

Intestinal Catarrh, Acute. See Enteritis, Acute.

Intestinal Hæmorrhage... 1176, 1281

Lactation, Prolonged ..... 1258

Lead Colic. .... 1281, 1377

#### Leprosy.

An infectious disease due to the bacillus lepræ of Hansen, transmitted mainly through dust contaminated with these germs by the expectoration and nasal discharges of sufferers. The tubercular form is the result of an effort by phagocytes, epithelioid cells and giant macrophages to segregate the germs and destroy them in the skin, mucous membranes, viscera, etc., but the tubercles tend to break down, leaving ulcers. These ulcers are due to the deoxidizing or reducing action of the germs on the adrenoxidase of the cellular elements they penetrate when the intra-tubercular phagocytes and the blood's auto-antitoxin are unable to prevent it. This destructive action is usually such as to cause the loss of phalanges, toes, ears, etc., and other deformities. The anæsthetic form is due to the invasion of nerves by the germs through the intermediary of the plasma circulating in the axis-cylinders, neuro-fibrils, etc., and in the perineural capillaries. At first a defensive local reaction, attended by the immigration of microphages and macrophages, thickening and congestion of the nerve, occurs. The resulting organic lesions finally become such that the nerves can no longer carry on their sensory or motor functions, and hyperæsthesia and deficient nutrition of the organs to which they are distributed follow.

Treatment: The aim should be to destroy the bacteria by increasing the aggressive power of the phagocytes and the bacteriolytic activity of the blood. *Thyroid gland* 2 grains t.i.d. (in adults), to increase the thyrioidase (opsonin) with, after one week, *iodide of mercury*  $\frac{1}{16}$  grain also t.i.d., reducing the dose slightly if salivation appears. At least one quart of some *saline mineral water* daily to preserve the fluidity of the blood and thus insure the free penetration of the bacteriolytic plasma into all capillaries and neuro-fibrils, and the prompt elimination of the increased wastes.

The diet should include a free supply of vegetables and fruit to provide the blood with alkaline salts, and keep the bowels open.

#### Leukæmia.

Due to the simultaneous occurrence of depression of the functional activity of the adrenal system and deficient alkalinity of the body fluids. The blood being poor in auto-antitoxin, the destruction of worn-out leucocytes in the blood itself and in the spleen is inadequate, and the undestroyed and partially disintegrated leucocytes accumulate not only in the blood and spleen, but also in the bone-marrow where the newly formed cells are to a great extent retained. The impaired osmotic property of the blood and lymph, itself due to deficiency of alkaline salts in these fluids, favors the retention of leucocytes in all these organs.

Treatment: To enhance the functional activity of the adrenal system and increase the blood's proteolytic activity, *thyroid gland* 2 grains t.i.d. in adults, with *oxygen inhalations*, or systematic daily courses of *deep breathing* in the open air. After one week, *saline solution* intravenously, six ounces being injected slowly every other day. Free use of *alkaline waters* to facilitate the elimination of detritus by the intestinal and urinary systems.

Lithæmia. See Gout.

Little Tetanus. See Tetany.

Lobar Pneumonia. See Pneumonia.

Lobular Pneumonia. See Bronchopneumonia.

Lockjaw. See Tetanus.

Lues. See Syphilis.

Lyssa. See Rabies.

Malarial Fever. .... 1245, 1246, 1318

Due to the presence of the plasmodium malarie of Laveran in the red corpuscles, and characterized by a periodical or intermittent increase of auto-antitoxin in the blood having for its purpose the destruction of the pathogenic parasite. This process, i.e., the period of pyrexia or sthenic fever, which may last ten or twelve

hours, entails the destruction of many red corpuscles: hæmolysis. Hence the high temperature (104 to 107° F.) often observed, the subsequent hypothermia and the gradually developed anæmia. When the anæmia is marked and persistent, we have the *malarial cachexia*; when the hæmolysis is such as to impair greatly the functional efficiency of the blood, the *algid* or *comatose* type is produced, the blood being hydræmic. When a temporary but severe hæmolysis occurs, *hæmoglobinuria* follows, owing to the elimination by the urine of the hæmoglobin derived from the broken-down corpuscles.

Treatment: The only true specific in this disease, *quinine*, not only poisons directly the plasmodium, but by exciting the vasomotor center provokes constriction of all arteries, thus causing a greater volume of blood to circulate in the capillaries, where the red corpuscles and their pathogenic organism are most advantageously exposed to the poison. Its action is more perfect than that of the adrenal system, which destroys the red corpuscles to reach its contents, the plasmodium.

Prophylaxis: Quinine, especially the *hydrochlorate*, protects the body against infection by rendering the blood toxic to the parasite in its various stages and by causing through its action on the vasomotor center, hyperæmia of the cutaneous capillaries. Inoculation by the mosquito is thus prevented by destruction of the parasitic form as soon as it enters the blood.

Measles. See Rubeola.

Melancholia ..... 1239, 1386

Meningitis, Cerebro-spinal. .... 1346

An inflammation of the membranes of the brain and spinal cord, caused by various bacteria, particularly the pneumococcus, the bacillus coli communis, and the various pyogenic bacteria; and in epidemics of the disease, by the meningococcus of Weichselbaum. It develops in subjects whose adrenal system is functionally depressed through fatigue, exposure, deficient aëration, exhausting diseases, etc., and, in infants, by artificial feeding.

The fact that the pneumococcus is

the most frequent cause in sporadic cases explains the frequent occurrence of pneumonia as a complication.

Treatment: At any stage an immediate increase of thyrioidase (opsonin) and auto-antitoxin in the blood is imperatively indicated to destroy the pathogenic organisms. The *iodide of mercury*  $\frac{1}{10}$  grain orally, or if the case is marked or advanced, dissolved in fifteen drops of sterilized water, injected intravenously every three hours (adults), until slight salivation occurs, when the dose is to be reduced to  $\frac{1}{16}$  grain every four hours, given orally. Simultaneously from the start, *thyroid gland* 1 grain with each dose of mercury, and *saline solution* hypodermically, or better, intravenously, to increase the fluidity of the blood and facilitate its circulation in the cerebro-spinal capillaries, while enhancing the elimination of wastes. *Fleener's serum* if at all obtainable.

Menopause ..... 1145, 1168

Menorrhagia ..... 1387

Mental Torpor ..... 1258

Metrorrhagia ..... 1387

Migraine, treated in full. .... 1522

#### Morphinism.

Due to hyperexcitation and the resulting exhaustion of the sympathetic center by the excessive use of opium or morphine (see p. 1276).

Treatment: Absolute and immediate abstention from the use of the drug. To eliminate poison from the organism, *saline solution* hypodermically, or better, intravenously. Then to enhance general oxygenation and nutrition of the depraved center, *thyroid gland* 2 grains t.i.d., and after one week, to restore gradually the tone of the sympathetic center and the propulsive activity of the arterioles it governs, *atropine* or its physiological analogue, *hyoscyne*,  $\frac{1}{400}$  grain t.i.d.

If the sudden removal of the morphine causes diarrhœa and vomiting, a *calomel* purge, by stimulating the adrenal system, counteracts its cause, excessive vasodilation, and muscular relaxation affecting, among others, the gastric and intestinal muscles.



The insomnia being due to relaxation of all arterioles, which entails passive hyperæmia of the cerebro-spinal system, *acetanilid* to stimulate the depressed sympathetic center. Chloral and all other drugs which produce sleep by depressing the adrenal or vasomotor centers increase the depression and should not be used, if possible.

#### Multiple Neuritis.

Characterized by passive hyperæmia of various peripheral nerves due to relaxation of the arterioles through which their capillaries, axis-cylinders, etc., are supplied with blood-plasma. The propulsive activity of the arterioles being also deficient the nerves are insufficiently nourished and their power to generate nervous energy or impulses is impaired. While the passive hyperæmia of which they are the seat renders the affected nerves and the areas to which they are distributed sensitive to pressure, the nutrition of these areas is impaired. Hence the concomitant muscular tenderness, wasting and paresis.

The loss of function of the arterioles is primarily due to the action of any poisons such as alcohol which deoxidize the blood; ergot, or toxins which cause excessive vasoconstriction; or wasting diseases, etc., which reduce directly or indirectly the volume of adrenoxidase-laden plasma supplied to the arterioles by their nutrient vasa vasorum.

Treatment: The elimination of the cause is of course the first indication. To counteract the paresis of the arterioles *atropine*, with, if there is pain, small doses of *morphine* or *acetanilid*. When the pupil becomes dilated the atropine should be replaced by its analogue, *hyoscine*,  $\frac{1}{150}$  grain t.i.d. Static electricity and gentle massage are useful adjuncts to restore motion to the parietic muscles.

#### Myxœdema and Infantile Myxœdema or Cretinism..... 165

Due to arrest of the functions of the thyroid gland. Its secretion serving mainly to sustain the functional efficiency of the test-organ and through it that of the adrenals, absence of this secretion is followed by the formation of insufficient thyroi-

odase and adrenoxidase for physiological metabolism. As all tissues are inadequately supplied with oxygen under these conditions, all functions are impaired in proportion. Hence the hypothermia and sensation of cold, due to the deficiency of adrenoxidase in the blood, the mental torpor, the adynamia, the imperfect nutrition of the skin, the relaxation of all vessels and the resulting accumulation of mucin-like plasma in the subcutaneous tissues, etc., and finally the vulnerability to intercurrent diseases, the deficiency of adrenoxidase involving a corresponding deficiency of auto-antitoxin both in the phagocytes and in the blood, and also of thyriodase in the latter.

In *cretinism*, the same deficiency of thyriodase and adrenoxidase entails also a lack of trypsin and nucleoproteid, the three main foundations of the vital process, and thus prevents development of the body and brain. Hence, in addition to symptoms of myxœdema, the dwarfism and idiocy.

Treatment: In adults *thyroid gland* 3 grains t.i.d. may be given. A slight fever may occur after a few days, but this indicates improvement. In children the dose should not exceed 1 grain t.i.d. at first. The condition of the pulse and heart should be frequently ascertained. If they become weak or irregular, the depressor nerve is being hypersensitized and the functions of the pituitary body (found enlarged after death only because, like all other organs, it is the seat of marked hyperæmia) are being inhibited. Under these conditions the use of the gland should be stopped a few days, and then resumed, but in smaller doses. See also DISEASES OF THE THYROID APPARATUS, Vol. I.

#### Neuralgia, treated in full..... 1529

#### Neurasthenia, 1175, 1222, 1224, 1231, 1239, 1245, 1246, 1258.

Due to exhaustion of the sympathetic center and to the resulting relaxation and loss of propulsive activity of the arterioles. The blood circulating through capillaries lacking its usual velocity, the functions of all organs are correspondingly depressed. Hence the inability to do prolonged mental labor, the habitual

fatigue, the weakness, the gastrointestinal atony, etc. Although the speed of the blood-stream in the capillaries is diminished, these small vessels are nevertheless congested owing to the greater volume of blood admitted into them by the dilated arterioles. Hence the areas of hyperæsthesia or tenderness, the muscular twitching, the neuralgic pains, the pseudo-angina due to hyperæmia of cardiac capillaries, the hyperacusis, the dysmenorrhœa, etc.

Treatment: Removal of the cause of the disorder. Hypnotics, such as sulphonal, trional, chloral, etc., only serve to aggravate the disorder by depressing the vasomotor center and the test-organ, thus inhibiting nutrition. *Acetanilid* or its weaker analogue *phenacelin*, given on retiring with a tumblerful of hot milk, not only causes sleep by quieting the patient, but as it does so by exciting the sympathetic center, it aids the curative process. To initiate the latter, *atropine*  $\frac{1}{20}$  grain t.i.d., followed, when dryness of the throat or mydriasis appears, by *hyoscine hydrobromate*  $\frac{1}{100}$  grain t.i.d. to stimulate the sympathetic center and restore the propulsive activity of the arterioles. If excitement is caused the *bromides* may be used instead of the coal-tar products on retiring, to depress somewhat the vasomotor center and thus reduce the capillary congestion. *Sea-air* and *sea-bathing* are powerful adjuncts. *Coca*, by gently stimulating the test-organ, is especially effective in this disease, a wineglassful of Mariani coca wine being given t.i.d. Static electricity, by causing reflex contraction of all peripheral arterioles, is very beneficial.

#### Neuritis, treated in full..... 1529

#### Night-sweats ..... 1215

#### Obesity ..... 1145

A condition due to deficiency of adrenoxidase and pancreatic ferments in the blood, owing to functional debility of the adrenal system. The carbohydrates being inadequately broken down, fat accumulates in the subcutaneous and subserous and other tissues.

Treatment: Besides the familiar dietetic treatment, *thyroid gland* to

enhance catabolism, but not in the large doses usually prescribed, which provoke hypercatabolism and greatly weaken the patient. From 2 to 3 grains t.i.d. are enough to increase gradually the lipolytic power of the blood. *Potassium iodide* in increasing doses can be used instead, when thyroid extract cannot be obtained. *Hyoscine hydrobromate*  $\frac{1}{100}$  grain t.i.d. assists the reducing process by increasing the propulsive activity of the arterioles and causing them to drive an excess of blood into the fat-laden areas. *Carlsbad*, *Homburg*, and *Marienbad* waters owe their virtues mainly to the alkaline and purgative salts they contain, especially *sodium sulphate*. As a beverage alkaline *Vichy water* is advantageous to enhance the osmotic properties of the blood and facilitate the elimination of wastes. See also, 1, DISEASES OF THE THYROID APPARATUS, AND, 2, DISEASES OF THE PITUITARY, Vol. I.

#### Orchitis ..... 1383

#### Osteomalacia ..... 1145, 1258

#### Osteomyelitis ..... 1145

#### Otorrhœa ..... 1387

#### Paralysis Agitans.. 1223, 1324, 1325

#### Pericarditis ..... 1388

An inflammation of the pericardium which occurs when, owing to the presence in the blood of the toxins of various bacteria, the pneumococcus, the streptococcus pyogenes, the tubercle bacillus, the gonococcus and others, toxic waste products, inflammatory foci, etc., the adrenal system is insufficiently stimulated to cause the appearance in the blood of a large quantity of auto-antitoxin and thyriodase, to expose the serous membranes to autolysis. In the *acute fibrinous* form, the pericardial surface is merely congested and found post-mortem covered with a layer of fibrin; in the *sero-fibrinous* variety, a serous exudate, varying from a few ounces to three pints, occurs besides the foregoing; in the *purulent* form the exudate becomes purulent owing to the immigration of phagocytes. All these are various stages of the



proteolytic or digestive process to which the serous membrane is exposed.

Treatment: This complication is due to the fact that *saline solution* is not used in febrile processes to preserve the normal fluidity of the blood. *Saline beverages* and *saline solution hypodermically* with rest in the recumbent position are the best measures to adopt during the acute disease.

*Potassium iodide* is contraindicated during the acute stage, but may be used advantageously to promote absorption of the effusion during convalescence. In the purulent form paracentesis is often necessary to evacuate the pus.

**Peritonitis** ..... 1346, 1377

In the form which occurs irrespective of any perforation, injury, etc., under the influence of pyogenic staphylococci or streptococci, the colon bacillus, the gonococcus, etc., the cause is the same as in pericarditis, viz., autolysis of the serous membrane owing to excessive digestive activity and viscosity of the blood circulating in its capillaries.

Treatment: *Hypodermoclysis* or intravenous injection of *saline solution* to reduce at once the proteolytic activity of the blood, in addition to the usual dietetic precautions.

**Pernicious Anæmia**, treated in full ..... 1778

**Pertussis**, treated in full ..... 1716

**Plague**, treated in full ..... 1807

**Pleurisy** ..... 1168, 1346, 1388

Inflammation of the pleura, is due to the same causes as pericarditis, and the pathogenesis of its various forms is similar.

Treatment: The same as in pericarditis (q.v.).

**Pneumonia**, treated in full .... 1659

**Progressive Anæmia**. See Pernicious Anæmia.

**Puerperal Eclampsia**, treated in full ..... 1473

**Pulmonary Tuberculosis**, treated in full ..... 1609

**Pyæmia**. See Septic Diseases.

**Rabies**, treated in full ..... 1486

**Railway Spine**. See Traumatic Neurosis.

**Rheumatism, Acute**, 1145, 1168, 1282, 1289, 1293.

Due to the presence in the blood of any toxin, or toxic, especially toxic wastes derived from excessive tissue metabolism, capable of exciting violently the test-organ and of increasing to an abnormal degree, therefore, the functional activity of the adrenal system. The proportion of adrenoxidase in the blood being very greatly increased, as shown by the tendency to hyperthermia and the anæmia (due to hæmolysis), there occur (1) hyperconstriction of all vessels owing to excessive metabolism in their muscular coats and as a result hyperæmia of all capillaries (which are not provided with such a coat), including those of the serous membranes, especially those of the joints, and (2) as the result of hyperoxygenation of the pancreas and leucocytogenic tissues and hyperstimulation of the thyroid apparatus, an accumulation of auto-antitoxin and thyroidase in the blood; and therefore in the plasma or serum effused in the joints, serous membranes, glandular elements, etc. Hence the swelling, heat, severe pain, accumulation of fluid, and the inflammatory lesions including erosion in the joints; hence also the marked predilection of serous membranes, the pericardium and endocardium, the myocardium, the tonsils, etc., to inflammation; hence, finally, the fibrous adhesions in the joints and around the neighboring structures which provoke ankylosis.

While the toxins of various bacteria, the staphylococcus citreus, the micrococcus lanceolatus, the gonococcus, may stimulate the test-organ sufficiently—especially in individuals in whom this organ is hypersensitive—to provoke acute rheumatism, it is caused in most cases by intermediate toxic waste-products which appear in the blood as a result of exposure to cold and the resulting hypocatabolism—the cellular trypsin failing, when the local temperature is below normal, to break down adequately worn-out cell material.

Treatment: Prompt diminution of the blood's relative asset in auto-antitoxin and thyroidase by the use of *saline solution* intravenously. Hypodermoclysis is also effective, but less so. Large injections at 110° F. should be used. The blood being diluted, metabolism in the muscular coats of the arteries is reduced and the hyperconstriction likewise. To sustain this effect, *chloral hydrate*, which not only depresses the vasomotor center but the test-organ as well, thus reducing the proportion of auto-antitoxin and thyroidase produced, and counteracting not only the disease itself, but preventing also the dangerous complications it entails. *Salicylic acid* and the *salicylates* are not curative in rheumatism; by stimulating the sympathetic center they cause marked constriction of the arterioles, and subdue the pain by reducing the volume of blood admitted into the inflamed area. The hyperconstriction of the arterioles produced by excessive doses tends to cause cardiac arrest by preventing the access of blood to the heart-muscle. *Acetanilid* and *morphine*, which arrest pain in the same way, are safer agents.

**Rheumatism, Muscular.**

Differs from acute rheumatism (q.v.) only in that the muscles bear the brunt of the capillary hyperæmia and that the toxic wastes due to the hypocatabolism that follows exposure to cold are the usual exciting cause.

Treatment: The *salicylates* suffice in this disorder to rapidly counteract pain, especially if alkaline *Vichy* is taken simultaneously in large quantities.

**Rheumatism, Chronic.**

Differs from the foregoing in that the cause of the disease is inadequate catabolism of tissue wastes and excitation, by the toxic products formed, of the vasomotor center. While the pathogenesis of the joint lesions includes more or less increase of the vascular tension as in the acute form, therefore, the original cause is entirely different. It may also be brought on by cold and the resulting increase of products of hypocatabolism this entails, but this only aggravates a pre-existing tendency in the same direction due to depression of

the functional activity of the adrenal system, the disease occurring in debilitated or prematurely old individuals, the poor, the overworked, etc. Hence the chronicity of the disease, the primary cause being a more or less permanent dyscrasia.

Treatment: The *salicylates* afford but temporary relief in this form of rheumatism. The pathogenic factor being irritation of the vasomotor center by toxic wastes, the cause of the disease can only be eliminated by agents which enhance catabolism. *Thyroid gland* in small doses or a course of the iodides is efficient in this connection. *Colchicum*, which excites the sympathetic center and the test-organ, is valuable in this connection, 10 drops of the tincture being given every three hours with 5 grains of *potassium iodide* during acute attacks, until slight diarrhœa appears. *Potassium bromide*, 15 grains on retiring, depresses sufficiently the vasomotor center to afford additional relief, colchicum being also an analgesic. *Saline solution* hypodermically hastens the curative process by facilitating the elimination of the pathogenic wastes. In this form, the toxic wastes, as in gout, increase greatly the local irritation in the joints; heat or dry hot air, by increasing the digestive activity of the auto-antitoxin in the effused fluids, affords a great deal of relief. *Massage* is efficient through a similar process.

**Rhinitis, Chronic** ..... 1317, 1387

**Rickets** ..... 1145, 1258

**Rose Cold**. See Hyperæsthetic Rhinitis.

**Rubella (German Measles).**

A mild contagious disease bearing some analogy to rubeola and scarlatina, is due to an undetermined toxic or toxin which moderately excites the vasomotor center, and by thus provoking general vasoconstriction causes hyperæmia of the peripheral capillaries and accumulation of the specific toxic. The irritating action of the latter on the skin while this organ is attempting to eliminate it is the cause of the rash, the specific character of which is determined by the mode of irritation produced.



The specific poison also excites the test-organ, however, and the blood's auto-antitoxin and thyroiodase being soon increased, the pathogenic toxic is destroyed.

Treatment: The prognosis being invariably favorable, the only measure indicated is one that will hasten recovery: *calomel* in small doses frequently repeated, by exciting the test-organ may be used to antedate the specific poison and cause prompt appearance of an excess of auto-antitoxin to destroy the latter. Free drinking of *water* to facilitate the antitoxic process and insure elimination of wastes while protecting the kidneys is an important feature of the treatment.

#### Rubeola (Measles).

An extremely contagious disease, due to an unidentified toxin which excites the vasomotor center, thus causing (as in rubella) general vasoconstriction and hyperæmia of the peripheral capillaries. Hence the conjunctival congestion, the nasopharyngo-bronchial catarrh, and the rash due to irritation of the skin by the specific poison while it is being eliminated. The peripheral hyperæmia is such in some cases that hæmorrhage into the skin is caused, constituting the "*hæmorrhagic*" or "*black*" measles observed in adults.

The poison by exciting the test-organ also provides, in the vast majority of cases, for its own destruction by thus promoting the formation of an excess of auto-antitoxin and thyroiodase (opsonin) in the blood which finally destroys the pathogenic poison.

The complications may be of the *sthenic* type, *i.e.*, broncho-pneumonia due to excessive congestion of the pulmonary capillaries, laryngitis, neuritis, myelitis, etc., all due to excessive vasoconstriction, and, when the circulation is impeded, aural and ophthalmic disorders, stomatitis, etc.; or of the *asthenic* type: pneumonia, tuberculosis, or ulcerative aural or ophthalmic disorders, due to the vulnerable condition in which the disease leaves the body, and which lasts until the overworked adrenal system resumes its normal activity.

Treatment: If the case is seen early, *calomel* or the *biniodide of*

*mercury* in small frequently repeated doses, and the free use of *cold water* as a beverage will often curtail the disease by stimulating the adrenal system, thus insuring prompt destruction of pathogenic toxin by the excess of auto-antitoxin produced. If the rash is already clearly defined, the aim should be to counteract the excessive vascular tension while enhancing the antitoxic process in the cutaneous capillaries. *Aconite* by depressing the sympathetic center accomplishes this purpose; the arterioles being dilated, the volume of blood in transit through the capillaries is increased and the antitoxic process is active in proportion. In mild cases, *sweet spirit of niter*, which depresses the vasomotor center, suffices. *Saline solution* used freely as a beverage reduces markedly the vascular tension by preserving the blood's normal fluidity. This goes far towards preventing complications.

**Sapræmia.** See Septic Diseases.

**Sarcoma.** See Cancer.

#### Scarlatina.

A contagious disease due to the toxin of an unidentified organism, which toxin excites violently both the vasomotor center and the test-organ. Hence the high fever which characterizes the disease, the febrile process being supplemented by intense hyperæmia of the cutaneous capillaries which occurs as a result of the excessive vascular tension. Hence also the widespread blush or uniform redness which characterizes the eruption and its disappearance on pressure, the latter causing a momentary depletion of the capillaries. The strawberry tongue, the severe congestion of the entire respiratory tract, the hæmorrhagic extravasations, epistaxis and hæmaturia, occasionally observed, are all due to excessive capillary congestion. This is sufficiently great in some instances to provoke "complications," *viz.*, effusion into the joints similar to that in acute rheumatism; otitis, meningitis, adenitis, neuritis, etc.

The most dangerous complications, however, are those due to the excess of auto-antitoxin and thyroiodase in the blood, *i.e.*, inflammation of the

serous membranes, endocarditis, pericarditis, and pleurisy. Of the terminal complications the most frequent by far is nephritis due to the liberation of pent-up waste-products, which may appear during the second week or later when desquamation is nearing completion.

Treatment: The disease may sometimes be controlled, if recognized early, by *calomel* given in frequently repeated doses until the stools become greenish. As a rule, however, the physician is called when the eruption has appeared, *i.e.*, when the vasomotor center and the test-organ are violently excited by the poison. The dangerous features of the disease being due to excessive vascular tension and autolysis of the serous membranes, *chloral hydrate*, which depresses both the excited centers, is indicated when the fever is abnormally high. In the average case, however, depression of the sympathetic center with *aconite* will lower the excessive tension without lowering the antitoxic power of the blood.

One important indication in this disease is the use of *saline beverages* from the outset in sufficiently large doses to insure the elimination of wastes as soon as formed by the kidneys, thus avoiding the accumulation which later would cause nephritis. *Saline solution* enemata at 105° F. are also useful in this connection, besides keeping the bowels free.

The naso-pharyngeal cavities should be kept as free of discharges as possible in order to avoid aural disorders. A solution of *hydrogen peroxide* 1 in 3 is valuable for this purpose when used with atomizer, the oxygen liberated increasing markedly the germicidal properties of the nasal mucus.

**Sciatica.** See Neuritis.

**Seminal Emissions** ..... 1342

#### Septic Diseases.

*Sapræmia* caused by putrefactive bacteria derived from retained fragments of placenta, purulent materials in wounds, etc.; *septicæmia*, due to the pyogenic streptococci and staphylococci and other germs which invade the blood from a contaminated focus; and *pyæmia*, in which venous

thrombi caused by bacteria provoke abscesses where they occur, are all aggravated by debility of the adrenal system from whatever cause, and deficient alkalinity of the blood, which inhibits the bacteriolytic properties of its auto-antitoxin.

Treatment: Besides the usual surgical measures, *thyroid gland* should be given in such cases, and *alkaline beverages* or *saline solution* likewise.

**Shingles.** See Neuralgia.

**Shock** ..... 1175, 1215, 1231, 1258

**Sick Headache.** See Migraine.

**Simple Anæmia.** See Anæmia.

**Small-pox.** See Variola.

**Sporadic Cholera.** See Cholera Morbus.

**Stomatitis, Gangrenous.**

In this form of stomatitis, which occurs in debilitated children especially after measles, the necrosis of tissues is due to a deficient nutrition owing to depression of the functions of the adrenal system.

Treatment: Small doses of *thyroid gland* added to the usual measures do much to insure recovery by increasing general nutrition.

**Sunstroke.** See Heat-stroke.

**Syphilis, treated in full** ..... 1795

**Tetanus, treated in full** ..... 1437

**Tetanus, Intermittent.** See Tetany.

**Tetany, treated in full** ..... 1429

**Tic Douloureux.** See Neuritis.

**Tonsillitis** ..... 1158, 1214, 1245

**Torticollis** ..... 1215

**Tracheobronchitis.** See Bronchitis, Acute.

#### Traumatic Neuroses.

Produced by violent shocks such as those experienced in railroad accidents, explosions, shipwreck, etc., are due to violent concussion of the



sympathetic center, the most sensitive center of the sensorium commune. In some instances its functional activity is depressed; the arterioles of the entire organism being relaxed, nutrition is imperfect and a condition resembling neurasthenia follows. In others, the sympathetic center is rendered hyperæmic, and hysteria (q.v.) with all its manifestations including paralysis and contractures is induced. In a third class of cases, the disturbances of the circulation form the starting-point of various disorders, such as localized arterial degeneration, hæmorrhages, pachymeningitis, areas of sclerosis, optic atrophy, etc.

Treatment: That of the diseases produced: neurasthenia, hysteria, etc.

Typhoid Fever, treated in full. 1758

Typhus ..... 1215

Ulcerative Colitis. See Enteritis, Chronic.

Uræmia ..... 1357, 1383

Uricæmia. See Gout.

Vaccination ..... 765

Variola (Small-pox).

A highly contagious disease in subjects that have not been immunized by vaccination, due to the presence in the blood of some unidentified toxin or toxins which excite with great violence the three centers that govern the blood-vascular system and the protective functions of the body: the test-organ and its adreno-thyroid center, the vasomotor and sympathetic centers. As a result of the vasomotor hyperactivity, all the vessels of the body are excessively constricted, the blood being driven forcibly by the deeper vessels to the cutaneous capillaries, while the sympathetic hyperactivity increases the propulsive activity of the arterioles. The violent excitation of the test-organ causing the formation of a large excess of auto-antitoxin and thyroiodase, the blood thus projected forcibly into the cutaneous capillaries and which filtrates into the tissues, is intensely active as a diges-

tive agent and the tissues are destroyed by it, *i.e.*, subjected to autolysis. Hence the foci of necrosis which are formed and, when the papilla of the true skin are involved, the pitting.

This autolysis is not limited to the skin; the mucous membranes are often macerated and studded with ulcers, and various viscera, especially the liver, show areas of cloudy swelling. The cutaneous hyperæmia may be such as to produce hæmorrhage into the tissues, *i.e.*, the hæmorrhagic form.

The face is the seat of the greatest number of pock-marks because it is nearest to the overstimulated centers.

Treatment: In no febrile disease is the use of *saline solution* more imperatively indicated to dilute the blood, reduce its excessive proteolytic activity, and insure the prompt elimination of the enormous quantity of wastes (due to hypermetabolism) formed besides the pathogenic poison. Both wastes and poison excite the vasomotor center and the test-organ and thus keep up the most dangerous phenomena of the disease. Nothing short of hypodermoclysis or endovenous injections of large quantities of saline solution is indicated.

Of the internal remedies that are mentioned in text-books, some—mercurial preparations, antitoxin, iodine, etc.—are positively harmful. With the use of saline solution, the anti-toxic process as regards the disease itself is not antagonized; it is simply kept within safe bounds. In cases which resist this measure, the proteolytic process may be still further controlled by *chloral hydrate*, which depresses both the vasomotor center and the functional activity of the adrenal system, but the full defensive action of the blood may be preserved by means of *aconite*, which only depresses the sympathetic center and thus reduces the violence of the blood-stream that penetrates the capillaries and the surrounding tissues.

The external antiseptic applications in general use are of value in that they preserve the skin's cleanliness.

Whooping Cough. See Pertussis.

### Yellow Fever.

An acute infectious disease due to the toxin of some as yet unidentified microorganism which depresses, or paralyzes in severe cases, the sympathetic center. The pathogenic toxin, however, simultaneously provokes a violent reaction of the test-organ and therefore accumulation in the blood of a corresponding excess of auto-antitoxin and thyroiodase. As all tissues are thus flooded through their dilated arterioles with blood whose proteolytic or digestive power is very marked, hæmolysis and autolysis occur. To the passive congestion are due: the flushed face, the swollen eyelids, the conjunctival and faucial congestion, the intense headache, the muscular pains, and the want of correspondence between the temperature and the pulse-rate, the central control of the arterioles (which through their changes of caliber and their propulsive activity govern these phenomena) having ceased. To the stasis in the superficial capillaries of the skin and conjunctiva, caused by the slowing of the blood-stream, is due the yellow coloration of the skin and eyes, the tinge being due to oxidation of what adrenal principle is left in the skin after disintegration of the hæmoglobin molecule. To the excessive proteolytic activity of the blood are due the fatty degeneration and necrosis of the hepatic tissue; the cloudy swelling of the kidneys; the active hæmolysis; the capillary erosions which cause hæmorrhage in various tissues including the gastric mucosa, the source of the black vomit.

Treatment: If the case is seen early the aim should be to check if

possible the increase of the toxin in the blood by destroying its source: the unidentified pathogenic organism. The *mercuric bichloride*  $\frac{1}{60}$  grain and *sodium bicarbonate*  $7\frac{1}{2}$  grains every hour (Sternberg), not only forestall the pathogenic poison by stimulating the adrenal center, thus provoking the appearance of an excess of auto-antitoxin and thyroiodase (opsonin) in the blood, but the sodium salt increases the alkalinity of the latter and enhances its bactericidal properties. If the morbid process persists unchecked, however, the first twenty-four hours, the mercury should be replaced by *saline solution* intravenously to increase the fluidity of the blood and thus reduce its depressing action on the sympathetic center, which is thus rendered more amenable to agents which stimulate it, *viz.*, *antipyrin* or *acetanilid* in hourly doses until the dilated arterioles resume their normal caliber, as shown by the diminution of the facial redness and the improved cardiac action. To cause further depletion of the capillary system of the entire organism, *potassium bromide* or *veratrum viride*, which depress the vasomotor, may also be used, the blood being thus caused to accumulate in the large central arteries.

None of these compromise the defensive properties of the blood, the really harmful feature of the disease being the dilation of the arterioles and the admission of an excess of blood rich in auto-antitoxin into the capillaries. *Cold* applications, *sponging*, are of great value to facilitate the dissipation of heat.

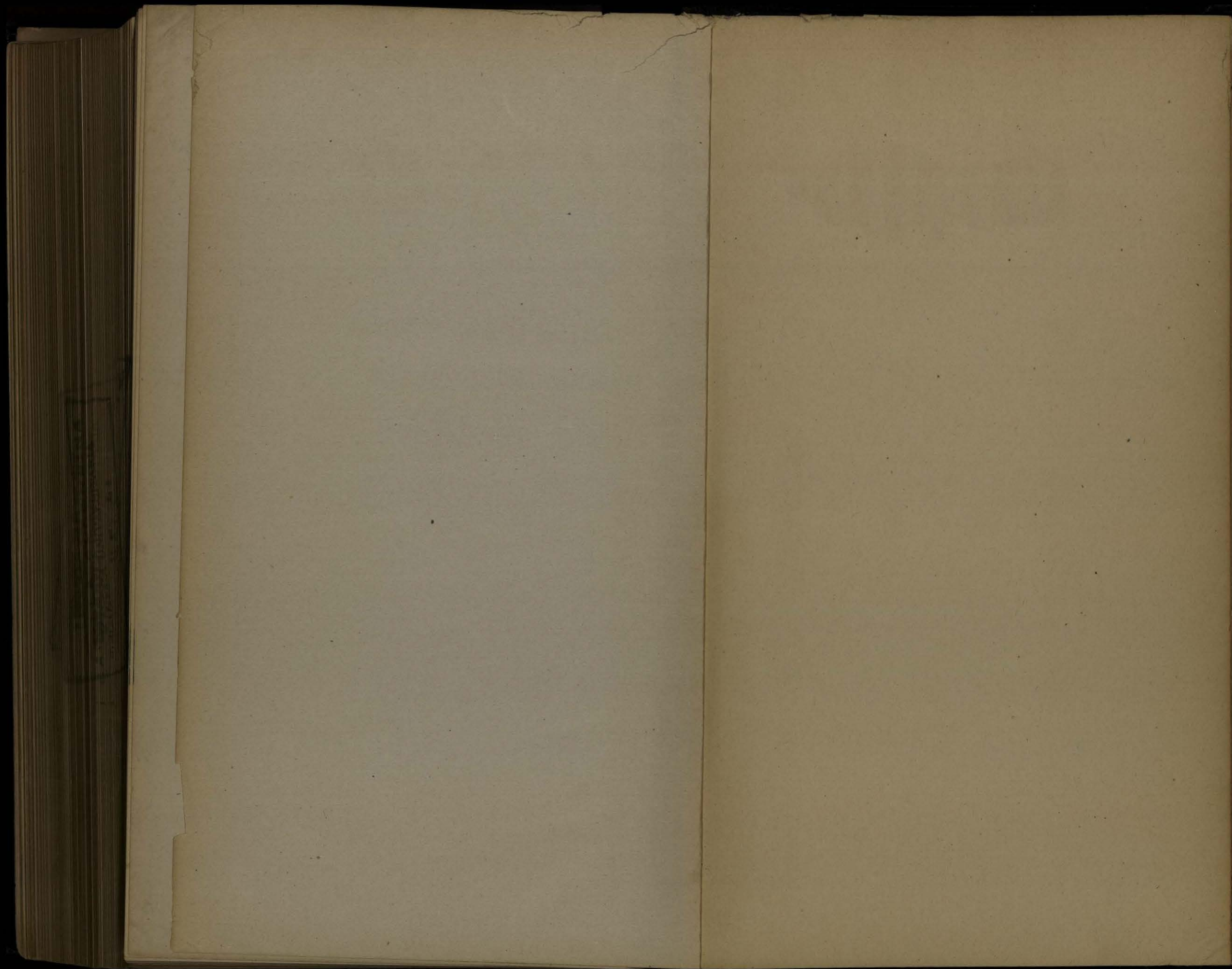
Zona. See Neuritis.



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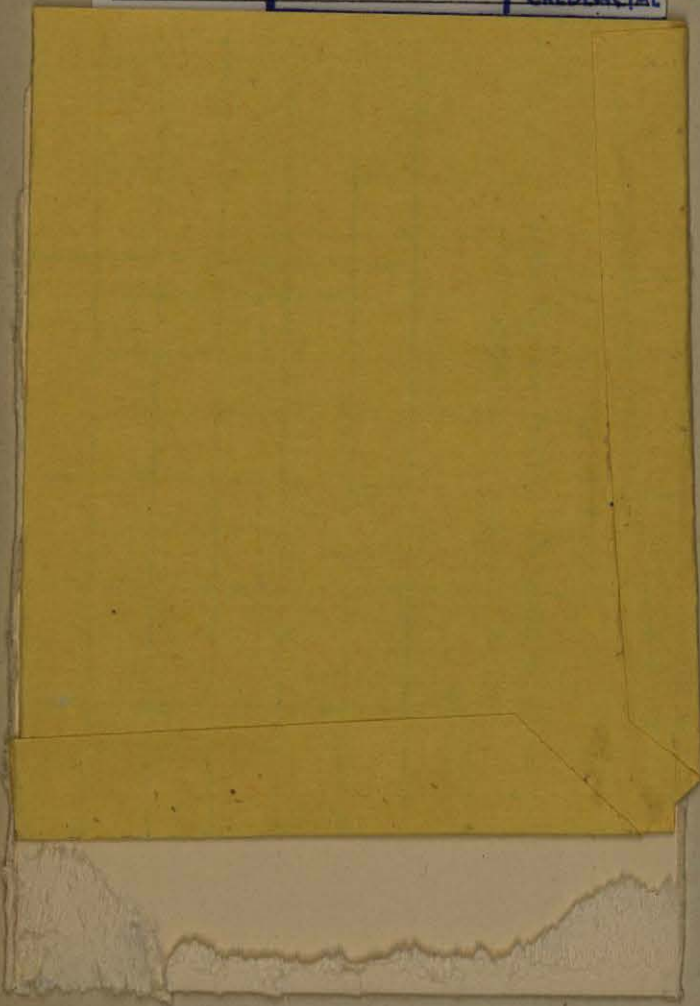
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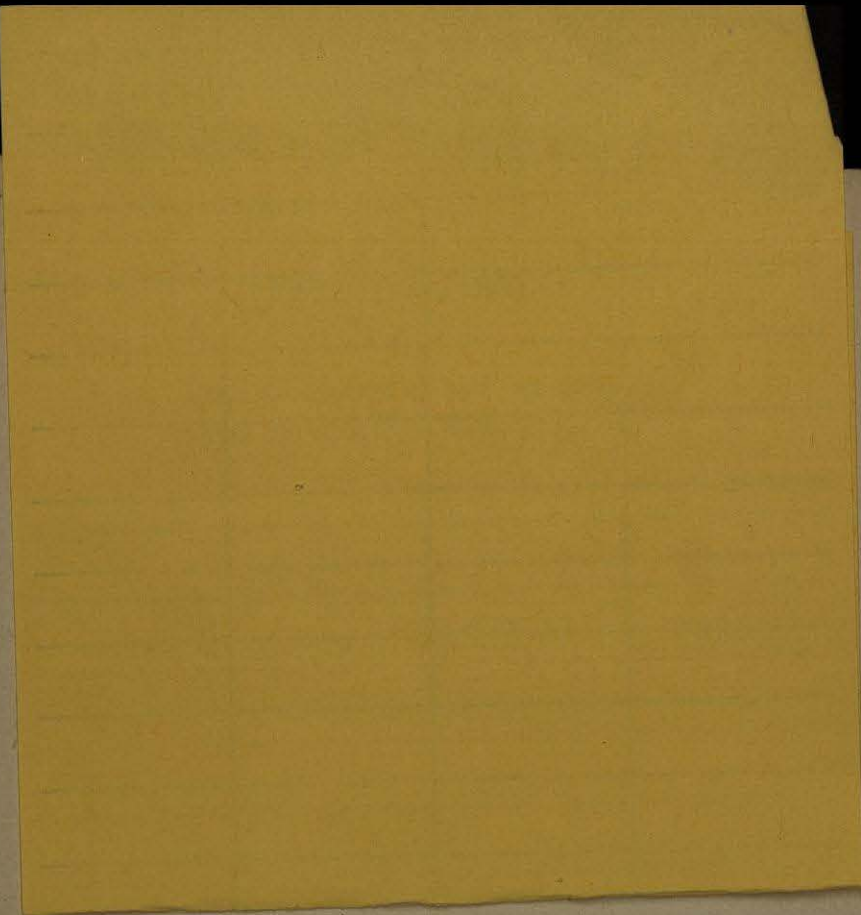

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