper lobe, respiratory murmur is harsh; over the lower lobe bronchial breathing is heard, but no râles.

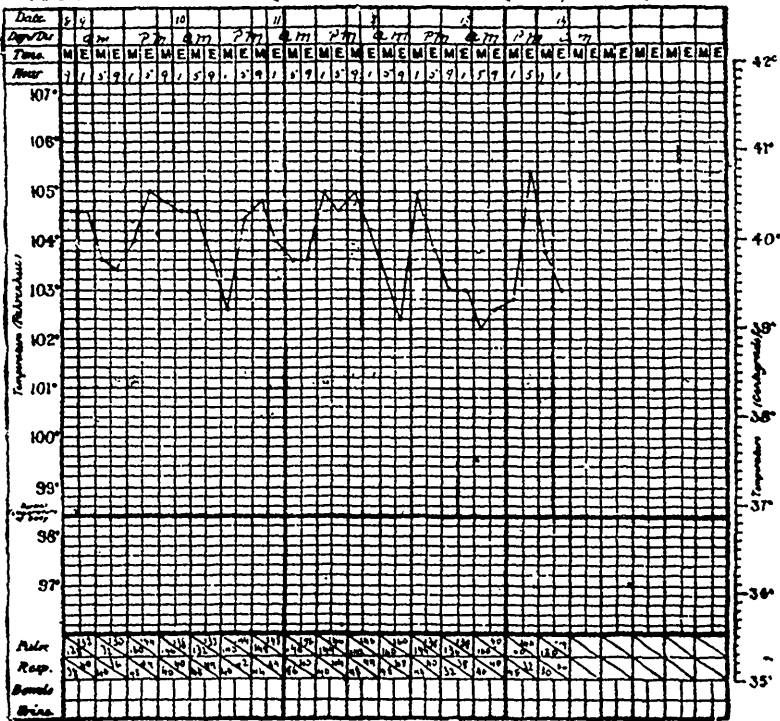
January 10th.—Physical signs as before. Hypodermic needle inserted in the mid-axillary line in seventh interspace, with negative results.

January 11th.—Left side of chest immobile at full inspiration; vocal fremitus is rather less; dulness on percussion as high as third interspace in anterior axillary line; coarse bubbling râles can be heard over the lower left lobe behind, over the lower part of the upper lobe bronchial breathing is very marked.

January 12th.—Patient very much prostrated; lower lip excoriated; pulse frequently becomes irregular; breathing difficult and labored, but cyanosis is slight.

January 13th.—Color has become waxen; breath very foul; cyanosis more marked; abdomen is distended; some delirium and restlessness;; carphologia and subsultus tendinum, varying with a semi-comatose condition; pulse weak and very irregular; inhalations of oxygen were used for three minutes every half hour, and have improved condition somewhat. Patient has been lying on

**HOSPITAL FOR SICK CHILDREN, TORONTO.**



It is desirable to take the temperature more frequently than evening and morning, the hours should be recorded, and a vertical line drawn to red of the day.

left side for last twenty-four hours, and complained very much when disturbed. Examination of heart shows a dilatation of right side, dulness extending only a finger's breadth from the right sternal margin.

January 14th.—Patient's condition worse, symptoms of intoxication being more marked. Patient had a series of chills; temperature went up to 105.2 deg.; sponging proved ineffectual; patient gradually became weaker, and died at 10 a.m.

Autopsy.—Six hours after death; body well developed and nourished; rigor mortis and post-mortem staining slight. On

section—Thorax: No pleural adhesions; both pleural cavities contained a considerable quantity of sero-purulent fluid: right side, six ozs.; left side, twelve ozs. Right lung: Filled cavity fairly well, was soft and flabby, pitting on pressure, crepitates and floats; on section, smooth, darker than normal, showing hyperemia throughout, and edema of lower lobe; small sections taken from different areas readily float; no consolidated areas visible; bronchi normal. Left lung: Considerably collapsed, and pressed upwards and backwards; crepitates throughout, though less than right; responds to hydrostatic test; bronchi normal. Heart: Pericardium non-adherent; cavity contains about four ozs. of sero-sanguino-purulent fluid; both surfaces markedly roughened, dull and dark in appearance; heart weighs four and a half ozs., is oversized for child of eight years, but is firm. On section, right side muscle appears paler, but not thicker than normal; endocardium shows no signs of inflammation, no dilatation of cavities; pulmonary and tricuspid valves competent and natural in appearance; left side, wall of ventricle hypertrophied, three-quarters of an inch thick; endocardium healthy; wall of left auricle slightly thickened; posterior and outer parts completely covered with extensive verrucose excrescences, greyish-white in color, quite firm in organization. Mitral valve admits three fingers; cusps show large vegetations completely covering them, and extending down the tendinous cords for a short distance; no ulcerative process visible microscopically; the valve is thickened, but no tearing nor perforation. Aortic valve looks healthy and competent. Coronary and other vessels look normal. Liver: Somewhat enlarged, pale, firm. Gall-bladder full and duct patent. Spleen: Enlarged, seven inches by three and a half inches, looks hyperemic and softened; mesenteric glands not enlarged. Kidneys: right shows stellate hemorrhages in cortex; capsule non-adherent; cortex not thickened. Left—in lower quarter is a fibrous scar, sclerotic and white, extending through cortex and medulla, probably an old infarction. No metastatic abscesses nor emboli found. Other organs and structures appear healthy.

*Microscopic Examination.*—Section of vegetation from left auricular wall shows inflamed connective tissue, round cell infiltration and granulation tissue, some organized fibrin.

*Bacteriologic Examination.*—Cultures from the pericardial fluid show the diplococcus pulmoniae. Heart blood does not show anything.

Features of interest in this case are: (a) The extensive mural distribution of the vegetations, which alone mark it as malignant; (b) the mural excrescences being limited to the left auricle; (c) the pure pneumococcal infection; (d) the enlarged spleen; (e) the severe pericarditis and pleuritis, with sero-purulent effusion as complications; (f) the absence of any apparent preceding or accompanying pneumonitis; (g) the absence of emboli.

Regarding the distribution of the vegetations, we all agree, I think, that the presence of extensive vegetations on the cavity endometrium always means malignancy. Both Osler and Holt mention the greater frequency of the involvement of the left ventricle over any other surface in mural endocarditis.

Of thirty-three cases of malignant endocarditis reported by Weichelbaum, seven showed a pure pneumococcic infection. Twenty-five per cent. of Osler's cases were from that source.

Traube says endocarditis from pneumococcic infection is short in duration, less fatal, temperature continuous, and embolisms rare.

Viewed from a pathological standpoint, a severe verrucose endocarditis, due to pneumococcic infection, may be just as malignant as a severe ulcerative process.

Henry L. Elsner, Professor of Medicine, Syracuse University Medical College, reports a case of extensive mural endocarditis, of pneumococcic infection, in which there were no symptoms nor signs of pneumonia, and makes this statement, that endocarditis following or accompanying pneumonia is rather rare.

Of 254 cases of pneumonia seen in the Tübingen clinic (Henke Virchow's Archiv., Bd. clxiii., No 1.) but one was observed to have endocarditis.

We know that the endocarditis of pneumonia has special anatomic peculiarities, viz., the right side of the heart is attacked with an unusual degree of frequency, and the aortic more frequently than the mitral valve.

Sandford Blum, Professor of Diseases of Children, University of California, reviews the subject of the etiology of endocarditis, with especial reference to bacterial agencies, and sums up his thesis thus: 1. Bacterial agencies are active in the cause. 2. The presence of bacteria in the circulation is not sufficient cause alone; a *locus minoris resistentiae* must exist (experiments of inoculation, in which the endocarditis is not wounded, give negative results, but when you wound the endocardium, as by puncturing the aortic valves, through the left carotid artery, plus inoculation, you can produce an infective endocarditis). 3. Not all bacteria cause endocarditis, but in general those which are pathogenic for the individual. 4. Congenital and infantile, due to defective development. 5. Endocarditis due to mechanical or chemical insults.

Dr. Glynn, in his Lumlein lectures at the Royal College of Physicians, London, 1903, speaks of the great frequency of enlarged spleens in his cases of endocarditis and looks on this as a very valuable aid in diagnosis.

Osler says the diagnosis of the condition rests on physical signs that are notoriously uncertain.

The examination of the blood is important, and should be made in all cases where infection is suspected.



## COUGHS AND COLDS.

BY WILLIAM F. WAUGH, M.D., CHICAGO, ILL.

THE digestive system is taking a well-earned rest, after its painful experiences of the past summer. Many a little grave is filled by the patients of the men who "do not believe in intestinal antiseptics," and who "do not know that the sulphocarbolates are used internally." Those who rely upon chalk mixture, rhubarb, calomel, bismuth, tannin mixtures, Hope's paregoric, and those who "are going to try Haller's acid next summer," have made their usual average, saving all but the bad cases, and winning just enough success to encourage them in persisting in the old way. The men who do not know it all, but are willing to try a new idea, have tested the sulphocarbolates and the alkaloids, and have scored heavily in the race for life and for success. They have renewed their faith in their art, and once more believe that the doctor's profession is a God-sent one, and that they can do something else besides mutilate their patients.

Now we have the respiratory mucosa to deal with. Who was it said the doctor goes forth to visit his suffering mucous membranes? He was right, for a very large percentage of our work is with these tissues.

Is there any malady that has more remedies than a common cold, or is more universally mistreated? Nearly everyone recommends treatment involving the swallowing of much water, and this fills the blood-vessels to repletion, and they discharge their surplus into the channels offering the least resistance, and these are the partially paralyzed vessels of the inflaming respiratory tract.

They must be partially paralyzed, for the vasomotors lose their tonicity and permit more blood to enter than is normal. Why not squeeze out this surplus by giving strychnine up to its full effect, till the vasomotors are restored to normal tone? But if there is too much blood here, there must be too little somewhere else, as there is nothing to indicate that there is more blood in the body than the normal quantity. But this means that some other vessels are partly empty, are contracted—that is, their vasomotor contractors are spastic. Hence we may reach the difficulty in another way, by relaxing these spastic vessels and permitting the surplus blood to flow out of the distended pituitary tissues. Here is where our hot foot-baths, hot drinks, and depressing remedies come in. We may combine these two principles, by adding to our strychnine either aconitine or veratrine, selecting

the latter if the elimination is faulty. Burggraeve said that both these processes could be stimulated at the same time, the spastic cells or fibres taking up the aconitine and the patetic fibres absorbing the strychnine, just as bone cells absorb lime and nerve cells phosphorus, both presented to them by the blood. Is there any more difficulty in conceding to the cells the power of taking up such drugs as they require to restore physiologic balance, any more than the power of taking up such food as they require for the same purpose? Just what is the difference between foods and drugs, if either is needed to restore the equilibrium we term health? Try it, anyhow; giving strychnine arsenate, gr. 1-134, and amorphous aconitine, same dose, and repeating every fifteen minutes till the effects of one or the other are manifest, in slowing pulse or increased arterial tension. If the patient is below par, add digitalin Germanic (really digitalein), gr. 1-67, to reinforce the strychnine; or if the pulse is full and fast, the emunctories closed, add veratrine, gr. 1-134, till the occurrence of slight nausea or gastric burning indicates that enough has been taken. By this time the "cold" will be a thing of the past, and the doctor will have learned, if he did not know it before, what truth is in Burggraeve's theory as to the simultaneous action of apparently antagonistic remedies.

More than once we have spoken of faulty elimination in connection with colds. Were we to desire a cold, we would eat a Thanksgiving dinner, and shut up the eliminative doors. Don't try it; but the next case you get, stop all food, and especially all drink, and eliminate, sweep out the alimentary tract, open up the skin with pilocarpine, or the kidneys with bryonin or apocynin, or both by veratrine; and the phenomenon of a disease "jugulated" will be demonstrated. The old woman—it must have been one—who advised to "feed a cold," must have considered the cold's interests, but not the patient's. The absolute stoppage of all food and drink—we mean water, too—gives the best results when trying to abort an attack.

The greatest of remedies for a tight dry cough is to be found in ipecacuanha—not the crude drug, which contains the acrid emetic principle, cepheline, but the milder emetine, which is also an eliminant and acts on the liver more effectually even than does calomel. Give gr. 3-67 to an adult every half hour till the secretion becomes thin and free, and the hyperemia of the bronchi and larynx has subsided. If nausea supervenes, lessen the dose, but continue the remedy. It has no known equal. By leaving out the cepheline you get the maximum effect on the respiratory mucosa with the minimum of nausea. In the rare cases, when there is an idiosyncrasy against all forms of ipecac, even in minute doses, we may fall back on apomorphine. This is not

nauseant when taken by the stomach; it acts even more powerfully than emetine in stimulating the bronchial mucous secretion. Nevertheless, emetine is to be preferred for routine use, because apomorphine is more costly, and sometimes, and always in large doses, acts as a depressant, which emetine never does. Apomorphine may be given in doses of gr. 1-67 every quarter hour, or up to gr. 1-10, with impunity and benefit.

If the patient is robust and there is some fever, lobelin is perhaps a safer and more effective remedy. Give gr. 1-12 to 1-4 every fifteen minutes in hot water, till nausea or diarrhea occurs; and the crescent inflammation will be found to have thought better of it, and retired to wait a more propitious season. This is a remedy that has been shunned by the regular profession, principally because it was a favorite with Samuel Thompson. In his hands it was shown to possess great powers for good, if well directed, and for evil, if incautiously administered by the ignorant. Such considerations do not weigh with the physician who desires all the good he can secure in his work; and in lobelin he will find a decided value, in combating incipient inflammations with excited circulation and unimpaired strength. It is a most depressing emetic, with a feeling of wretchedness that makes it far from popular with the patient; and even though the eclectics may be right in asserting that a remarkable sense of well-being follows the subsidence of the emesis, it is hardly probable that this outweighs the distress. For that matter, a similar sense of euphoria follows all emetics and cathartics when truly indicated.

In spite of Murrell's assertion that codeine is simply a "little morphine," only differing in the dose, we have found codeine a better sedative for irritative coughs and less disposed to interfere with the digestion and elimination than morphine, and just as good, if not superior, to the much vaunted heroin. In doses of gr. 1-12 for an adult, codeine is the most effective as yet known to soothe such a cough. It acts well with emetine, adding camphor monobromide if the spasmodic element is manifest. Emetine, gr. 3-67, codeine, gr. 1-12, and camphor monobromide, gr. 1-2, repeated every ten minutes, forms an excellent combination. But we are averse to opiates in all forms, and always persuade our patients to await the slower but more desirable effects of emetine.

No good commander neglects the accessories, however much faith he places in his heavy artillery; and we always see to the hot mustard foot-baths, the confinement in a warm, well air-moistened room, steam inhalations, quiet, abstinence from the use of the voice, the use of rubefacient liniments to the chest, and over the pneumogastric nerve in the neck if irritated notably, and such protective astringents as hydrastine, before the patient is per-

mitted to return to the open air—hydrastine, because it contracts the capillaries, which are left weak and atonic, and by its use we guard against that most dangerous thing, a relapsing broncho-pneumonia.

What has been said anent the causation of catarrhs by over-eating, may be taken as a hint of the importance of keeping the bowels clear. If we limit the quantity of ingesta so as to keep the blood-vessels from being distended, we may add to the effect by draining away some of the serum, and also stop the absorption of toxins from the alimentary canal, by a few doses of saline laxatives. Blood laden with toxins must be irritant to a mucous membrane hyperemic with beginning inflammation; and we thus remove one element of the causation. Whatever may be our method of treatment, it is more effective for keeping the bowels clear and aseptic.

An agent whose place is universally mistaken is cubeb. This has been long employed as a succedaneum for copaiba, but its action is radically different. Copaiba dries up mucous secretions, pathologic and physiologic. It is of considerable value in the declining stages of a bronchitis or other respiratory catarrh, when there is a relaxed membrane and free secretion. Here it will often restore the affected membrane to a healthy state, when if administered earlier in the attack will do harm. This has given copaiba some repute with the druggist and laity, as a remedy for colds, "when everything else had failed." But the evil repute of this remedy, and its still more evil effects on the stomach, render it desirable to replace it by a more modern agent, if possible. This we find in hydrastine, which, given in doses of gr. 3-67 every hour, will dry up the secretion and restore the appetite at the same time. It contracts the capillaries, and if berberine be added to contract the relaxed connective tissue, we have one of those exact and powerful therapeutic applications familiar to the employer of active-principle therapy—and to any one else. Give berberine in doses twice larger than hydrastine.

But we have wandered from our subject—cubeb. This does not dry like copaiba, but rather resembles emetine in facilitating secretion—it loosens a mucous discharge. If copaiba be given too soon, while the membrane is still hyperemic, it causes an unpleasant sense of heat and tightness. Cubeb instantly relieves this, hence the patient praises it. Moreover, it tends to restore a healthy secretion in place of a pathologic one, and promotes a cure. The ordinary preparations are uncertain and feeble, but cubeb, in doses of gr. 1-12 every hour, answers well.

Sometimes there is need of gently and cautiously stimulating the vitality of the diseased tissues, to enable them to throw off the malady more speedily, and for this purpose, sanguinarine,

gr. 1-67 every hour or two, does excellently. This is also the remedy for bronchorrhea in the aged or infants, when there is abundant secretion and deficient sensibility, so that secretions collect to a dangerous extent. Sanguinarine makes the patient cough harder and expel the mucus. The dose for an adult may be averaged at gr. 1-12 every two hours.

To the student of therapeutics there is something peculiarly attractive in this fitting of the expectorant remedies to the pathologic condition for which each is suited, instead of commingling them heterogeneously, as is too often the custom. There are many diverse conditions met in these maladies. No two of the expectorant remedies have exactly the same action or clinical application. It is not at all difficult to distinguish these differences, nor to fit the remedies to each. It gives a desirable precision to one's therapeutics, a certainty to his prognosis, and perhaps it tends, like active-principle medication in general, to a quite unaccustomed and "unscientific" positiveness of assertion. At least, I note in the reviews of my last book ("*Alkaloidal Therapeutics*") that this positiveness is adverted to with disapprobation. Well, I cannot help it—and I do not wish to help it. After practising for a third of a century, mostly in the old way, it is such a relief to the mind to be able to say a thing positively, that the temptation is irresistible. Positive facts should be positively stated. The Decalogue says, "Thou shalt not bear false witness." This seems on the whole preferable to saying: "It has sometimes appeared to us that under the circumstances it might, at least at times, be advisable to approximate somewhat in the direction of the supposedly veracious."

Most of our knowledge is relative, tentative; we as a rule advance our propositions with the underlying qualification that the matter is presented as being what we then believe to be the best explanation in harmony with the prevailing theories, and the other beliefs of men. When some such revolution as the evolution theory arises, and appears to us to be the most reasonable explanation of phenomena, we must rearrange our ideas to harmonize therewith. When we say that cubeb loosens expectoration, we mean that this result has followed the administration of possibly twenty thousand granules of this agent we have used in practice. That seems to us sufficient ground for a pretty positive statement. Were we to use the cubeb berries, in any variable degree of decomposition, we might be excused for saying that maybe they dry up secretion, or maybe they loosen it.

## THE MAMMA: ITS PHYSIOLOGICAL PURPOSES.\*

BY THOMAS H. MANLEY, M.D., NEW YORK,

If we appreciated the treatment of the numerous pathological conditions of the female breast with a more complete knowledge of all its functions, purposes, and of its complex structures, we would hesitate longer, and more frequently resort to conservative methods, rather than hastily resort to its total sacrifice by amputation in various diseased conditions of it.

Those large, projecting, pyramidal, pectoral bodies in the adult are at once an integral part of the sexual system, besides serving an important cosmetic purpose, providing protection to the anterior wall of the thorax and supplying nutriment to the new-born.

It is the only secreting organ calling for a vacuum to drain it, and discharging directly on the surface.

The description of its structures by nearly all anatomists is faulty, inadequate and misleading.

Our faith in the teachings of writers on anatomy is so settled that to even question their accuracy has been regarded as a stupid effrontery.

We have all been taught that the breast is a "gland with a capsule."

Testut denies that it is a gland, but an aggregation of widely scattered, separate, secreting lobes, each one opening on the surface of the mamilla independent of the other.

The mamma has an excessive fibrous development in its parenchyma, the membrana cribrosa, without any definite organization or arrangement, stretching from the armpit to the sternum and from the clavicle, to blend below with the abdominal aponeurosis; but it constitutes no capsule, and is so intermingled with the panniculus adiposus, the secreting lobes and lobules, as well as with the overlying integument, that its complete separation is impossible. The adipose tissue of the breast is of a deep yellow color; its proportion varies, but in corpulent individuals it constitutes the main volume.

It lies in a deep layer over the secreting structures: fringes and corpuscles of it everywhere permeate the parenchyma.

There are four sets of independent secreting glands in the mammary body. First, the sudoriparous and sebaceous, in their overlying adherent integument; second, the sebaceous or oleaginous, in the tissues of the mamilla; third, diminutive,

\*An abstract of essay read at Meeting of Mississippi Valley Medical Association, held in Cincinnati, Ohio, Oct. 14, 1901.

tributaries in the areola; fourth, the lobular; isolated lobes of the mamma. The latter drain into the galactiferous ducts, which open separately on to the surface of the mamilla.

The milk ducts pursue a radiating direction as they extend inward and break up in canaliculi in the lobules.

A critical dissection of the breast during the function of lactation will display the lactiferous ducts varying widely in diameter and length, just as we will find some of the lobes diminutive and others of considerable volume. The nipple is made up of white and yellow elastic tissue, galactiferous tubes having a cutaneous investment. The nipple contains no angiomatic tissue nor muscle fibre, and hence, strictly speaking, it is not an erectile organ; it is sometimes rudimentary, and often deformed through congenital or acquired conditions.

The base of the nipple is guarded by a circular disc of integument of a remarkable histological composition, the areola. This, like the nipple, in its deeper layers is continuous with the fibrous felting of the mamma.

The principal vascular supply to the breast is by the internal mammary artery, while its larger veins drain into the axillary trunk.

The most notable feature in connection with its nerve supply is the preponderant influence on the sympathetic; no direct connection can be traced in its supply from the cerebro-spinal system with that of the generative branches from below.

Lymph nodes are lodged in groups at the outer, upper and inner aspect of the breast, but there is very little lymphoid tissue in the organ itself. Zappey depicts a most elaborate arborescent display of lymph vessels in the overlying integument, but several independent investigators have been unable to verify their presence by any description of injection. There can be scarcely any doubt but the importance of the lymph ganglia has been greatly exaggerated in their relation to function, etc., in the mamma.

The "modern cleaning out," radical operation is based on the unproven assumption that they are the *fons et origo mali* of all serious mammary affections.

In function, the mamma is at once a duct and a ductless gland, *i.e.*, it has an external and an internal secretion. We have not isolated in its physiological state its internal secretion, nor either have we that of the thyroid, the spleen, or supra-renal bodies.

In the child or the maiden, we find its elements as but shadowy and ill-defined; its acinous arrangement can be scarcely outlined.

In the non-child-bearing, and during the intervals of lactation, it is essentially a *ductless* gland; it discharges no secretion,

but rather absorbs it, from which we must assume that the maintenance of the new-born is but one of the functions of the female mamma.

In two instances of double amputation of the breast coming under my observation in young women for cystic disease, both later married, but neither ever conceived. The complete amputation of both breasts is well known to produce most profound psychological impression, and often when but one is totally removed.

The advent of nearly every variety of organic lesion here is quite invariably ushered in by depression of spirits and spells of distressing melancholy.

Beatson's operation has clearly demonstrated the intimate relations subsisting between the breast and the ovaries. In monorchids, in cryptorchids, or hermaphroditism—imperfect development of the external male genitals—gynecomastia, or very large development of the mammae, is a most conspicuous figure.

#### CONCLUSION.

The mamma is a highly organized, and, structurally, a most complex organ.

Its functions are manifold. It is an essential and integral part of the generative system. Intermittent in function, like the testes, total ablation, like double castration, makes its impress on the sensorium.

Very frequently degenerative or pathological changes begin in a single isolated lobe, about twenty of which are in each breast. In all non-malignant affections, radical measures should be limited as far as possible to the affected area or lobe.

It is only in malignant disease of a progressive type, and life is imperilled, that total sacrifice of the breast is justified.

Inasmuch as the functions and purposes of the axillary lymph ganglia are yet imperfectly understood, and their removal quite invariably enhances the risks of operation, involves a wide mutilation of the chest walls, and always leaves more or less impediment in shoulder action, or even at times a painful tumefied limb, it is only as an extreme and exceptional measure that their complete extirpation should be practiced.



## Proceedings of Societies.

### CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

A STATED meeting of the above society was held November 7th, 1904. The President, Dr. Daniel S. Dougherty, occupied the chair. The following interesting specimens and papers were presented:

*Specimen of Gangrenous Appendix.*—Dr. J. A. Robertson showed an appendix which had been removed from a patient the previous week. During the afternoon he had severe gastric pains and vomiting. At ten o'clock the same evening a diagnosis of appendicitis was made, based on the tenderness at McBurney's point at the ventrix. Slight intestinal obstruction was also suspected, as the vomiting persisted, and toward morning became fecal in character. The temperature was 103.8 deg., followed by collapse the next morning, and during this collapse the operation was performed, the appendix being removed about 9 a.m. Examination of the appendix revealed the fact that it was gangrenous near the tip, and midway there was a stricture. Opposite the point of stricture were two gangrenous spots, just ready to break through. This specimen demonstrated the rapid development of the disease, and emphasized the need for early operation. The speaker had seen seven consecutive cases of gangrenous appendicitis within the past two years, and had operated on them, with but one fatal result, and in that case he had hesitated more than twenty-four hours after the appearance of symptoms before operation. In his opinion, operation should be performed during the first twenty-four hours, or not at all.

Dr. A. Lyle opened the discussion. He said that the point he thought of greatest importance was the sudden drop of temperature. Gangrenous appendicitis can almost always be diagnosed by this sudden drop of temperature. Many physicians might interpret this as a sign that the patient was on the road to convalescence and postpone operation, and the case would probably result fatally. In the suppurative type of appendicitis, the temperature continues to rise slowly and does not drop as suddenly.

Dr. B. H. Wells said that he had seen this patient in consultation with Dr. Robertson, and an important feature, not men-

tioned by the first speaker, was the sudden cessation of pain. The temperature in appendicitis cases he thought a very irregular guide, as is the pain, or, in fact, any single symptom. The patient may have normal or subnormal temperature and normal or very slow pulse, but if the pain is severe and then suddenly stops, it is well to proceed carefully. The speaker had examined many cases under these circumstances, and often found extensive gangrenous appendix and intestines.

Dr. M. Packard said that in his opinion from the standpoint of diagnosis it was immaterial how the temperature stood, but the pulse was an important factor. If the patient has a rapid pulse, with a normal or subnormal temperature, and a pulse of 100 and a temperature of 98.6 or even 98, operation should be performed. Another point mentioned by Mannenberg, and substantiated by Nothnagel as important in the differential diagnosis of appendicitis, is that of the second pulmonary sound of the heart, which is usually accentuated in appendicitis. Mannenberg reports this symptom in 170 out of 200 cases of appendicitis which he examined.

Dr. Robertson, in closing the discussion, said that at the operation it was found that the complication which had been suspected was found to be present. About eighteen inches from the appendix the small intestine was strangulated and twisted, and the mesentery was twisted throughout, and for a few minutes we debated whether it would be wise to resect this portion of the intestine, but Dr. Wells suggested that it be closed.

*Specimens of Tubal Pregnancy.*—Dr. L. J. Ladinski reported three cases of tubal pregnancy occurring in his practice during an interval of twelve days, and showed the specimens removed from these patients. The first patient had been bleeding from the uterus for four or five days, but the discharge had disappeared the day before the speaker saw the patient. Temperature was normal, pulse 110. Examination revealed a somewhat enlarged uterus, a characteristically enlarged tube, tender and sensitive to the touch. No bleeding from the uterus, however. A diagnosis of tubal pregnancy was made and operation advised. The following day the uterus was curetted and abdomen opened. There was free blood in the peritoneal cavity. The enlarged tube, with the fimbriated extremity very much dilated, and presenting a large blood clot, from which hemorrhage took place, was removed. This was a case, therefore, of tubal abortion. The tube might have been saved, but as the attachment of the sac was close to the uterine end, it was not deemed wise to do it. The patient left the hospital nineteen days after operation.

The second patient was twenty-three years old. On the day previous to her admission to the hospital she had been taken with

a sudden, sharp, stabbing pain in the lower abdomen on the right side. With the onset of the attack she had a hemorrhage from the uterus. It was not time for her menstrual period, as she claimed to have menstruated only three weeks before. She felt dizzy, cold and extremely weak. Patient denied any possibility of pregnancy. Operation was performed under ether, the uterus being curetted. Upon incising into the peritoneal cavity, free blood welled out. The right tube was found very much elongated, and the gravid sac, with the amniotic sac unruptured, was found attached to the fimbriated extremity and external to it, and was removed. The left ovary presented a cyst the size of a hen's egg, to which the gravid sac and distal end of the right tube had evidently been attached, and was separated on manipulation before opening the peritoneal cavity. This ovary was removed. The distal end of the tube, which was found closed, was opened and everted. The appendix was removed and the wound closed without drainage. The patient made a good recovery.

The third patient complained of a sudden, sharp onset of pain, with bleeding from the uterus which lasted for about twenty days. Examination revealed a tense, tender, elastic mass bulging into the left lateral fornix of the vagina. Uterus slightly to the right of the median line. Patient absolutely denies any possibility of pregnancy. A diagnosis of tubal pregnancy was made, the uterus was curetted and the abdomen opened. Free blood was found upon opening the peritoneal cavity. The left tube was much distended, with clots, and ruptured. The left tube was removed, including the left ovary, and the abdominal wound was closed in four layers, without drainage. The patient made an excellent convalescence.

Dr. Wells opened the discussion of these cases. He said that in extra-uterine pregnancy hemorrhage is usually attributed to rupture, while in reality it often occurs previous to rupture, and is not necessarily accompanied by this latter symptom. The ovum is expanded inside the tube, and the villi grow into the walls of the tube, and after a time grow straight through. The blood pressure causes the tube to sweat blood from the little ends of the villi. The same process makes the wall of the tube very weak, and the ovum is growing inside, and when it comes across a naturally large blood-vessel, hemorrhage is apt to follow.

*A Case for Diagnosis.*—Dr. M. Packard reported the case of a man who presented himself at the clinic about four weeks ago with the following history: Family history and previous history good. His present history began about nine months ago, with gradual difficulty in swallowing. The dysphagia became so extreme that it was impossible to take solid food of any kind. On several occasions he vomited blood, which was always of a

bright red and never of a chocolate nature. He lost in weight as much as thirty pounds. Naturally, with this history, we suspected a neoplasm of the esophagus or cardiac end of the stomach. We passed an esophageal sound, which was not restricted at any portion of the esophagus, but on removal brought up about three drams of pure blood. The stomach was normal in size, but on account of the bleeding a test examination was valueless. Liver and abdomen were normal. The heart sounds were all feeble, but there was a relative accentuation of the second aortic sound. There was no burring or thrill. His blood examination showed 5,200,000 red, 100 per cent. hemoglobin, 7,600 whites, showing the blood absolutely normal, and ruling out with a positive degree of certainty malignancy, and especially of the stomach. His arteries were athermetic, and with this history the diagnosis pointed either to varicose veins of the esophagus or ulceration of the esophagus, due to arterio-sclerosis.

Dr. Burtenshaw stated that Dr. Packard, in connection with the blood examination, said that the normal condition of the blood proved conclusively that there was no carcinoma. In the speaker's opinion, the blood examination alone was not conclusive proof that no malignancy or inflammatory condition was to be anticipated.

Dr. Packard, in closing the discussion, said that he agreed with the last speaker that a normal blood examination alone was not conclusive proof of the absence of malignancy, but when a patient's blood gave a red blood cell count of over five million blood cells, and 100 per cent. hemoglobin, it is safe to assume that carcinoma is not present. In carcinoma there is usually a secondary anemia, and the hemoglobin of the red blood cells becomes polluted.

*Epithelioma of Vulva.*—Dr. Brooks H. Wells reported two cases of epithelioma of the vulva which had come under his observation, and presented drawings and photographs to illustrate them. He said that primary epithelioma of the vulva is rare, occurring in only about three per cent. of the cases of cancer of the genital tract. Not much is known definitely of the predisposing causes. Long-continued irritation undoubtedly increases the chance of its appearance. Cancer may invade any portion of the skin of the vulva and spread outward in the direction of the lymph streams. Histologically, it usually gives the picture of a squamous-celled epithelioma, except when it invades the vulvo-vaginal gland, when we find the cylindrical-celled or adenocarcinoma.

The treatment of cancer of the vulva should be early and radical excision, together with excision of the superficial inguinal glands on both sides. Prognosis as to permanence of relief is bad,

as after a variable time the disease nearly always returns. In inoperable cases, morphia, given freely to quiet pain, scrupulous cleanliness with alcohol dressings to minimize odor, and at times partial operations to remove sloughy or hemorrhagic portions of the new growth, with such other measures as may be demanded in the particular case, to secure the least discomfort, should be resorted to.

The first case was a patient, aged 40, multipara, referred to the speaker for diagnosis. She was stout, florid and well, except for a peculiar spot which had been present for several months on the left side of the vulva, which persistently itched, and had been pronounced a chancre by several physicians. Inspection showed on the upper part of the left labium majus an area of somewhat thickened skin, thickly sprinkled with fine whitish scales. Within this area were two insensitive, round, slightly elevated, firm, flat masses, movable with the skin upon the underlying tissues, having rounded, whitish edges, smooth, slightly moist, glistening surfaces of a copper-red color, and which in all particulars resembled chancre. Careful palpation showed slight, hard, painless induration of the inguinal glands on both sides. Syphilis being apparently excluded, owing to the high moral character of the patient and her husband, and the absence of all history, a diagnosis of epithelioma was made and excision advised. This was done a few days later, by an incision which went wide of the diseased area, and deeply removing the whole of the left side of the vulva. The patient and her physician would not consent to the removal of the inguinal glands. The wound healed per primam. The specimen was taken to a well-known pathologist for examination. He looked at it and said a fine chancre had been removed. Examination of the hardened tissues, however, proved it to be a typical epithelioma. The patient was lost sight of for two years, at the end of which time she was seen with a mass of carcinoma in the left groin, and so weak that it was evident that she had but a few days to live.

The second patient came to the clinic, complaining that for eight months her womb had come down. Family history showed no constitutional taint of tuberculosis, rheumatism or cancer. She had no living children, but four miscarriages from traumatic causes between the third and sixth months. Examination revealed her to be in a normal condition above the pelvis, the uterus small and free and very easily movable. The vagina was large, the pelvic floor much relaxed, and when the woman stood up or strained, there was complete prolapses of vagina and uterus. The skin for an inch out from the mucocutaneous junction, at the lower half of the vulvalar entrance was dry, somewhat thickened, slightly reddened, and covered with abundant whitish scales, the

condition resembling a chronic scaly eczema, and being accompanied by severe and persistent itching, which had been present for about fourteen years. There was no sugar or albumen present in the urine, and diabetes was excluded as a cause for the skin condition. Operation was strongly advised, but refused by the patient, who, as a temporary palliative, was shown how to support the uterus by a firm cotton cylinder, placed crosswise in the vagina, and was given a one-half per cent. salicylated Lassar's paste to apply to the diseased skin. About two and a half years later she again presented herself, complaining of a gradual loss of health and strength, itching of the vulva, with occasional periods of pain, and for three months an offensive discharge like bloody water. Examination showed a flattened papillary mass projecting one-quarter inch above the adjacent skin, and extending outwardly from a little within the mucocutaneous junction of the lower third of the vulva on the right side. On the opposite labium were a number of smaller similar papillary masses, apparently the result of contact inoculation. There was no apparent enlargement of the inguinal glands on either side. Patient entered the hospital, and the superficial inguinal glands on either side were removed, together with the new growth, the greater part of the skin, and the underlying fatty tissues and connective tissues of the vulva and of the lower vaginal mucosa. The wounds were closed with silk-worm gut and healed without infection, except at the lower vulvar portion, where some suppuration and granulation occurred. The specimen was sent to Dr. Jeffries for examination, and he pronounced it typical carcinoma.

Dr. J. H. Burtenshaw asked whether the bloody discharge in the second case was only from the growth or the skin covering it. He also asked whether there was any involvement whatever of the mucous membrane or the vaginal walls, and also whether the possible effects of the application of the X-rays, the Roentgen or the ultra-violet rays had been considered. He thought that in cases where the use of the knife was impracticable, especially, the rays should be at least tried.

Dr. L. J. Ladinski said he had operated on a patient for epithelioma of the vulva, and had removed the inguinal glands, which were only slightly enlarged, the operation having been performed early in the course of the disease. Recurrence in the pelvic glands had followed very quickly, and the patient's condition was much worse than at the time of the original attack. The speaker would hesitate to operate again under the same circumstances, and would first try the various forms of radiation.

Dr. Milton Franklin said that in case of epithelioma, as in all other cases of malignant growths, he would advise against using any of the radiations where the knife could be used. In

cases of epithelioma of the face, where a good cosmetic effect is desired, radiation may be preferable to the use of the knife. Epithelioma of the lower lip had never been cured by the rays, as far as the speaker could ascertain, and epithelioma of the pelvis seemed to be in the same class. After operation, however, the field from which the carcinoma has been removed should be X-rayed, as experience has demonstrated the value of this treatment.

The paper of the evening was read by Dr. Joseph Brown (Cooke, and was entitled, "The Obstetrics of the Future." Dr. Cooke said he thought that in another quarter of a century the general method of procedure in obstetrics would be the routine induction of labor, at or near term, instead of the waiting policy of the present time, by which pregnancy is permitted to continue until labor is spontaneously ushered in. He said that, with the method at present in vogue, when the labor was normal, chloroform used to the obstetrical degree during the last hour or so, and the woman rallied promptly and enjoyed a normal puerperium, this was all that could be desired. It often happens, after labor begins, that the woman's suffering becomes so great, in spite of apparent uncomplicated delay in delivery, that the physician is obliged to interfere, and under complete anesthesia discovers for the first time a previously unrecognized persistent posterior occiput, a face case, a condition of marked disproportion between the presenting part and the pelvis, or even a breech appearing at the superior straight. The entirely unnecessary delay to which the woman has been subjected only intensifies her liability to shock, to sepsis and to hemorrhage after the operation. The child, which might have been saved, if interference had been inaugurated in time, may be lost through asphyxia, manipulation, forceps, or even require mutilation before delivery can be accomplished. When such emergencies arise, there are, as a rule, no adequate preparations for the work to be done. The remedy which the speaker offered for this state of affairs was as follows:

"Every obstetric case should be examined methodically during the last month of pregnancy, preferably at weekly intervals, and after due consideration a definite day and hour for the onset of the labor should be set. This should depend upon the position and presentation of the fetus, the character of the pelvis, and the relation which it bears in point of size and shape to the presenting part; and every effort should be made to correct any existing large dose of castor oil at night, followed by an enema, are often With a slightly contracted pelvis, measured more accurately by the relation of the fetal head to the brim than with the pelvimeter, a somewhat early induction of labor would afford far better chances to both mother and child than a version or pro-

tracted forceps operation performed two or three weeks later. The possible danger to the child by reason of its slight prematurity would be more than offset by its easy birth and escape from the perils of operation. In cases where the position and presentation are normal, the patient should be allowed to go on to term, and labor then induced. The method of induction depends much on whether the patient is a primigravida or a multigravida. In the first instance it is usually necessary to insert a bougie after the Krause method and leave it until pains are established and the cervix softened and dilated, when it should be removed. This should be done at night, the patient having been first given a full bath and a large dose of castor oil, to be followed by an enema in the morning. The physician should return the next morning, remove the bougie, and if pains are not well established, stimulate contraction by digital dilatation of the cervix. In the case of a multigravida, the use of the bougie is seldom indicated, as a large dose of castor oil at night, followed by an enema, are often enough to bring on labor in the morning. If not, vigorous dilation of the soft and patent cervix will, in nineteen cases out of twenty, cause effective pains within a short time. As soon as labor is well established, its further progress is left to nature. Chloroform to the second degree should be exhibited during the second stage, and instruments used if necessary, under surgical anesthesia, but only after complete dilation. The duration of labor in the primiparas, dating from the onset of pains, after introduction of the bougie, has averaged under five hours, and in multiparas under two hours."

Dr. J. H. Burtenshaw said that were labor induced, and anything to go wrong, the family would throw all responsibility on the physician. Also, he did not see how the term of labor was so successfully shortened at the end of a full term pregnancy in either a primipara or a multipara.

Dr. Wells said that he had treated several patients who had been delivered by the method described by Dr. Cooke, and they had suffered a greater percentage of ill results following parturition than the women whose labors had taken the normal course. He also said that if only the external os were to be dilated, he much preferred to do it with the gloved hand, rather than with the bougie.

Dr. Ladinski said that he recalled several cases in which it had been necessary to induce labor, in which this procedure had been followed some time later by subinvolution and hemorrhage. While a little time had been saved for the physician by Dr. Cooke's method, he doubted whether the patients had been saved much time and discomfort.

Dr. Cooke closed the discussion, saying that he thought the



positive statement that labor would be induced at a given time had a good effect on the patient mentally, and the uncertainty which she was saved left her in general condition better fitted for the ordeal which she had to face. He thought the post-partum complications to which Dr. Wells referred were the result of inexperience and imperfect technique on the part of the operator rather than of the method itself.

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**Toronto Medical Society.**—On the first Thursday evening of each month the Executive of the Toronto Medical Society has arranged for a meeting of its members at one of the hospitals, as follows: January 5th, Western Hospital; February 2nd, Grace Hospital; March 2nd, St. Michael's Hospital; April 6th, Toronto General Hospital. At each of these meetings the hospital staff will present a full complement of interesting clinical cases, and the Hospital Board furnish refreshments for a pleasant social gathering at the close. The Executive believes that it will be not only a duty, but also a gracious act for every member of the Society to endeavor to be present, and therefore asks for an attendance of at least one hundred members at every meeting. The meetings already held at the Hospital for Sick Children and the Toronto Orthopedic Hospital were certainly a great success, and we urge as many of the profession as possible to make a point of lending their presence to each meeting this winter.

## Selected Articles.

### THE LOUISIANA PURCHASE EXPOSITION, THE NEURASTHENIC AND THE BRAIN-TIRED.

BY CHARLES H. HUGHES, M.D.,

Dean of the Faculty and Professor of Neurology and Psychiatric Neurology, Barnes Medical College, St. Louis.

THE "Exposition grounds are approximately in the shape of a rectangle, two miles from east to west, and one mile from north to south, made up of four distinct parcels of ground, aggregating 1,240 acres. The greater portion of the fair is in the west half of Forest Park, one of the largest of the public parks of the great cities of the United States. The east half of this park has been kept intact. The Forest Park section of the fair comprises 668 acres. It was the first portion of the site acquired, and on it are built eight of the big exhibit palaces. West of the Forest Park section is the Skinker tract acquired from private owners, the principal of whom was Thomas Skinker. It covers 422 acres. On it are located the palaces of Agriculture, Horticulture, Forestry, Fish and Game, the Philippine reservation, the big Floral Clock, the plant Map of the United States, the United States life-saving exhibit, the Ethnology building, and the national pavilion of France. An additional area of 110 acres just north of the Skinker tract was leased from Washington University. On it are built the majority of the foreign pavilions and the Administration group of permanent buildings. East of the University tract and north of the fair grounds, is the Catlin tract, which contains sixty acres, which is used for concessions. The Pike runs the entire length of this tract, a distance of nearly a mile.

"The architectural feature of the Exposition is mostly made up of eight vast exhibit palaces and two miles of lagoon. Picturesque building and verdure-covered hills help the effect. This is on a level area surrounded on two sides by high hills. These hills are not continuous, but jut out at four points. These jutting prominences are used with fine effect in the decorative scheme of the Exposition. The first of the prominences is crowned by the United States Government building. Two others, with the connecting ridge, form the Cascade effect. The remaining prominence is crowned by the national pavilions of Japan.

"The two central prominences, which are connected by a

semi-circular ridge, lead to the lower level of the grounds by a finely sloping hollowed declivity. This natural feature was used by the Exposition architects for what is pronounced by critics to be the greatest architectural water and garden composition ever executed by man, the Cascades and the Cascade gardens. The declivity below the Cascades is occupied by lawns and gardens of exquisite design. The hill is reached from two of the avenues of the main picture by a long approach flanked by portrait statues of the great men who have helped in the development of the Louisiana Purchase.\*\*

If, then, we consider only the magnificent distances and multi-form attractions of the Louisiana Purchase Exposition, and the expenditure of neuropsychic and muscular force necessary to see and hear them completely, we should say, *prima facie*, the neurasthenic should not go there. Its actually more than two mile square of attractions (including its enclosure and Forest Park and its environments and the Lewis building and searchlight to the north-west), if encompassed with the usual eager sightseeing haste, will exhaust the strongest, and are liable to collapse the neurasthenic, if attempted in the usual hasty way. Six weeks are none too much of time for the strong, and a hundred one or two-hour visits, in as many days, would better suit the brain-fagged and nerve-strained.

But the neurasthenic will go to the World's Fair, as well as the strongly nerve-centred, and we should guide him on his way, if we can, against unrecoverable exhaustion, as we shall have him to treat, if he escapes our friend, the man of the black pall and plume, at the conclusion of his Exposition experience.

The true neurasthenic is a neurone asthenic, a psychic neurone asthenic. One whose psychic neurone waste and repair balance has become deranged. He is the man or woman who "does things," or who "has done things," or tries to do things, or has tried to do things too often to the point of abnormal, not readily daily recuperable exhaustion, as would come to the neurally healthy—that is, the true psychic cerebrasthenic neurasthenic is so. His neurotic restlessness makes him restive and prompt to exertion, even after the time in action for rest is reached, as distinguished from excessive passionate indulgence, such as the venereal or alcoholic neurasthenic, who usually has complicating troubles.

The clinic picture, with portrait, of the late Professor Gross, of the Jefferson Medical College, on exhibition in the art section, a picture of blood with the horror-stricken mother, in a side light in an attitude of despairing shock and grief, is not a good picture calculated to help toward recovering the sanguiphobic neurasthenic.

\*This description is taken mainly from the Official Guide, which contains about 200 pages more of description.

Cutting down upon a necrosed bone or on an artery for ligation is never a cheerful picture to any onlooker, and not especially so to the most hopeful patient, unless he takes an anesthetic pleasantly and passes soon into dreamy forgetfulness, much less to morbidly unstable nerves, as in neurasthenia.

The painting is one of Thomas Eakins' best, among many good productions there on exhibition. The eminent surgeon's expression, intent upon his task, like a veteran warrior commander amid the carnage of battle, indifferent to all else, though lives about him are shattered and hearts bleeding, is true psychologically to nature. The picture, however, does not meet the requirements of either modern psychiatry or surgery, for the operators all have on their ordinary clothes, the principles of Lister are not in evidence in the proceeding, and to-day the poor, despairing mother would not be permitted in the operating room.

The complementary picture of D. Hayes Agnew, in the amphitheatre by the same artist, in the same hall, represents an operation under more advanced aseptic precautions. The picture must have been painted towards the close of the session, with a senior class for an audience, for many of them showed tired faces, and some are asleep, and some appear to be developing that pathological neurasthenia, which is too often the sequence of the modern medical colleges' exacting and exhausting curriculum, especially where the students are so imprudent as to indulge in engrossing side pleasures in late night hours, in addition to the exacting study college duty demands.

The pictures of Gross and Agnew, coupled with the biography of their regular, steady, driving, striving, systematic lives, are a defiance of that premature neurasthenia, such as befalls the less systematic and prudent worker in the fields of medical endeavor. They worked much, but they rested betimes and were not worn out by those vices and indulgences which exhaust so many. If you would see the picture of another great and long-lived surgeon, see that of Sir James Paget, in the British pavilion. Its tranquil face, like that of the imperturbable artist who painted it, will rest you while you look upon it and them. Non-neurasthenic tranquility and psychic power and composure beam from those faces.

To the man of ceaseless demands, the man of affairs, the weary and heavily laden professional, business or domestic burden bearer in this strenuous age, diversion is recuperation, and recreation is rest and may be made to conduce to recuperation, even at a great Universal Exposition like the World's Fair at St. Louis is. But to conduce to this end, its attractions should be taken slowly and in moderation, with the length of weeks and months expended upon them and not by a few days of brain-racking sight-

seeing. Not by trying to encompass its wondrous exhibits or comprehend its numberless world studies in limited days or even weeks, can he or she of meagre nerve power reserve, do it without self-harm, but by doing the observation of its cosmic wonders with leisure and discrimination, diverting and resting the mind, and adequately feeding and sleeping the body between visits to its thousands of entertaining and instructive and mind-diverting attractions, and by blending its tranquilizing, soothing and refreshing adjunctive influences with its wondrous sights.

The lagoons, the native environing forests to be seen from the windows of the Intramural railway, the automobiles and rolling chairs and jinrikishas of the grounds are restful, and so likewise the different plazas and the Filipino reservation and Press Club porticos and views therefrom.

The brain-weary should take in the Pike with extreme moderation and deliberation and only at times when the brain is most refreshed, as early in the morning, after a previous night of prolonged, refreshing sleep. No neurasthenic should attempt, or anyone else of discretion, to do the Pike in a single day. Visits to the most exciting scenes, like the Galveston Flood, the Boer War and the Naval Battle, should be followed by a round of the lagoons or on the Intramural railway, or by a visit to Old St. Louis or the Tyrolean Alps or to the North Pole or Under and Over the Sea, to Creation or the Plazas, or the Government Fisheries building or to Jim Key, the educated horse, or to the Old Plantation. Certain neurasthenics should avoid the Boer War and the Naval Battle entirely, while the hypochondriac and the melancholic might see them under judicious neurologic advice; likewise the scenic railway, the shoot the chutes, the aerial leap.

The Philippine parades are interesting and restful, as all the exhibits, educational and domestic, of these people are instructive, as well as the Government Filipino exhibit and War Department exhibit here. Likewise the panoramic trip to the Philippines, the Solarium, and Frigidarium.

The Dairy Farm barns and Commercial Poultry Farm and other farm shows and fruit exhibits are enough for one day for the weary visitor from the country on the first day of arrival, and too much for the brain that is unhealthily tired, that is neurasthenic. The lagoons in the evening, a restful view of the Cascades and a round of the lagoons and Intramural railway is enough for the brain and body-wearied for one day, and better for the first day at the Exposition for any one.

The Exposition may be viewed with less fatigue by approaching it first at the south-east gate or at the Administration building entrances of the Transit or Suburban systems, instead of the Main or Lindell entrance, going to the State buildings, especially

to your home State building, registering and resting there. This gate is called the States Entrance gate, though not all the State buildings are in that vicinity, the California, Illinois, Tennessee, Virginia, Idaho, Maryland, Montana, Oregon, Maine and Fraternal buildings being further west. But the ground is high here, almost on a level with the Terrace of States, the Festival hall, the Fine Arts hall at the top of and behind the Cascades, distant about half a mile, and the German building near by. Here, on this level, the visitor who must economize his strength and who will, if not possessed of a surplus of reserve nerve energy, may spend a day in viewing, from an eminence, the grandest aggregation of architectural beauty, combined with an unequalled esthetic panorama of Nature, ever portrayed in the same place, through instrumentality of the head and heart and hand of man. From here, looking north in the distance one mile away, but appearing farther than it is, one may see the snow-clad Alps and Blarney Castle of Ireland, and, in the valleys below, the waterways and gondolas between the Art palaces, as if one were actually viewing them in Venice. Here are also the more modern and more rapid electric launches. Only Ireland dissipates the pleasing illusion that the real Alps are before you in all their snowy sunlit or moonlit beauty in the distance. From near where you stand ripple and dance and sparkle in electric light the illuminated Cascades, down the statuary and column-skirted stairway. In front, and on either side, are green velveted sward and waterways, the beautifully artistic bridges spanning them and the magnificent buildings, each of a different style of construction, lining the streets and holding samples of the world's greatest treasure in fine art, handicraft, varied industries, productions and inventions, including our own Government's matchless display and the great De Forest Wireless Telegraph Tower, the Model City and the Sunken Gardens to the north-east and Machinery Gardens to the north-west.

The young and the strong, in the sappling age of life, when nightly recuperation completely restores each day's waste of neurone strength, need no special precautions, for they will soon learn in lessons of experience and be forced to take the needed rest for proper repair of mind and body and not be the worse for their lesson, because their fatigue, being only physical, will be physiologically recompensed by nature in her natural course of recuperation. But neurasthenia, as the neurologist understands, is abnormal nerve centre exhaustion and inadequate neurone reconstruction, after the psychic exhaustion of undue sight-seeing. Recuperation is neither so rapid nor complete in cerebrasthenics after this condition appears, as it was when their cerebro-mental state was normal and Nature preserved for them each day

the rightful physiological balance between waste and repair; when reintegration and disintegration were better balanced and daily overwork of brain was better compensated.

These observations are intended to apply to that strenuous individual whose life motto has probably been "nothing impossible," and whose rule of action is "always at it," or something of that sort, who has never admitted a limit to the possibilities of human endeavor, especially his own, who has regarded his mind as something apart from his brain, and not subjected like the organs of the body to definite physiological limits of endurance, who believed his brain could be loaded to limitless effort and who has never stopped till cerebraesthesia and its attendant phrenasthenia called him to a halt. Who has always thought it was the other fellow and not he that would break in the strain of the battle of life. He is coming to the city. He is among our patients. He is among yours, brother neurologists. You can arrest him for a time, because his brain exhaustion compels a halt, but you cannot suppress him or hold him down. He has not got over the idea that the mind is superior to the brain that sustains it. He will see the Exposition though he may die in the attempt. Since we cannot keep him away from it, let us try and guide him aright and teach him to make a diversion, rather than a task, of it, a rest rather than a ruin. Let us try and make of the Exposition a medicine by counselling him aright; let us not permit him in his impetuous strenuosity to make it a source of further exhaustion, for the mental meat of the vigorous and unbroken may become, if taken the same way, a poison to the neurasthenic. Rest and restful diversions from accustomed brain strain are the remedies for the neurasthenic, and while Paine's fireworks and Halc's fire fighters are better for the hypochondriac and melancholic and should only be seen at a distance, if at all, by the neurasthenic, there are restful diverting scenes for him here that need not be denied him.

These injunctions are only for those persistent, irrepressible neurasthenics who insist on keeping their psychic neurone machinery running, pending the efforts of the neurologist at effecting repair. There is another class among the brain-fagged professional or business man not yet in the hands of the neurologist, who might profit by some of the precautions against overstrain set forth in this paper. It embraces those who yet toil in that busy mill,

Where souls are ground and money is made  
All day—"till temples throb and thrill  
With the whirring grind of the wheels of trade,"

And the ruthless, relentless, routine rest-robbery of this radium

light and electric speed epoch of modern progress toward brain and body dwarfing and mind destruction.

The profoundly neurasthenic had better avoid the inside of the great exhibit buildings, except to give them but a bird's-eye view from their entrances, to get a general idea of their grandeur and magnitude for comparison with the exhibit spaces of the next World's Fair, after he gets well, if the world is ever to have a replica of this great Exposition's exhibit palaces. The neurasthenic should hang about this great Exposition for months, seeing and doing but a little daily, as at a seaside home.

The World's Fair avenues, like the great boulevards of Paris, or the Nevsky Prospect of St. Petersburg, or like other expansive environments of the Exposition, are too broad to excite a feeling of Claustrophobia in a neurasthenic. Nothing of the kind for free air space between its enclosure has been seen in any previous similar Expositions, and the south and east view of the virgin woods of Forest Park, as they may be seen from the windows of the Intramural railroad, is not equalled by any scenery for native woodland grandeur in Fontainebleau or Rotten Row.

The neurasthenic tuberculotic would find the air and temperature here congenial to his pulmonary needs, even in the hottest weather, and the entire grounds are sanitary. The prevailing breezes here are from the south and west, and temperature habitually averages eight or ten degrees lower on the Terrace of States than on the Plazas below. The high, cool plateau location of nearly all of the State buildings and the opportunities in all of them for sitting in the shade, coupled with the general hospitality of their invariably amiable and often handsome hostesses and courteous commissioners, makes them inviting places for weary visitors, even who are not neurasthenic.

The neurasthenic, who has the characteristic dread of solitude, will not feel alone at the Exposition, and he who has a dread of crowds need not mingle with great crowds on the many special days, nor visit the Pike or the Plazas when the bands play, nor go at those hours and places when and where the people most do congregate, but can enjoy them at a distance. The best entrances for such as wish to husband their nerve strength and avoid the confusion of crowds and save their physical strength, are the gates on the south side, reached by the rapid transit, and by the Administration building entrance of the Suburban system's most western gateway.

The grounds of the south-east side of the Exposition are the highest and the visitor sees everything here on a high level or as he descends. The exhibits here are the quietest on the grounds, being chiefly in the State buildings, the Festival hall, where the great organ is, the German building and great restaurants and the Terrace of States. In this vicinity are General Grant's Log



Cabin and the Lewis and Clark historic Oregon\* fort, Clatsop, built for winter-quarters at the conclusion of the famous expedition of that name, across the continent to the Pacific in 1805-6. The Lumbermen's club house (the House of Hoo Hoo) is here with its characteristic hospitality and its woods of more varieties than Joseph's famous coat had of colors. You may rest on the portico or in its restaurant, or have an excellent luncheon across the way at the grounds of the Grant Cabin, in the shade of the trees, or a little further south at the Southern Home restaurant, which looks out on the forest, or the German building restaurant, or at Mrs. Rorers'.

On the north-west grounds are the Queen's Jubilee presents, Anthropology exhibits and the Hall of Congresses in the Administration and Washington University buildings. On the south and south-west sides are Jerusalem and Morocco and some of the State buildings and the Boer War camp, a desirable place to visit, full of interesting exhibits, and where Generals Cronje and Viljoen may be seen independently of the exciting portrayal of the Boer War. A good place for the silent melancholiac, but not for the sanguiphobic and astrophobic neurasthenic.

If this cursorily constructed paper shall help any brother neurologist in managing that neurotic problem, the neurasthenic at the World's Fair, the author will feel himself rewarded for his pains. Of course, the profoundly neurasthenic will not be at the World's Fair, but the milder neurasthenic, with graver symptoms than he may himself appreciate, will be there, and if we can we should turn his sight-seeing and novelty-seeking experience into an instrumentality of help, instead of harm, and this is not assailing the absolute rest cure for a class of these patients for whom absolute and secluding rest can be prescribed and will be taken.

Contrasted with other great expositions, a valuable comparative estimate of the Columbian and Louisiana Purchase Expositions is given by Mr. Edward Bangs, first assistant superintendent of Illinois, after a visit to the St. Louis World's Fair. This Exposition, he says, greatly exceeds the Chicago fair in scope, arrangement, extent and beauty:

"In the matter of exhibits there is to be found on these grounds a more complete, comprehensive and extensive display of nearly every branch of human endeavor than has ever been brought together. The arrangement of the buildings is convenient, and, for

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\* A legend on this building reads: Fort Clatsop 99 years ago. This structure is a replica of Fort Clatsop, the winter-quarters of Meriwether Lewis and Wm. Clark and their company in 1805, after they had on the greatest of American expeditions crossed the continent to the Pacific. To this achievement, more than to any other, our Nation owes its frontage on the Pacific and its geographical basis as a world power. The centenary of the event will be celebrated through the Lewis & Clark Exposition, to be held at Portland, Oregon, in 1905.

Here also the American Medical Association will meet next year.

their extent, are easy of access from any point. The Cascades and the Grand Basin surpass the pictures heretofore to be seen at other expositions. The illumination of the Terrace of States, with the imposing Festival Hall, the Cascades and the water effect is an achievement of spectacular architectural effect that has never been approached."

We might except to this statement of Mr. Bangs, the electrical tower display of the Pan-American Exposition, but that was a limited feature of the Buffalo display and not at all comparable in magnitude and beauty to the general variegated illumination of the Cascades, Terrace of States and Exhibit buildings, the Pike illumination and other environing light displays.

The magnitude of this Exposition may be gleaned from an examination of the many interesting features of the Philippine display, which some people regard as an annex, like the great Live Stock exhibit and the Stadium show. The Philippine grounds embrace forty-seven acres, and have upon them thirteen hundred natives, six native villages, 445 Filipino scouts, a constabulary numbering 280, a reproduction of a Spanish fortification and Spanish Filipino bridge, a walled city, a war museum, a Government observatory and relief map of the islands, a Filipino educational building, a reproduction of a cathedral of Manila, and the Manila Commerce building, showing Manila exports and imports, wonderful and beautiful woods, crude and polished, of the islands. a typical Manila house, handsome and attractive without and within, containing exhibits of Manila woman's handiwork, the Government building, the Fine Arts exhibit, the Agricultural and Horticultural exhibits of the Philippine Islands, the Ethnology building and house of the Tree Dwellers or tree-dwelling Moros, the Philippine Forestry building, with the principal exhibits of Philippine woods, a Model school in operation, with Philippine teacher and students, mines and metallurgy, fish and game exhibits of the Philippines, fish-nets, fish and commerce boats, animals, birds of plumage and reptiles of the islands, including the python and the tamarau or water buffalo, a band and concert of eighty natives, constabularies, a Philippine marriage ceremony, native dances, Moro music, food and cooking processes, etc., etc. The black water buffaloes may be seen enjoying life in the water of what has been produced as a replica of Pasig River.

A railroad will take you free of charge around the outskirts of these grounds, but they must be leisurely gone through, and the buildings and inhabitants closely inspected, to fully appreciate this part of the most wonderful of the World's Expositions. The round cannot be made by the strongest person, intent on becoming properly informed, in less than one day, and a person in any way debilitated should not attempt the arduous task without giving

it the leisure inspection of many days. Places for rest and adequate refreshment are on these grounds, as they are everywhere about this wonderful Exposition. It is important that the nervously debilitated person, who imprudently ventures to visit these grounds, should find and avail himself of every favorable opportunity for rest and food repair of brain and body tax during his efforts at sight-seeing.

There is a class of neurasthenics who should be placed in a sort of half-way restraint sanitarium, with features between those of an insane hospital and a home for inebriates, who should sign away their rights to habeas corpus for a time, like Dr. Crothers' Connecticut patients often do, and be treated like Weir Mitchell applies his rest cure, *i.e.*, by absolute rest from all social life and business demands; but the majority are not of that class and will not and need not submit to so great an absolvment of personal liberty. Most neurasthenics may be cured by a regulated preponderance of sleep, light mental diversion, in lieu of the accustomed brain-fagging professional business or grief or sorrow-strain of mind, a superabundance of partly predigested nutrition, plenty of fresh, untainted air, as good a supply of daily sunshine as it may be practicable to procure, and a pleasing, diverting environment, such as may contribute to inspire the mind with the impression that life is still worth living, and dissipate the neuropathic timidity and morbid fears of the brain fagged victims. A little daily diverting mental activity is better than autoeratically enjoined repression of thought and emotion, which cannot be accomplished. A little exercise of those neurone aggregations (which we call centres), which have not felt the brain fag of the daily grind, if followed by ample sleep and nutritional reconstruction, will prove salutary if we skilfully regulate, by judicious chemico-therapy, the involved psychic neurones, and this the present-day neurology is now certainly resourceful enough to do with the aid of properly adapted environing influences, even in psychasthenia, about the cure of which so many are yet incredible.

A stroll or ride from the Inside Inn on Commonwealth Avenue, past the Utah, Indian Territory, Arizona, Mississippi, New Jersey, Iowa, Minnesota, Kansas, Massachusetts, New York, Ohio, Missouri and Wisconsin buildings on a balmy August, September or October early morning or evening, turning west down the valley roadway, between the New York and Kansas buildings, skirted with trees and flowers, with the gigantic bird-cage, showing the birds of the Smithsonian National Zoological Park, with the Oklahoma, Colorado, West Virginia, Montana, Vermont and New Hampshire buildings on the north, with the Michigan and South Dakota close by them, will instruct and interest in a restful way

anyone whose brain neurones are not too much exhausted by even slight mental movement.

Birds of many climes and forms are there, large and small, squat and tall, and shapely and shapeless, graceful, graceless and gross. And their habits, all or nearly all, of seeking rest and sleep at the close of each day, will set an object lesson example from the feathered tribe worth emulating by many World's Fair visitors. About this exhibit are seats for the weary, and at the west are music and meals. From a seat here one may contemplate the ingeniously constructed, conical-shaped Washington State building, the United States Fisheries Commission building, the Portland Cement Exhibit building, the Potteries of Ohio, the Colorado burros, and, near by, is the Mining Gulch, Third-rail railroad, the Metal pavilion of the Colorado School of Mines, the Kentucky building, the Government building and the Mines and Metallurgy palace. The South Dakota Corn palace, in this vicinity, is a specially pleasing, ingenious and artistic feature, where one may rest any morning in rapt contemplation of its beauty and skilfully artistic construction. The Kentucky, Texas, Hoo Hoo and German buildings are all in walking distance, in which one may rest and enjoy himself.

On some part of the porticos of most of the State buildings, and most of the other buildings, one may find shady and restful chairs and enjoy a tranquil and inspiring view and verdure of trees, and in "these thick and rich-hazed sumptuous autumn nights," common to Missouri now, when "the moon grows like a white flower in the sky," and "stars are dim," and "tired Nature rests content among her sheaves, as a fond mother rests among her children," the tired brain may recoup itself upon a tranquil feast of smiling delights, of soothing scenes, in a thousand places about the Exposition and away from the music-stimulated Plazas, where the masses most are seen.

After having visited nearly every World's Exposition since 1876, and having been over one hundred times in this, though without yet having seen it all, I make this record of my experience, that it transcends them all in grandeur and beauty of architectural and esthetic feature, as well as commercial and politico-economic comprehensiveness.

At the Louisiana Purchase Exposition, the strong and vigorous who runs through it may read the lesson of the great modern world's great progress, and the brain-weary may, if prudent, view it with leisurely pleasure, if he take but time enough, for, unlike its predecessors, beauty and amplitude of landscape, as well as architectural design show everywhere, and within its ample grounds may be found a hundred restful views refreshing to look upon for body and brain.

Notwithstanding the immensity of this great Exposition, where the healthy, hearty seeker after world's sights may satiate his mind with a full mental meal in two or three weeks, the specially brain-fagged, with mind strained in one line of business or professional thought, may make it a recreative, diverting, restful, sight-seeing tour of the world within from forty to sixty days. Here he may go and visit within thirty-six hours, without mental or bodily fatigue, Ireland and Jerusalem, and on another two days and a night see Austria, Germany, Holland, Sweden, the Tyrolean Alps, Charlottenberg Castle, *Das Deutsche Haus*, sleeping each intervening night on terra firma. He may go to the Philippines on another day and be but an hour or two in transit, if he stops at a near-by hotel by means of the Street and Intramural railways or the automobile transit. He may, in the same manner, go to Mysterious Asia, to Morocco, New York and the North Pole, Over and Under the Sea, to and from Paris, to the Battle-fields of the Civil War and Mexico, to Santiago, to Cuba, to the Cheston Flood, to China at the Pavilion, to the British Pavilion and the Cottage of Burns, near the banks of the Doon, to the Brazilian, Japanese, Belgian and other foreign buildings, to Alaska and its totem poles, to Oregon and to Washington, States of tall timber fame, to the mining regions of Missouri, Colorado and the Great West, and down into the mines, whence comes in life-like representation the mineral wealth of these United States. In like manner may the natural resources and manufacturing products of all countries and all sections of this great country be seen.\* So we may see the aborigines of America, the Indian school and huts, the African dwarfs, the buildings of all the States, and the extensive water, forest and plateau views of this blended and unequalled picture of landscape and architectural beauty and commercial and educational utility, such as the world has never before seen in one assemblage, and whose like perhaps we shall never see again.—*Abstracted from Alienist and Neurologist.*

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**ALOPECIA AREATA.**

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Hyd. Subchloridi - - - - -	20 grains.
Hyd. Ammoniaci - - - - -	1 drachm
Liquoris Carbonis Detergentis - - - - -	1½ drachms.
Vaselini,	
Lanolini - - - - - aa	2½ drachms.

“*A Treatise on Diseases of the Skin,*” page 56.

T. McCALL ANDERSON, M.D., Glasgow.



DR. JOHN HUNTER  
TORONTO

PRESIDENT TORONTO MEDICAL SOCIETY

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# The Canadian Journal of Medicine and Surgery

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NO. 1.

## Editorials.

### THE INDICATIONS AND THERAPEUTIC VALUE OF PROSTATECTOMY.

THE indications and therapeutic value of the principal operations practised for the relief of prostatic enlargement was the subject of a masterly report, presented by Dr. R. Proust, at the eighth Congress of the French Association of Urology, held at Paris, Oct. 20-22, 1904. The reporter, who is a master surgeon in prostatectomy, showed that ablations of the prostate are performed by two

routes, the suprapubic and the perineal. Partial prostatectomies are, and ought to be, abandoned.

Removal of the entire prostate by the perineal route shows a mortality of 7.13 per cent., which places this operation in the position of one of the most favorable in the surgery of the urinary organs.

Its special post-operative complications are: lesions of the rectum (recto-urethral fistulæ), urinary complications (uro-perineal fistulæ, incontinence of urine), lesions of the genital organs (orchitis, impotency).

The best results are obtained in complete chronic retention of urine. Patients who had been unable to urinate for years, pass their urine easily and spontaneously. In recent complete retention, the results obtained are quite as good, but not so striking.

In incomplete chronic retention, the results are not so good, and sometimes are negative. The therapeutic feature of prostatectomy in those cases is explained by the bad state of the bladder and the condition of the lesions arising from their long standing. When calculi are present, their removal is easy during a prostatectomy, and the latter operation makes a relapse unlikely. Prostatectomy exercises a happy influence on micturition and the state of the kidneys; the patients progressively get rid of their toxic condition, and their general condition of health is completely changed.

Suprapubic prostatectomy, or Freyer's operation, may be done in two ways: in one there is a total enucleation of the prostate, with a portion of the prostatic urethra (Fenwick's); in the other (Freyer's) there is a partial or paraurethral enucleation of the prostate, the prostatic urethra not being removed. The latter operation is to be chosen when possible. From a statistic of 244 operations by the suprapubic method, the mortality is found to be 12 per cent., which is, of course, much higher than that from perineal prostatectomy. In looking for the causes of death traceable to this operation, Dr. Proust finds accidents manifestly due to infection; on the other hand, post-operative complications are much less frequent than in perineal prostatectomy. The therapeutic results seem to show that suprapubic prostatectomy is equally efficacious with, if not superior to, perineal prostatectomy.

In the first part of his report, Dr. Proust showed



the results of prostatectomy as applied to the treatment of the hypertrophied prostate gland; in the second part he showed the results obtained in the treatment of malignant tumors of the prostate (cancers and sarcomas). The results in the latter, though bad, are not quite desperate, for the mortality from the operation in such cases, which at first was 55 per cent., has fallen to 30.4 per cent. (Pousson.)

The chief indication for prostatectomy is hypertrophy of the prostate gland. It is during the second period of prostatism, when congestive disorders have been succeeded by mechanical difficulties and retention has occurred, that prostatectomy should be done. In fact, retention of urine is a sufficient indication for prostatectomy, but not a necessary one. The patient ought to have a choice between "catheter life," with which he is threatened, and the operation, which can free him from such a condition. But the indication may become more pressing, owing to the difficulties of catheterism in complete retention, and the increase of the residue in incomplete retention, and prove necessary, owing to the presence of toxemia and progressive infection. Another element which should be remembered in establishing the operative indications is the size of the prostate and the extent to which its shape is altered.

With regard to the choice of route in prostatectomy, Dr. Proust simply says that "If the perineal method is better regulated, has more cases to its credit, and has a lower mortality than the suprapubic one, we must look to the future to learn which is the better of the two operations."

In the matter of malignant growths of the prostate, the fact that their mortality has been lowered by 25 per cent. by prostatectomy should give encouragement in the future, even if the survival in such cases should be small, owing to the fact that the methods by which an early diagnosis is secured still remain imperfect.

The paper was discussed by Drs. Desnos, Heresco, Reboul, Harmonic, Veerhogen, Pauchet, Paul Delert, Rafin, Malherbe, Loumeau, Brin, Reynés, Leguen and Albarran, who mentioned the results of their prostatectomies, and, in a general way, confirmed Dr. Proust's conclusions. Dr. Nicolich (Trieste), however, declared himself a supporter of the suprapubic method,

because that operation is done "more easily, more quickly, and is less dangerous."

The statistics of prostatectomy, given by American surgeons, are still more favorable than Dr. Froust's.

In a paper published in the *Journal of the American Medical Association*, November 12th, 1904, Dr. Eugene Fuller, of New York, says: "My experience to date with prostatectomy is somewhat over three hundred cases. I feel that, if cases complicated with very marked uremia are excluded, I can operate with an average risk to the patient of not more than probably under 5 per cent. Death from the operation itself is practically *nil*." Dr. Fuller selects the route most suitable for the case in hand.

Dr. Parker Syms, of New York, who is opposed to the suprapubic route in prostatectomy, said, in the discussion which followed the reading of Dr. Fuller's paper: "There are 78 cases of prostatectomy reported, by Goodfellow, 58 by Young, and 33 by myself, being a total of 169 cases, with only 4 deaths. This certainly speaks well for perineal prostatectomy, showing a mortality of only 2.33 per cent."

The statistics given by Fuller and Syms speak well for the American surgeon, the American patient and the American nurse. It is about time for Canadian surgeons to begin to publish their statistics of prostatectomy.

J. J. C.

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#### SOMETHING ABOUT THE ETIOLOGY OF BERI-BERI.

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ISOLATED facts fall into groups and may be crystallized into general conclusions.

From a study of the summer and winter outfit of the Japanese infantry soldier (*Brit. Med. Journal*, November 12th, 1904) it appears that the greatest care and ingenuity are exercised by the military authorities of Japan to secure the health and comfort of the men serving in Manchuria, which is in summer very hot and in winter very cold.

Further, at the International Congress of Military Surgeons, held at St. Louis, October, 1904, Major Seaman, U. S. Army, declared that the medical forces of the Japanese army, in addition to the care of the sick and wounded, have to grapple with the greater problem of preventing disease by the careful super-

vision of the details of subsistence, clothing and shelter. The medical officer was to be found in the front of the army and in the rear. He tested and labelled wells, so that the army which followed would drink no contaminated water; he examined the sanitary conditions of a town, and, if cases of contagious or infectious diseases were discovered, he placed a cordon around the quarter where they were found. A medical officer accompanied foraging parties, and, with the commissariat officers, sampled the various foods, fruits and vegetables sold by the natives before the arrival of the army.

The medical officer also taught the men how to cook, bathe and live in general a healthy life, and it was a part of the soldier's routine to carry out these instructions in every particular. As a result of this system, cases of fevers and dysentery that follow the use of improper food and polluted water were not brought to the notice of the medical officer. During six months of war in a foreign country the Japanese army lost only a fraction of one per cent. from preventable disease. Major Seaman stated that up to August 1st, 1904, 9,802 patients had been received at the hospital at Hiroshima, of whom 6,636 were wounded, and that of the entire number only 34 had died.

So far so good. Another bit of evidence is not so satisfactory. Richard Harding Davis, *Collier's* special war correspondent with the Japanese Second Army, writes as follows, in *Collier's*, November 5th, 1904: "The next morning, as the camp woke, a company of soldiers came towards us on foot. That they were going to the base, instead of to the front; that they were without arms would have made them conspicuous; but, added to this, the gray light gave to them a touch of the weird and uncanny. They were not wounded, at least they wore no bandages; apparently they were not ill, for they were able to walk. But, as they passed us, we saw that they moved only with infinite effort, that their glazed eyes were unseeing. They neither joked nor spoke. Before they had passed we knew that all of these were the latest victims of that scourge of the Japanese army, the beri-beri, or the sleeping sickness. In the morning mists, as the long, sad column moved in utter silence, it resembled a procession of ghosts."

The name "beri-beri" is that given by the Malabars to this disease. Beri is the Singalese for weakness, and by iteration.

implies great weakness, as indicative of the increasing weakness and marked anemia which, with numbness of the surface generally, together with stiffness and edema of the lower extremities, are the symptoms of this affection.

Regarding the etiology of this disease, French writes, in *Practice of Medicine*, Philadelphia, 1903: "The theory of food toxemia is held, especially in Japan and Java, where the disease is attributed to the excessive consumption of white (hulled) rice. It is said to have been repeatedly checked by the adoption of European food. Visitors to Japan do not become affected, so long as they do not adopt the rice diet."

The fermentation of rice is regarded by several writers as the more remote cause. Capt. E. R. Rost, I.M.S., asserts that in Rangoon, where the disease is epidemic, it is caused chiefly by drinking rice-water liquor, made by the Chinese from damaged rice. The disease is not seen in children there, seldom in women, and it is not infectious or contagious. Males from 16 to 25 years of age are most frequently attacked, but it may affect either sex at any age. Hot, moist atmosphere and overcrowding favor its development.

An interesting observation on the etiology of beri-beri is recorded by Dr. Judet de la Combe in *Annales d'Hygiene et de Medecine Coloniale*, 1904, No. 3, p. 326. Having been placed as a medical officer in charge of the "Nickel Company" in New Caledonia, during the years 1901, 1902 and 1903, he had to look after one thousand Japanese laborers who were brought into the colony and employed by that company. The morbidity rate among these men was high, as was also the mortality rate. Beri-beri was the disease which, from the beginning of his engagement, was the principal factor in their medical history. He found that the substitution of bread for rice in the diet of the Japanese laborers caused the beri-beri to completely disappear from among them. No allusion is made to any medicinal treatment.

In Bangkok, where fresh rice is plentiful, Nightingale (*Brit. Med. Journal*, September 20th, 1902) states that beri-beri is a rare disease. Amongst the Tamils, in the Straits Settlements, beri-beri is very uncommon, it being their custom to decorticate their rice, *only after it is cooked*, whereas amongst the Chinese and Malays beri-beri is rife, and they eat rice which has been husked a year longer."

Schuttelaure (*Arch. fur Schiff's. Med. Trop. Hyg.*, July, 1902) describes two epidemics of beri-beri at Diego-Suarez. In one of them, he found the disease disappeared by increasing the quantity of fat in the diet, and in the second epidemic, when fresh bread and fresh non-decorticated rice supplanted rice deteriorated by age, the disease was arrested. These and other observations seem to prove that when, from any reason, the health of men living in tropical countries deteriorates, beri-beri, which may have attacked some members of the community, speedily disappears with a change to fresh, wholesome diet.

The study of this interesting subject is "now being carried on at Kuala Lumpur, in the Malay States, by Dr. C. W. Daniels and his colleagues." (James Cantlie, M.B., *International Med. Annual*, 1904.)

Even if the regulation diet of the Japanese army is constituted of the proper proportions of proteids, fats and carbohydrates, it must, in war time, have the curse of sameness, which would be a predisposing cause to beri-beri, according to Laoh (*Journal Trop. Med.*, September 1st, 1903).

Whatever the true etiology of beri-beri may be, alteration or improvement in the diet of the patients is always followed by improvement.

Probably the best that could be done for the ghostly company of soldiers who limped along before Richard Harding Davis in Manchuria, last August, was to send them to the base, where the necessary change of diet could be most speedily secured. A knowledge of the etiology of the disease would, in future campaigns, help to prevent its occurrence among Japanese troops.

J. J. C.

#### ON THE EXTENT OF TUBERCULOSIS IN CANADIAN CATTLE.

To those who have followed the movement through which so successfully, during all these years, live Canadian cattle have been prevented from setting foot outside the dock-yards in Great Britain, it is not a little interesting to observe the series of subterfuges by which the cattle-breeding interests in Great Britain have striven to bolster up their action. The last subterfuge is only on a par with its predecessors. It is stated that there is serious danger of the introduction of tuberculosis into British

herds through the introduction of Canadian live stock. A more fallacious argument it would be difficult to bring forward. What are the facts of the case? There is no country of equal size, or with an equal number of cattle, in which, as far as statistics can show, there is less bovine tuberculosis than there is in Canada. The disease, it is true, exists, for it has spread through the world, but, whereas—if we may judge from the various abattoir results and the results of tuberculine tests upon various herds of cattle in Great Britain—from twenty-five to fifty per cent. of British cattle are infected with this disease, it is safe to say that not three per cent. of Canadian cattle are infected; a statement that cannot be made, to our knowledge, with regard to the cattle of any other civilized country. "And these infected cattle in Canada are, very largely, herds raised from imported, high-bred British animals, and the evidence that it is to these that we largely owe the disease in Canada is so strong, that the government has been forced to take strong measures in order to prevent the further entry of such infected animals from British ports. It is in the older established provinces that the disease is found, but even in the Province of Quebec, with its small French-Canadian farms, in which the management of the cattle is far from perfect, so rare is the disease that, only a few years ago, when Professor Adami, as pathologist of the Department of Agriculture of the Dominion, was engaged in studies upon bovine tuberculosis, and needed urgently to have cattle presenting advanced tuberculosis of the udder, although instructions were given to various inspectors to report such cases in order that, instead of the animals being destroyed, they might be forwarded to the experimental station at Outremont for research, during the three years he was unable to obtain a single case. One herd only was reported in which this existed, and, when the owner heard why the animals were required, he immediately put such a price upon his beasts that the Department refused to consider the matter. This, in itself, is sufficient to show the relative rarity of advanced tuberculosis, even in the older established districts.

But it is worthy to note that the exportation of cattle from the older established provinces to Great Britain is practically *nil*. The cattle-raising industry for the British market is practically confined to the North-West Territories, and among the cattle on

the great ranches of the foot-hills of the Rockies, tuberculosis is practically an unknown quantity. Those cattle are out in the open the whole year round, and, with them as with man, life in the open is the surest preventive of the disease. These cattle have been slaughtered by the thousands at the Deptford, Glasgow and Liverpool abattoirs, and the freedom of their lungs and serous membranes from any trace of the disease is a matter of notoriety.

So the actual facts of the case give the lie direct to the contentions of those who oppose the importation of Canadian cattle. And the deductions to be made from these facts are the very opposite to those suggested. In order to introduce new blood into British herds, wholly free from tuberculosis, no better general scheme could be suggested than to freely admit cattle from the North-West into Great Britain.

J. G. A.

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**“THESE ARE ALL HONORABLE MEN”—WHO PAY FOR CHAPERONES ?**

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TORONTO, DECEMBER 7TH, 1904.

*Dr. MacCallum, 13 Bloor Street W., City.*

DEAR SIR,—I should have replied earlier to your letter of the 4th ulto. Possibly, it is now scarcely necessary to do so, as you state that you have decided on the course which you will pursue. It may not, however, be fair to allow you to remain under the misapprehension to which you refer, and the more so as it appears to cause you so much pain that some of your fellow practitioners pursue “such unprofessional and reprehensible practices in connection with Havergal College.”

In the first place let me say that the item to which you object is in no case asked or paid where the pupil is visited at the College. The only occasion in which such a charge is made is when the pupil visits the medical attendant. It is necessary that there should be a chaperone attending the pupil, and, after consideration, the amount suggested was found reasonable to answer this charge. The College makes nothing by this amount either in the shape of commission or discount. It barely supplies the amount needed to pay for the special attendance of the person who accompanies the pupil.

Secondly: Your deduction is absolutely erroneous. Without any basis for this you say: “Of course you inform the parents,” etc., “and that the recommendation of the College in connection

with the physician depends upon the payment of this commission." The College recommends no physician. It has had from the common-ment a regular medical attendant, and no other medical gentleman is called in unless by the special demand of the parent or guardian who invariably names the special physician he desires.

Third: I quite agree in your statement that "no reputable physician will so far forget himself as to employ runners or touts." The thought never entered my mind until suggested by your letter, and I simply reply to this portion of it, as your letter of the 4th is in answer to mine of November 1st.

Of course we are only responsible for those physicians who are employed by the College itself, and we are satisfied that they are reputable physicians, and, therefore, that some of the acts which you describe as reprehensible can be charged to them. Beyond this I cannot say anything. I trust that with this explanation you will feel it your duty as belonging to the class covered by your own term "reputable physician" to apologize to the College for the language that you have used, and the insinuation which you have made.

Faithfully yours,

S. S. HENDERSON.

TORONTO, DECEMBER 13TH, 1904.

*S. S. Henderson, Bursar, Havergal College.*

DEAR SIR,—Over a month to make the explanation which needed but a day! The physicians to whose offices the pupils of Havergal are sent do not pay commissions, but do pay for chaperonage. The rose is indeed sweeter under another name.

Every physician gives ten per cent. of his fee to the chaperone who accompanies a patient. He also sends a carriage for her, and, if wise, flowers occasionally. One would scarcely credit the amount of money expended in this way by physicians.

Another well known and accepted fact is that it is not the duty of the parent to provide a chaperone for his daughter. How can the school, which stands *in loco parentis* to the daughter, be expected to do so? This duty falls upon the milliner, the dressmaker, the dentist, the druggist, the doctor, any one who will pay ten per cent., but never upon the parent, nor upon the Institution to whose care the daughter has been entrusted.

Strange that I had overlooked such everyday facts! but you have made it so beautifully clear that I feel inclined to offer you fifty per cent. I do not see how Havergal can possibly do it for ten.

Do the authorities of Havergal in all seriousness offer this as an explanation? If the yearly fee charged by Havergal College be not sufficient to cover chaperonage, why not inform the parent, and charge him, instead of trying to take it out of others.

"The parent or guardian invariably names the special phy-



sician he desires" (Letter of Dec. 7). Who adds on "the usual condition, ten per cent. deducted by the College" (Letter of Oct. 24), Havergal College or the parent?

I refuse to pay a discount, commission or "charge for chaperone," as you now prefer to call it, and am told, not after a month, but by the next mail, that no other pupil will attend me from the College. Should any other parent chance to name me as the special physician, the pupil will not attend me, for Havergal College says "Miss — is the only pupil who will attend you from the College" (Letter of Nov. 1). What then becomes of the parents expressed desire? This is the way in which you propose to make me pay chaperonage?

To still further emphasize the necessity of my paying you this commission—chaperonage (?)—you state that my "name will not be entered on the staff of specialists connected with the College" (Letter of Nov. 1).

What term shall I apply to this? Shall I suggest that an apology is in order? Not at all! This is but one of the amenities of life as illustrated by the teachings of the authorities of Havergal College, an institution devoted to the ethical instruction of young ladies.

My "name will not appear on the Staff of Specialists," because I will not pay discount, commission, or chaperonage (?) Certain names do appear there. May one conclude that the men whose names appear on that staff do pay Havergal College this commission, chaperonage (?)

If this giving Havergal College ten per cent for "chaperonage" (?) is not reprehensible, if the physicians who have given it, for you describe it as the "usual condition," are not ashamed of it, why not give their names? That Havergal College agrees with me that this charge for chaperonage (?) is reprehensible, and unprofessional because reprehensible, needs no further proof than your persistent and studied failure to give their names.

You now tell me that Havergal recommends no physician, has none other than its regular medical attendant. What then becomes of "the Staff of Specialists in connection with the College?" (Letter of Nov. 1). How much confidence is to be placed in any statement of yours? Was there never any such staff, or have they resigned rather than let it be known that they pay what you so felicitously denominate a charge for chaperonage?

I confess that my deduction as to Havergal College recommending physicians was not based on fact. It was based on your statement of a "Staff of Specialists connected with the College."

Havergal College began by calling the usual conditions "a discount," but discounts are deducted by the one to whom the money is due, not by an outsider. Driven from that, you say it is a charge for chaperone—but strangers do not furnish chaperones.

First, last and all the time, it is a commission. Neither Havergal College, which demands the commission, nor the physician who pays it dare let the parent know that the confidence placed by him in them is being thus abused. The action is reprehensible and despicable on the part of both.

Truly yours,

JAMES MACCALLUM.

In the December issue of this Journal we had occasion to write our opinion upon physicians giving a rebate or percentage to schools, based upon correspondence that had come under our notice. We again publish *in toto* the recent letters exchanged between the Bursar of Havergal Hall and our confrere in the medical profession, Dr. James MacCallum.

The statements in the former letters do not quite tally with those in the last letter, written by this representative of the aforementioned seat of learning. In former letters a "Staff of Specialists" was spoken of, also "Attending Physicians," now "only one lone clinging figure" seems to embody the sum total constituting the medical attendants heretofore referred to. Again, this last letter contains the statement that only specialists to whose offices the pupils go as patients are requested to allow the percentage on their accounts in order to pay for a chaperone. Absurd. We find among the rules for pupils issued by Havergal Hall in their pamphlet, on page 24, "If, for any reason, a pupil should require a special chaperone, a charge is made." The parent is charged for it, the physician is charged for it; how unfortunate it is that there is not somebody else to charge it to.

Pity 'tis, the custom does not still obtain, as in former years, of having at least two or three "morning" governesses, whose duty it was to accompany the young ladies to physicians, dentists, dress-makers, and on Saturdays, shopping, etc. These governesses were formerly always maintained at the expense of the schools. The memory of one of those dragonesses haunts us still, for did she not keep sentry over the adored one in the days "when we were young." Last month we asked those physicians on the staff (imaginary or real), of Havergal Hall to send in their names for publication. We again hold the invitation open; but, as we have not received any answer, we may be permitted to ask—is the staff, spoken of in letters from members of the managing fraternity of the school, only a myth, or is it a new fashion to keep the names

of reputable Toronto physicians swallowed up in mystery? This problem is worth solving, and seems about as easy as that conundrum of the silly season—"How old is Ann?"

Over the hookah, let us remark, with apologies to the scribe of Nightingale Hall, that his non-committal correspondence and his C.O.D. chaperones may be summed up in the same manner as Mark Twain closed Mrs. Eddy's book "Science and Health," remarking, "Well, that is enough to give a fellow the blind staggers."

W. A. Y.

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#### A FURTHER ADDITION TO OUR STAFF.

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It is with pleasure that we announce that Dr. Charles R. Dickson, of Toronto, who for years now has made a specialty of physiotherapy, has consented to join forces with us from the first of the new year and take charge of that department. We congratulate, not only ourselves on the addition of Dr. Dickson's name to those of our collaborators, but our readers, whom we know may look forward to regular contributions from that gentleman dealing with the practice of physical therapeutics, of which he has made such a distinct success.

W. A. Y.

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#### THE WHITNEY GIFT TOWARDS A UNIVERSITY RESIDENCE.

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MR. E. C. WHITNEY, of Ottawa, has generously contributed the sum of \$15,000 to Toronto University towards the building of a Residence for the accommodation of the students. The gift is heartily appreciated and we trust that this will be but a start, and that our wealthy citizens will follow the example of Mr. Cawthra Mulock (who, by the way, we notice has been elected one of the trustees of Toronto General Hospital as a result of his recent generosity to that institution), and contribute the balance of the sum needed, \$200,000.

We feel that Toronto University stands in need of a Residence and that, until such accommodation is provided, Toronto can hardly be called a University town. For students to live together, study more or less together, and mix with one another in their daily work creates a spirit of *bon camaraderie* that can hardly otherwise

result, and as a proof of the success and benefit accruing from University Residence life, all one has to do is to look across the sea at that world renowned university, Oxford, and note what magnificent specimens of manhood they turn out over there, the result, largely, of the physical methods employed to, first of all, make men of the students, after which the result mentally is assured. W. A. Y.

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### TORONTO'S NEW MEDICAL LIBRARY.

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THE new Medical Library in Queen's Park is almost ready for occupation. The building has been all paid for, sufficient cash



TORONTO'S NEW MEDICAL LIBRARY, QUEEN'S PARK.

invested to cover the small annual ground rent, and a tidy little surplus is now in the bank as a nucleus of a sinking fund. It is expected that the Clinical Society and the Pathological Society will be able to hold their January meetings in the library, and, as soon as spring opens, it is hoped that the trustees will be able to commence renovating the building, so that by next autumn Toronto can boast of one of the most comfortable medical libraries in the Dominion. A great deal of credit is due to Drs. J. F. W. Ross, N. A. Powell and others for the work they have done in this connection.

W. A. Y.

## EDITORIAL NOTES.

**In Reference to Bovine Tuberculosis in Canada.**—The inhabitants of Ontario rejoice in such plenty that near Oshawa, last autumn, apples were left hanging on the trees or rotting beneath them, because, owing to the scarcity of labor, the farmer had to go on with his ordinary farm work, and had not time to pick them. Mr. Conant, Oshawa, writes on this subject in the *Globe*, November 25th, 1904: "There is, truly, within a radius of fifteen miles of this place, enough apples now wasting to supply amply a third of a million of people. Corn, too, is strewed along our roads, having been dropped from the farmers' waggons while drawing it into the barns, enough for many of the poor of Europe. Sugar beets, carrots, turnips, mangels and other vegetables are knocking about underfoot in great plentifulness, as if of no value." Truly a wayfarer would say, "This is not the land in which bovine tuberculosis should abound," yet to read the following item, sent from London by the Canadian Associated Press, and which appeared in the *Globe*, November 1st, 1904, one would think that Ontario beef would be dangerous food, and should rightly be excluded from British markets: "A correspondent, professing intimate knowledge, writes, denying the statement in an editorial that Great Britain protects itself against a country where cattle disease does not exist. He mentions a series of experiments in different parts of Canada, where a strikingly large percentage of tuberculosis was found. He suggests that pure breeds might be imported for breeding purposes." Two things crop out in this item: (1) The deliberate statement that *tuberculosis is proved by experiment* to be present in Canadian herds, and (2) that pure breeds should be imported into Canada for breeding purposes. As it is well to have an authoritative expression of opinion on these statements, we have referred the item mentioned to Dr. Adami, Professor of Pathology and Bacteriology, McGill University, Montreal, who has had special opportunities, under the auspices of the Canadian Government, for acquiring exact knowledge of the existence of bovine tuberculosis in Canadian herds. Dr. Adami has kindly consented to give an opinion, and his article appears at page 49 of this issue.

**Utilization of Fats by Tubercular Patients.**—Dr. René Laufer, in a paper read before the Parisian Academy of Medicine, says: “The most evident and constant influence of fats on tubercular as well as healthy persons, consists in the retaining and saving of albuminoid matters. When different kinds of fats are given in increasing quantities to tubercular persons, the curve of elimination of nitrogen (urine and feces) is at first lowered, and then remains stationary. Therefore, after a certain quantity of fat is ingested, the fat surplus is not utilized, and is consequently useless, at least in relation to the saving of albuminoids. Fat may also be stored up in the tissues, to a certain extent.” Dr. Laufer gave to one group of tubercular patients large quantities of fats (150 to 200 grams), such fats as are present in foods, and superadded fats such as cod liver oil, butter, sweet oil; to another group he gave fats in moderate quantities (150 to 200 grams), and he studied the curves of weight in these two groups of patients during from six to eight months. In those who received large quantities of fat, the weight curve rose rapidly, remained stationary, and then fell lower than the original weight, principally owing to digestive troubles, or because patients lost appetite, or because, owing to a total defect of utilization, the fats passed off with the feces without being utilized in the organism. In the second group (moderate quantities of fat) the weight curve rose slowly but steadily and constantly, so that the gain in weight was sure. Dr. Laufer thinks that from 100 to 150 grams (oz. 3.527-5.290) is the really useful maximum quantity of fat to be ingested by a tubercular patient. Note should be taken of this by physicians who may have occasion to establish a regimen for tubercular patients.

**How to Diminish the Mortality of Surgical Operations.**—

Dr. J. A. Rivière, who manages a great Physico-Therapeutic Institute at Paris, publishes in *The Annals of Physico-Therapy* (Aug., 1904) some remarks on the methods most likely to diminish the mortality of surgical operations. “Over and above the skill of the surgeon, three important factors make for or against complete success in a surgical operation: (1) The enemy from within (auto-intoxication, focus of disease), (2) the enemy from without (microbes), (3) the moral condition, as affected by hope and confidence. The surgeon, who should be a psychologist, in order

to enable him to raise and stimulate the spirits of his patient, will successfully combat autointoxication with calomel, castor oil, heat and water. Antiseptics will rid him of the invading microbe, asepsis will protect him from the outside microbe. Morphine, which, especially when it is given after the administration of chloroform, arrests the functions of kidney and liver, should be employed only in exceptional cases. The same objection applies to the use of massive injections of chloride of sodium, which injure the depurative functions of the renal filter, by the surprise which they occasion and the irritation which they excite in the delicate epithelium of these organs. A kind word, dictated by sympathy and a good heart, the charitable acts which the purest sentiment of humanity commands, the hope of a speedy cure, are, besides, most effective stimulants in accomplishing a cure. They are the real dynamic regenerators of the sufferer. Surgeons and physicians have no justification for practising their art other than because they safeguard the organs of the human body and prolong precarious lives. An operation is not a victory, but rather a therapeutic defeat."

**Constipation and Animal Food.**—Dr. Weir writes to the *British Medical Journal* from Chemulpo, Corea (his letter appearing Oct. 1st, 1904), giving his experience, derived from practice among the Coreans, of the absence of constipation among that people. He says: "Whilst in an English hospital the average out-patient is generally in need of aperients, I have found here very few, I think less than a dozen (out of over one thousand patients), who have any constipation at all, and the general answer to a question as to the number of motions is two or three times a day." He says, further, that "Animal food is very little used by Coreans, whose staple diet is *rice, helped down by pickles and dried fish.*" Think of this, ye prescribers who rack your brains for new formulæ of purgative pills, potions, tablets, etc., to assist the indifferent peristaltic wave. Why not let the responsibility rest where it properly belongs? If the over-fed patient will eat more meat than is good for him, let him be told of his fault. Over-ingestion of meat is a serious hindrance to every preventive or curative measure. It is not so rare as some would have us believe. People who have good tables and who consume more meat than they require are seldom satisfied, and are always

"constitutionally tired." Such people, when sick, should be advised to give up their purgatives, and in exchange for chops, steaks and roasts, to try the Korean menu.

**Flesh-eating and the Disposition.**—Meat-eating is said to be responsible for most of the bad temper that exists in the world. A butcher, whose article is quoted in *The Dietetic and Hygienic Gazette*, June, 1904, says: "Most meat-eating people, like the English, are noted for their bad dispositions. The French, who like fruit, vegetables, salads, fish and chicken, are noted for politeness and good humor. The Japanese live on rice, fruit, sweetmeats, and fish, and don't touch meat from one year's end to another. Their temperance and delicacy at table give them the best dispositions in the world. On the streets of Japanese towns there is never any quarrelling or fighting. You never see a disturbance among that people. Tolerance, courtesy, high-bred, ceremonious manners are as prevalent in Japan as grumbling in England." The cross-grained condition arising from flesh-eating is evidently intensified on days when meat is eaten more abundantly, and this circumstance gives point to a story told by a prominent English clergyman. He congratulated an old lady on her bravery in fighting her way to church against a terrible tempest, but received the disconcerting reply: "My husband gets so cross-grained after meals that I have to get out of his way, so I might as well go to church." All of which goes to show that the doctor, who is expected to have a heavenly disposition, or else be able to assume the appearance of having one, should be a vegetarian. If he cannot become herbivorous and good-tempered like the elephants, antelopes and camels, let him not imitate the diet of the lion, the tiger, the leopard, and the rest of the carnivora, which are fierce, treacherous and mean.

**The Physician as a Legislator.**—In the French Senate there are thirty-nine medical members; in the United States Senate there are two; in the Senate of Canada there are nine. In the French Chamber of Deputies, the popular branch of the government, there are fifty-one medical members; in the United States House of Representatives, the corresponding branch of the American Government, there is not a single medical member; in the Canadian House of Commons, the corresponding branch of our Government, there are fifteen medical members. It is consoling



to see that physicians who, by their education, occupation and general view-point are enabled to approach sociological questions with a clearness of understanding not enjoyed by other members of society, are fairly well represented in the Senate of Canada, as well as in the Canadian House of Commons. We think it is the duty of the Canadian medical profession to endeavor to secure the representation of our profession in the Parliament and Legislatures of Canada. There is no reason why physicians, because they are physicians, should cease to exercise the duties and rights of citizenship.

**Formation of Formaldehyd During the Combustion of Tobacco.**—From studies made by Dr. Trillat and communicated to the Academie des Sciences, Paris, November 7th, 1904, it appears that, during the combustion of tobacco, formic aldehyd (formaldehyd) is produced, the amount of which, in the case of heavy smokers, especially those who use clay pipes, reaches several centigrams a day. Formic aldehyd and acetic aldehyd, which is also present in tobacco smoke, exist in it only in the state of combination. This last particular is of considerable importance, for it relieves a smoker of the inconvenience of inhaling small quantities of formaldehyd in the free state. Dr. Trillat's observations, which go to show the value of smoking tobacco in this germ-infested world, recall an anecdote, related by Professor J. J. Mackenzie (Medical Faculty, University of Toronto): "A certain professor of bacteriology in a German university used to obtain pathogenic cultures from the saliva of his laboratory servant, who, during the earlier period of their relations, did not smoke tobacco. After a while the servant, no doubt in imitation of the Herr Professor, began to smoke tobacco every day, and his saliva, which became sterile, was of no further use as a source of bacteria."

J. J. C.

**Kress, Owen vs. Cruttenden.**—On the 8th day of December, Police Magistrate Denison, in the Police Court, registered a conviction against Thos. Cruttenden, jr., who keeps two drug stores in Toronto, one at the corner of Howard and Sherbourne Streets, and the other at the corner of Gerrard and Sumach Streets, for infringement of the trade mark, duly registered in Canada, owned by Kress, Owen & Co., 210 Fulton Street, New York, "Glyco-Thymoline." The evidence conclusively showed that the defend-

ant had put up a preparation under the name of "Glyco-Thymol," in bottles almost identical to those of Kress, Owen & Co., and with labels worded *verbatim et literatim* to those of the original manufacturers. The magistrate, in registering the conviction, gave the defendant's solicitor, who hinted at an appeal, to understand that, if he entertained that idea, he would not only fine but imprison his client as the law provided. The case was adjourned for a week, at the end of which time Cruttenden, through his solicitor, gave an undertaking that he would stop all manufacture of Glyco-Thymol and destroy all labels, bottles, etc., connected with the sale of that preparation. The firm of Kress, Owen & Co. are deserving of congratulation over the result of this case. They had every reason for prosecuting Cruttenden, as it was nothing short of dishonest, and entirely contrary to the law, that he should stoop to such practices and try to rob a firm who, by strictly ethical advertising (solely to the profession) and the expenditure of about \$175,000 per annum, have secured a large sale of Glyco-Thymoline, a preparation found valuable in catarrhal conditions of mucous membranes.

W. A. Y.

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### PERSONALS.

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DR. WM. NATTRESS has moved back into his old house on Carlton Street.

DR. C. R. DICKSON has purchased 184 Bloor Street West, and will remove there in May.

DR. CHAS. SHEARD lectured before the Unitarian Club at Webb's restaurant on the 19th ult.

DR. F. LEM. GRASSETT has been elected to represent the medical graduates on Trinity College Board.

DR. MURRAY MCFARLANE has removed to number 18 Carlton Street, formerly occupied by Dr. Uzziel Ogden.

CONGRATULATIONS to Dr. and Mrs. J. T. Clarke, 410 Bloor Street West, on the birth of a daughter on the 14th ult.

DR. BREFNEY O'REILLY returned recently from Hong-Kong, and is spending the holiday season with his father and mother, Dr. and Mrs. Chas. O'Reilly.

As it will be seen from the daily press, Dr. John Hunter, of O'Hara Avenue, has political aspirations, and at the time of writing it looks as if he will receive the nomination for West Toronto.

# News of the Month.

## DEATHS IN THE PROVINCE OF ONTARIO FOR OCTOBER, 1904.

BY CHARLES A. HODGETTS, M.D.,  
Secretary Provincial Board of Health, Toronto.

THE health of the province for October, based upon the returns of 760 municipalities, may be considered highly satisfactory, as the deaths from all causes are 31 less than those reported for the same period last year, yet notwithstanding the population reporting is greater by 10,000. The most pleasing features of the returns are the reductions in both cases and deaths of all infectious diseases, with the exception of typhoid fever, there being a case decrease of 23 per cent., and in deaths, 10 per cent., as may be seen by the table below.

The total deaths recorded from all the causes are 2,091—representing a reporting population of 2,092,300—which makes a death-rate of 12.0 per cent. per 1,000, as compared with 2,122 deaths for a population of 2,081,534 for the corresponding period of last year, which gave a death-rate of 12.2 per cent. Smallpox has almost disappeared, only one case being reported for the month. Scarlet fever, also, has reached a very low point, there being 177 cases and 10 deaths, or a case decrease of 23 per cent.

*Diphtheria.*—As may be seen by the returns, this disease has shown the greatest decrease of any of the infectious diseases, having dropped from 541 cases and 66 deaths to 239 cases and 34 deaths, being a case decrease of 55 per cent. and deaths 50 per cent., as compared with the same month a year ago.

*Typhoid Fever.*—The returns for this disease show but little change over the preceding month, but compared with October, 1903, there is an increase both in cases reported and also in deaths returned. The increase in the number of reported cases is no doubt due to the fact that medical practitioners are now aware of their responsibility, and more readily comply with the Act. The marked increase in deaths would indicate the type was more virulent.

In this connection, that portion of the quarterly report of the Secretary, as adopted by the Board on November 11th last, regarding water supplies, may be quoted. Its perusal is worthy

of careful consideration by individuals as well as municipal authorities:

"It is, however, quite evident from the information to hand, that water pollution is the cause in every instance of the outbreak, which emphasizes the fact that the utmost care must be taken by health authorities to preserve their water supplies from contamination, whether the source be wells, lakes or streams. Too often the relative positions of the well or the intake pipe and the barn, stable or cesspool are not carefully considered, and a long-continued rain storm results in water contamination by reason of the large amount of surface washings carried directly into the source of supply, with the inevitable result of an outbreak either of enteric fever or some intestinal trouble, according to the specific character of the bacterial infection. To prevent this pollution, it should be the duty of each local board of health to employ an intelligent officer to examine periodically into the conditions surrounding the water supply of each inhabitant, and, if necessary, take samples for laboratory examination. Further, if pollution is found to exist, either the source of the same should be removed or condemned, and the supply from that particular source, being unfit for domestic use, forthwith stopped.

"Further, municipal authorities must be alert to the fact that what has been a source of good water supply often becomes, by reason of the rapid growth of the place, a polluted well, stream or lake, presenting a condition which at the time of the inception of the system was never considered. In the case of a town, the sewage emptied into a body of water from which the water supply is taken, has increased to such an extent that admixture takes place through the very increase in volume. In the smaller towns and villages, without public systems, the pollution of wells and springs is an ever-increasing difficulty, and it behoves the individual householder and local authorities to bear this in mind and see to it, that either of these sources are not contaminated by the placing of cesspools or stables in too close proximity to either. With the rapid growth of towns, whereby fields become, through the erection of dwellings, the abode of perhaps hundreds of persons, it cannot be expected that, what in a primitive state is pure, will remain so.

"The question here arises, what is the best course to pursue in regard to both public and private supplies?

"In view of the fact that it is almost impossible to be your brother's keeper and have a control over how and where he shall dispose of his wash sewage and excreta, and also that water is often polluted at a considerable distance from the point where it is taken for consumption, the one answer is, to filter before use, for with the proper kind of filter in use, we have assuredly

the best guarantee of always securing a drinking water which is likely to be at all times free from contamination, though to maintain this standard in the case of corporations, it requires the local authorities to place the system in charge of a competent official, and this Board should not only require an annual report from the local authorities, but should, for the interests of the general public, institute a periodic inspection of both water and sewage systems."

I would particularly point out the danger of the pollution of milk supplies by reason of the use of the contaminated well water of the farm-yard, which water is used to wash out the milk cans. Too often, I fear, is the infection spread from this source, for the cool, crystalline spring water of the farm-yard is not always free from contamination, and therein often lurks the germ of typhoid.

COMPARATIVE TABLE FOR OCTOBER—THIS YEAR AND LAST.

DISEASES.	1904.		1903	
	CASES.	DEATHS.	CASES.	DEATHS.
Smallpox .....	1	0	7	0
Scarlet Fever .....	177	10	232	9
Diphtheria.....	239	34	541	66
Measles .....	1	1	2	1
Whooping Cough.....	20	7	30	17
Typhoid Fever.....	265	63	178	43
Consumption .....	169	159	169	169
Total	872	274	1159	305

**ANOTHER MUNIFICENT GIFT TO TORONTO GENERAL HOSPITAL.**

In an article in a recent issue we stated that, before long, important news would be forthcoming as to the new hospital scheme in Toronto. Our prognostications have turned out about correct, as Mr. George Gooderham, the retiring trustee of the General Hospital, a couple of weeks ago intimated that he will mark his retirement by a donation of moment to the hospital. The exact amount which Mr. Gooderham will give has not been specified yet, but Mr. Gooderham intimates that it would be in keeping with Mr. Cawthra Mulock's recent donation of \$100,000. The amount of Mr. Gooderham's donation will not be stated until the plans for the extension of the hospital assume a definite shape.

As the matter stands now, the Hospital Board has \$100,000 from Mr. Mulock, and the Ontario Government has offered \$100,000, on condition that the city of Toronto contributes a similar sum.

"We don't know quite where we are at," remarked one connected with the Hospital Board recently, "but we have already decided upon an hospital with four or five hundred beds. This we will build in units of one hundred beds or so. The hospital to be of utility for educational purposes must be established close to the University. We have not selected our site, and no one will know anything about it until we have secured the property. Mr. Gooderham's gift paves the way for making the hospital in connection with the University Medical College one of the best equipped and most important clinical hospitals on the continent."

The plans of the Board of Trustees for the new hospital are most ambitious. They want to give the medical students of Toronto University the most completely equipped clinical hospital in America. The advantages of such an hospital in connection with the University have been pointed out by such eminent physicians as Dr. William Osler, of Oxford University. It would raise still higher the standard of the medical profession in Canada.

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#### ITEMS OF INTEREST.

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**To Investigate Yellow and Malarial Fevers.**—Dr. Wolferstan Thomas, of Montreal, a son of the late general manager of the Molsons Bank, has left Liverpool for the Amazon to investigate yellow and malarial fevers on behalf of the Association of Liverpool Merchants, headed by Sir Alfred Jones, formed for the investigation of tropical diseases.

**Condemnation of the Division of Fees.**—At a recent meeting of the Council of the Chicago Medical Society, Arthur Dean Bevan offered the following resolution which is to be voted on at a subsequent meeting and then, if adopted, to be incorporated as an amendment to the Constitution: "Any member who is guilty of giving or receiving a commission, or of entering into any arrangement for the division of a fee for professional services, which arrangement is not known and fully understood by the patient or party by whom such fee is paid, shall be guilty of unprofessional conduct."—*Medical Record, N.Y.*

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#### ALOPECIA (SIMPLE).

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Liq. Carbonis Detergentis	-	-	-	-	1 oz.
Glycerini (Price)	-	-	-	-	6 drachms.
Aquæ destillatæ	-	-	-	-	4 ozs.

"A Treatise on Diseases of the Skin."

T. McCALL ANDERSON, M.D., Glasgow.

# The Physician's Library.

## BOOK REVIEWS.

*The After-Treatment of Operations.* By P. LOCKHART MUMMERY, F.R.C.S. (Eng.), B.A., M.B., B.C. (Cantab.), Hunterian Professor, Royal College of Surgeons, etc. Second edition. London: Baillière, Tindall & Cox.

It is somewhat of a treat nowadays to pick up a book other than "My First Hundred Operations for Appendicitis," or "My Last Hundred Cases" of what-not, and though to the one before us the charge might be made that there is too much "spoon-feeding," yet it has its value. The young practitioner is brought face to face with a serious emergency requiring immediate operation. This he does successfully, but his patient may lose his life through unskilled handling in the after-treatment. Here is a book that should be on the table of every general practitioner, for even if the surgeon has been called in, it is the family doctor in many cases that watches the after-progress of the case, and in this little book the detail of the after-treatment is given in a lucid manner.

One can hardly follow the author in all his ideas, namely, to allow the patient to be the judge of what is good and what is not good for him after the operation, yet on the whole his remarks are to the point. Particularly valuable are the hints on posture as relating to the patient's progress, and if followed many hours of discomfort will be saved.

In this second edition a section is added on the smoking and drug habits. The chapter on appendicitis has been enlarged, and that on shock and collapse has been revised, so that it is quite up-to-date.

F. N. G. S.

*Light Energy.* Its Physics, Physiological Action and Therapeutic Applications. By MARGARET A. CLEAVES, M.D., Fellow of the New York Academy of Medicine; Fellow of the American Electro-therapeutic Association; Member of the New York County Medical Society; Fellow of the Société Française d'Electrothérapie; Fellow of the American Electro-Chemical Society; Professor of Light Energy in the New York School of Physical Therapeutics; Late Instructor in

Electro-Therapeutics in the New York Post-Graduate Medical School. With numerous illustrations in the text, and a frontispiece in colors. New York: Rebman Company, 10 West 23rd Street, cor. 5th Ave.; London: Rebman Limited, 129 Shaftesbury Ave., W.C. 1904. Pp. 827. Canadian agent: Charles E. Wingate, 2 Richmond Street E., Toronto.

The scope of this work is sufficiently indicated on the title page. In general one may say that it presents the difficult subject of which it deals in a most fascinating manner. Whilst it is true, as the author asserts in her preface, that "light energy is as old as the sun, and so almost are its therapeutic uses," yet the average practitioner of medicine to-day has, we fear, little knowledge of the physical properties of light or of their therapeutic application. We welcome this book as one of the most timely publications among recent medical works. The subject is dealt with in a thoroughly scientific manner. Clear judgment, based upon extensive experience, is obviously brought to bear upon each phase of the varied problems which are passed under consideration.

The writer of this review would like to give the reader a definite idea of the scope of the work, in the hope that by so doing the profession may appreciate the extent and importance of the field covered. The two opening chapters deal with the physics of light energy and radiant heat. Several chapters are devoted to the action of light on living matter. Thus there is discussed the action of light energy upon elementary forms of life, upon vegetable organisms, upon bacteria and upon higher organisms. A chapter is devoted to the physical effects and biological action of light energy on the skin, the circulation, the nervous system, and upon metabolism. In succeeding chapters there is discussed the therapeutic application of light energy in sunbaths, electric arc baths, incandescent light baths, the concentrated visible chemical frequencies of the solar spectrum, blue light, red light, and ultra violet rays. The use of vacuum tube discharges is dealt with, and a chapter on the X-rays is added. Alpha, Beta and Gamma rays of radio-active substances are described as to their physical properties and their therapeutic uses, as also are fluorescence, fluorescent stimulation and sensitization—their therapeutic uses in cancer, lupus, condylomata, chancre and malaria. The final chapter is on the pernicious effect of sunlight, insolation, and the pathological effects of electric lighting.

The Roentgen ray is not dealt with in this book, as the author considers that the subject has been most exhaustively covered by others, but it is referred to incidentally in its relation to light and radio-active substances, "in order to establish as clearly as possible the indication for the one or the other."



One reference to the potency of light energy may be quoted. The author states: "The inconceivably rapid and minute oscillating light corpuscles of the invisible region beyond the violet have a chemical energy so intense as to destroy micro-organic life, to wreck the molecules of nitrite of amyl, of iodine vapor, and to produce erythema of the skin and underlying changes; effects dependent upon the accumulation of the periodical strokes of the oscillating swing until the atoms upon which their timed impulses impinge are jerked asunder. It is this energy in its various manifestations to which this volume is devoted. When light is conceived of in this manner, the reason for its power in continuing life and in curing disease becomes evident at once."

Not the least interesting portion of the book is the part which deals with the action of light on living matter; for example, the summary of experiments on the growth of fruit and flowers under continuous light—electric light at night and sun light during the day. Increased rapidity of growth was noted, and the fruit proved to be of larger size and improved flavor. "Wheat, barley and oats grew so rapidly that they fell to the ground of their own weight." The bactericidal power of light is shown to exist to a marked degree. This was first pointed out by Downes and Blunt in 1877. Since that time numerous investigations have been carried out. The author believes the most important factor in the human organism is to be found "in the effect of the light energy upon the nutritive bases of bactericidal growths *pari passu* with its physiological action upon the entire blood stream. This action is characterized by an increase in the amount of oxygen, which experimental data show to be so prejudicial to the well-being of micro-organisms." Outside the living organism light is shown to have a bactericidal action, too. In discussing the action of light upon hygiene and sanitation, the author states: "The habit of keeping the window-shades down, a very common practice, even in the absence of direct sun glare on the window, is in direct opposition to fundamental physiological principles. Sunlight is not only purifying to our atmospheric environment, in its destructive action upon micro-organisms, thereby preventing disease, but it has still a more deep and intimate human relation of a sanitary nature, for an abundance of light energy is a necessary condition of mental and bodily well-being." . . . "Thus the chemical activities of light serve in hygiene, sanitation and disease: in the one instance to maintain health, in the other to disinfect or destroy pathogenic organisms, and in the latter to check the inroads of disease by increasing not only the red blood supply, but the white as well, and the functional activity of the entire organism."

One of the most interesting chapters in the book is on radium, where a most instructive account is given of the pioneer work

of Madame Curie. The work of Professor Rutherford, of Montreal, is mentioned, and a reference is made to the experiments of Professor Maclellan, of the University of Toronto, where he found that rain caught in a vessel and immediately evaporated to dryness, imparted a radio-activity to the vessel.

This review has already extended beyond the ordinary limitations allotted for such works, otherwise the writer might be tempted to continue, but it is hoped that enough has been said to interest the profession in the treatise under discussion. One cannot refer in detail to the portion of the work which deals with the therapeutic application of light energy in its various forms, but suffice it to say that the treatment of this part of the author's subject is most suggestive and instructive; it is written in a moderate style and in a thoroughly scientific manner. Without the slightest reservation the book is to be commended as of the highest importance, and well worth the most careful study of thoughtful students in our profession who are anxious to be abreast of the times, and who desire to be possessed of the knowledge necessary to employ intelligently light energy as one of the most powerful therapeutic agencies which exists for the maintenance of health and the treatment of disease.

The publishers have produced a truly beautiful volume, printed on excellent paper, well illustrated and well printed. A. P.

*A Text-Book of Clinical Diagnosis.* By Laboratory Methods. For the Use of Students, Practitioners and Laboratory Workers. By L. NAPOLEON BOSTON, A.M., M.D., Associate in Medicine and Director of the Clinical Laboratories of the Medico-Chirurgical College, Philadelphia; formerly Bacteriologist at the Philadelphia Hospital and at the Ayer Clinical Laboratory of the Pennsylvania Hospital. Octavo volume of 547 pages, with 320 illustrations, many of them in colors. Philadelphia, New York, London. W. B. Saunders & Co. 1904. Canadian agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. Cloth, \$4.00 net; sheep or half-morocco, \$5.00 net.

One great advantage in the description of the various methods of investigation suggested in this manual is that they are of such a character that, while they furnish a guide to a correct diagnosis, they can be carried out both by the practitioner in his office and the student in the laboratory. The various procedures in clinical technique are so described that they can be very easily followed, the student being led from the simpler to the more difficult methods by easy steps.

Serum diagnosis, a thing hitherto belonging only to the expert, has been largely gone into and arranged in a simple form. The more recent methods of examination and staining of the blood are

described and illustrated by original drawings. These, with the later methods for the estimation of sugar, uric acid, etc., etc., are well considered.

A very useful and practical portion of the volume is given up to the subjects of animal parasites, diseases of the skin, transudates and exudates, together with secretions of the eye and ear.

To the progressive student or practitioner, and to the practitioner who requires a ready reference book, this volume will be found of great value, as it is a guide to the most recent methods in clinical diagnosis, and contains a description of the latest work done in this subject.

A. J. J.

*Hand-Book of Diseases of the Ear.* For the use of Students and Practitioners. By RICHARD LAKE, F.R.C.S. (Eng.), Lecturer on Practical Otology, Medical Graduates' College. Second edition. London: Baillière, Tindall & Cox. 1904.

Of this second edition with some new illustrations and additional letter-press, I have formed the same favorable opinion as of the first. I believe that when this little book once becomes known it will, in diseases of the ear, hold the same position as Swanzy or Nettleship on diseases of the eye.

J. M.

The Christmas number of *The American Journal of Nursing* (official publication of the trained nurse profession) contains a number of exceptionally interesting articles, among which is one by Bishop L. H. Brent, D.D., entitled the "Protective Forces of the World"; "What Made Life Worth While," a Christmas story by Lucy Rider Meyer, A.M., M.D., of Chicago; "A New Cranford," being a more or less true account of an experiment, by Miss Isabel McIsaac, late Superintendent of the Illinois Training-School; "Children's Island Sanatorium," an account of one of the great summer hospitals, by Maude S. Curtiss, Volunteer Worker of the Sanatoria Association; "Infant Feeding," by Mrs. Helen Marion Warfield, of the Children's Hospital, Boston; an illustrated article describing the new Club-House of the New York Alumnae; a most interesting description of a visit to the hospitals of Constantinople, with a photograph of the hospital where Florence Nightingale did her great work, by Miss L. L. Dock; the first full report of the Board of Nurse Examiners under the Regents of the University of New York State, and many items of personal and professional news of interest to the nursing profession. This number has a special cover, many illustrations, and is exceptionally attractive. The subscription is \$2.00 a year; single copy, 20 cents. It is published by The American Journal of Nursing Co., 227 S. Sixth Street, Philadelphia, Pa.

Extract from *Medical Annual*, 1904.—Peroxides of Magnesium and Zinc.—Under the names Hopogan and Ektogan, two new peroxides have been put upon the market. They possess the power of generating, under certain conditions, either ozone or nascent oxygen. Hopogan contains from 15 to 30 per cent. of peroxide of magnesium,  $Mg O_2$ , while Ektogan contains 25 to 60 per cent. of the peroxide of zinc,  $Zn O_2$ . In contact with weak, organic acids or bodies possessing acid properties, these peroxides readily give off oxygen, and thus have considerable power as antiseptics and antifermentatives. Hopogan is used for internal administration as a gastro-intestinal antiseptic, while in dermatological practice Ektogan enables us to produce nascent oxygen at the site of the disease. For this purpose it is only necessary to apply to the moistened skin or wounded surface a mixture of dry powdered Ektogan and an acid body. Similarly, the two peroxides enable us to produce, at will, nascent iodine, either for internal or external use. For the former all that is required is to mix the Hopogan with a dilute solution of potassium or sodium iodide. The stomach contents are always sufficiently acid to liberate the iodine in a nascent condition. Frenkel\* gives a series of tables, which enables the amount of iodine thus liberated to be readily calculated. For external purposes, the mixture of Ektogan, potassium iodide, and the acid substance is used. The best organic acid is tannin, but tartaric, citric, benzoic and salicylic acids are also suitable, as well as substances possessing acid properties, such as thymol, alum and potassium bitartrate.

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#### NEW MEDICAL WORKS AND NEW EDITIONS.

The following are a few of the new works on press, and which will be published shortly by the well-known firm, Baillière, Tindall & Cox, Covent Garden, London: "Manual of Anatomy" (University Series), by Dr. A. M. Buchanan, Professor of Anatomy, Anderson's College Medical School, Glasgow; "Manual of Obstetrics" (University Series), by Dr. Henry Jellett, of Rotunda Hospital, Dublin; Professor Bianchi's (Naples) "Psychiatry"; "Surface Anatomy," by Dr. J. Gillman Moorhead, of Trinity College, Dublin; "After Treatment of Section Cases," by Dr. W. J. Stewart McKav, Senior Surgeon to the Lewisham Hospital for Women and Children, Sydney. New editions of Jones' "Manual of Diseases of Women"; "The Roentgen Rays in Medical Works," by Dr. David Walsh, Physician to the Western Skin Hospital, London, and Walsham and Paterson's "Hand-Book of Surgical Pathology." Any or all of these books will be obtainable either from J. A. Carveth & Co., Limited, or Chandler & Massey Limited, Toronto.

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\**Le Prog. Med.*, April 4, 1903; *Ber. d. d. Pharm. Ges.* XXX.; *Jour. d. Pharm. et de Chem.*, No. 6, 1903.