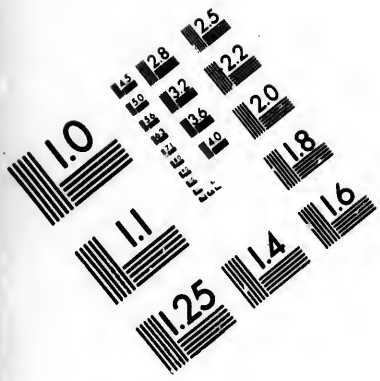

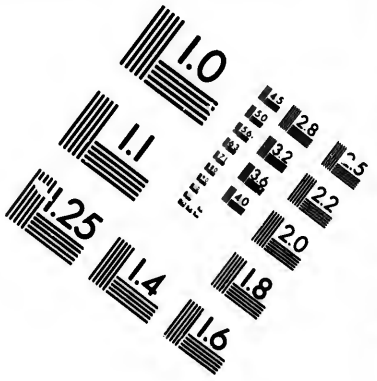

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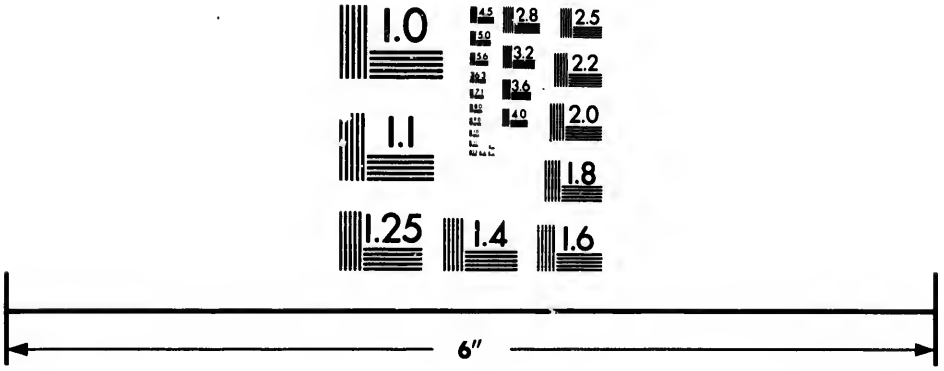

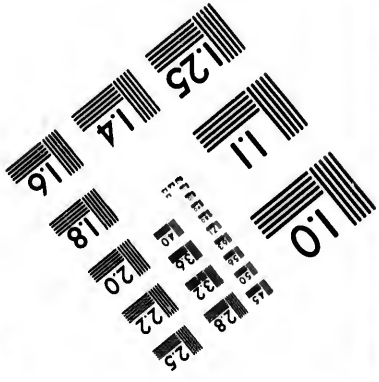

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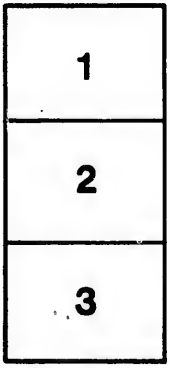

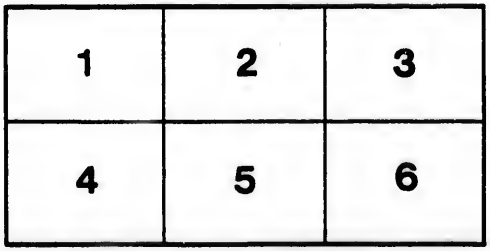

(THE) DEPENDENCE OF ABNORMAL EYE CONDITIONS UPON UTERINE DISEASES.

BY

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AND

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We are induced to lay before the profession a few practical data which will shew how closely related certain conditions of the eye, and perhaps of the nose and throat, are to diseased conditions of the sexual system in women. When we consider how seriously the whole general health of women is affected by slight retrograde change in the sexual organs, we can easily understand how the organs of sight will participate in the general enfeeblement established. It is this participation which is the real cause of the distressing ocular conditions we so often see in young women who have for their occupation teaching or some other such laborious work. In the majority of instances the ages of these patients range from 17 to 30, and a large number of them are young girls budding into womanhood. And as it is considered by the sex generally that every woman suffers from head and back ache as a normal condition from the time she matures until the menopause, little attention is paid to such symptoms. When, however, her anxiety becomes awakened by distress or serious discomfort in the use of the eyes, the oculist is immediately consulted. He often fails to find sufficient cause for the eye trouble after a careful investigation of all the ocular functions. He then directs his attention to reflex disturbances emanating from other organs. Thus it happens that a considerable portion of these cases are referred to the gynæcologist, but to establish and demonstrate a direct communication of morbidity between the pelvic organs and those of special sense would be a somewhat difficult task. Nevertheless, with the aid of

clinical observation, it can, we believe, be approximately done, and is in every way deserving of our most serious thought. Physiologists and Neurologists can give us very little aid in the matter. They tell us that the organs in question are presided over by the spinal cord, the nerve force of which is controlled or inhibited by the brain. Congestion of the spinal cord may and does produce congestion of the pelvic organs and increased glandular activity. But here our chain is broken in regard to making connection with the trouble located in the organs of special sense. We are not as yet in the position to trace the path of morbid influence so widely distributed. We have therefore to a great extent to fall back upon the associated condition as a hystero-neurosis, and whilst we know that patients afflicted with chronic pelvic disease usually complain of asthenopia or impairment of the ocular functions, the direct relationship of these conditions to each other is by no means well established.

Although a large proportion of asthenopes may be relieved more or less completely by correcting errors of refraction, faults in accommodation or muscular anomalies, there remains a considerable number who cannot be successfully dealt with in this way. The ophthalmic surgeon may search in vain for any defect in the mechanism of vision. In many cases the correction of slight errors of refraction utterly fails to give relief, indeed it may happen that the use of glasses ever so accurately adapted rather augments the patient's distress.

In the last few years considerable advance has been made in our knowledge of reflex disturbances originating in morbid conditions of other parts or organs, but finding expression in visual disturbances of various kinds, more particularly in the assemblage of symptoms commonly classed as asthenopia. A conjunctivitis which resists all treatment but suddenly subsides after the removal of a diseased tooth, or the correction of some abnormality in the nose, or vault of pharynx, is obviously an eye disease of reflex origin. Such an event happening occasionally might justly be regarded a coincidence, but since hundreds of these cases are on record the existence of reflex conjunctivitis is no longer a matter of conjecture.

When pronounced asthenopic symptoms without local signs of disease are relieved in the same same way, the reflex nature

of the asthenopia is equally obvious, That asthenopia frequently originates from faulty conditions in the nasal passages will be conceded by most opthalmologists of the present day.

It is not our purpose to discuss, or even to mention all the morbid conditions which give rise to reflex asthenopia.

In all probability opthalmologists still have much to learn in this direction, and in order to learn they must enjoy the intelligent co-operation of other workers in the wide field of medical research.

Among these the gynecologists certainly have to deal with many cases that first are led to seek relief on account of their visual troubles.

Diseased states of the genital organs have long been known to bear a certain relation to various functional and organic diseases of the eyes.

The admirable essay on the relation between diseases of the genital organs and the organs of vision by Förster, in the "Handbuch der Gesammten Augenheilkunde" of Gräfe & Sæmisch is a classical contribution to this subject, and though often referred to by writers in other languages has, we believe, never been translated into English. We therefore insert a translation of this valuable article as far as it refers directly to the subject we are now discussing.

"The labours of A. Von Gräfe and Donders have thrown so much light upon the group of cases hitherto included in the chapter on hebetudo visus or kopiopia, that only a small contingent remains for further investigation. Among these last, a considerable number may be set down as belonging to a class in which the visual disturbances are due to anatomical changes in the cellular tissue around the uterus (parametrium), well-known to be so richly supplied with nerves, and secondarily to changes in the uterus itself. In these the visual disturbances are to be regarded as hyperæsthesiæ of reflex origin involving the 5th and optic nerves, and the group of symptoms they present may be designated Kopiopia Hysterica.

The description these patients give of their eye troubles is very similar to the complaints of those who suffer from muscular or from accommodative asthenopia. In some particulars, however, there is an important difference.

In Kopiopia Hysterica the chief complaint is of painful sen-

sations of the most varied description, whilst in Muscular or Accommodative Asthenopia the most prominent symptom is indistinctness of vision.

In the former the painful sensations occur around the eyeball, on the top of the eye, or in the eyeball itself, or they may be behind the eye or more rarely in the malar bone, bridge of the nose, or in the upper jaw. These pains are variously described as drawing or stretching, dull weight, or more rarely as burning sensations.

Very often there is a feeling of soreness over the eyeball or burning or pricking sensations on the surface of the eyeball or at the edges of the eyelid, sometimes there is a painful heaviness of the eyes or a feeling as if a foreign body or an eyelash were in the conjunctival sac.

These sensations are often increased by work, reading, sewing, etc., and also by the bright light; they come on, however, quite independently of an accommodative effort and often last for many hours or for a whole day with some variation in their intensity. They are furthermore apt to be increased by anything which causes physical or mental depression such as bodily fatigue, prolonged or loud conversation, anger or grief. They are diminished by rest, sleep, pleasant associations, travel, etc.

The pain has not the typical character of supra-orbital neuralgia in which there are intervals of freedom from pain with daily or more or less regular exacerbations.

In Kopiopia hysterica too, painful points are seldom present. The pains of this reflex hyperæsthesia are also entirely different from those of the so-called ciliary neurosis, such as occur in corneal ulcers, iritis and glaucomatous affections, in all of which the pain resembles that of supra-neuralgia.

In the reflex affection both sides of the head are nearly always affected. The pain is of longer duration, irritating and annoying rather than intense, and never worse at night, whilst that of a ciliary neurosis is altogether more severe with boring sensations in the bony structures, often the entire side of the head is affected and there are nocturnal exacerbations with remissions during the daytime.

In the reflex affection these pains are often described as terrible, but the patient never groans or becomes indifferent to

all surroundings. There is no injection of the conjunctiva, no swelling of the lids and no lachrymation, and nothing to account for the severity of the pain, signs which are often present in typical forms of trigeminal neuralgia. There is no evidence of heroic efforts to suppress manifestations of pain among a class of patients who are peculiarly wanting in self control.

An examination of the eyes reveals either nothing at all to account for the pain or the local manifestations are nothing more than a slight conjunctivitis, a muscular insufficiency, some hyperopia, or presbyopia without error of refraction. Further observations and treatment show, however, that these local conditions were only incidental and have, in reality nothing to do with the sensations the patient complains of, since the removal of these complications does not get rid of the pains or at most affords but slight relief.

The heaviness of the eyelids continues as before, even when the conjunctival catarrh has been cured.

The use of prisms or of convex glasses, or tenotomy of the external rectus affords but little aid to vision, indeed it frequently happens that although glasses make vision more distinct they rather increase the patient's discomfort; the glasses are too strong or they make the sight too distinct, or the frames press uncomfortably upon the nose or temples and increase the pain or cause distress in the head. The reflections from the glasses are also a constant source of annoyance. Even blue glasses cause the same discomfort although in some respects they afford partial relief.

The hyperæsthesia thus depicted, is seldom confined to the fifth nerve, but almost always affects the optic nerve too. This finds expression as an intolerance of light or undue sensitiveness to bright light. Ordinary diffuse light is, however, less distressing to the patient than artificial light. Such patients complain much more of artificial than they do of daylight, although the latter is infinitely the stronger. They are much less incommoded by the light of a cloudy sky or even by bright sunlight, than by that of a lamp in a darkened room.

During the daytime they go about without blue glasses, but in the evening with the lamp lighted upon the table they cannot endure the white tablecloth. It must be covered with

some dark material or at least with a printed newspaper. The white bedquilt, the brass lamp pedestal, or the opaque glass globe dazzle and cause pain in the eyes, consequently must be covered. The lamp must be removed to some out-of-the-way place in order that the room may be sufficiently dark, or the patient retires to an unoccupied and darker room.

I believe this peculiar intolerance of light, which by the way, is never associated with lachrymation, may be regarded as an intolerance of contrast between light and shadow in the visual field which is far more striking in artificial than in daylight for it is not at all likely that the artificial light in itself possesses any special quality which causes it to irritate such eyes.

It is also worthy of note that these patients have their good days and bad days without apparent cause for the variations. During the good days they are almost free from pain, bear the light better and can sometimes even read for hours at a time; but on their bad days all the symptoms are pronounced even when the eyes are kept perfectly at rest. The pain never interferes with sleep and the patient is never awakened by severe pains ir or about the eyes. If awakened from any other cause, the only discomfort is a feeling of dryness or heaviness of the eyes.

In the morning, perhaps for several hours, they get on fairly well, later on the labors of the day induce fatigue or loss of tone, and with this their pains begin. It may be that these nocturnal remissions are due to the recumbent posture rather than to the removal of external impressions. For example — a young woman has an abortion with great loss of blood and on this account remains in bed for several weeks. During this time she is free from all her eye troubles, can read, etc., but so soon as she is up and about again they all come on again. Shortly before and after menstruation the symptoms are generally more pronounced.

These patients are for the most part exceedingly verbose, describe their pains in hyperbolic phraseology and talk of them incessantly, but the entire absence of objective symptoms and a behaviour inconsistent with any severe disease arouse a suspicion of simulation; or at least of exaggeration.

The morbid visual sensations which these patients some-

times describe and the circumstances which seem to arouse them are simply innumerable. Nevertheless, vision is very frequently not in the least impaired, in fact it is apt to be remarkably acute. If there happens to be a slight amblyopia it presents no special characteristic either subjective or objective; indeed, it is difficult as a rule to determine with certainty whether the somewhat diminished visual acuteness occasionally met with is not an habitual condition existing prior to the occurrence of pain and intolerance of light. In only two cases out of several hundred the pupils were 5 m.m. in width and unaffected by light. This symptom is therefore of rare occurrence, though probably in some way dependent upon the same conditions as the other phenomena. This class of cases is rarely met with among men, although nervous men are common enough. The malady in question may therefore be justly regarded as a prerogative of the female sex. I desire, however, to emphasize the fact that I have met with a small number of men who suffer in precisely the same way.

The vast majority of cases, however, are elderly spinsters, sterile or prematurely sterile married women and widows.

Among childbearing women the affection is rare [indicative of freedom from disease of the reproduction organs], and when present is always ameliorated during pregnancy.

We hear the same complaints from girls between 15 and 25 years of age. After the age of 60 the affection is almost unknown. Among 56 typical cases chosen from a large number on account of having been more accurately observed, two were between 15 and 20 years of age, 23 between 20 and 30, 12 between 30 and 40, 15 between 40 and 50, and 4 between 50 and 60.

The disease is more common among the well-to-do than the poorer classes. In 1000 cases only 8 or 10 belonged to the latter.

The general health as a rule is conspicuously defective, sleeplessness, nervous irritability, palpitation of the heart, low spirits, pains in the abdomen and small of the back, and constipation are commonly present. Pains in the arms and fingers are often experienced. The entire array of nervous manifestations known under the name of hysteria and often associated with a certain perversity of behaviour is now and then

observed, although the typical hysterical phenomena such as an uncontrollable tendency to laugh or cry, globus hystericus, convulsions, paralysis of sensory or motor nerves, *arthropathia hysterica*, are seldom met with among these patients. In some cases hysterical symptoms are entirely wanting, and indeed, kopiopia hysterica may be associated with an appearance of robust health.

The group of symptoms described, and which are extremely characteristic so far as they concern the eyes, are always associated with and caused by a peculiar chronic inflammation of the cellular tissue surrounding the uterus or atrophic parametritis chronica.

Professor Freund of Breslau was the first to recognize this affection of the genital organs and in the course of 14 years has met with it in a large number of patients suffering from the above described visual disturbances.

The connection between this affection of the eyes and disease of the genital organs is so constant that whenever the former is met with the latter may with certainty be assumed to exist. Since Freund has proved the existence of this disease of the genital apparatus by numerous autopsies and preparations I shall give here a brief description of the morbid conditions in his own words as follows :—

" That part of the pelvic cellular tissue which immediately surrounds the cervical portion of the uterus is called the parametrium. This structure presents several peculiarities which distinguish it from other pelvic cellular tissue.

It is destitute of fat and of closer texture becoming more and more dense as the uterus is approached. The portion which immediately surrounds the uterus shows in horizontal sections a stellate arrangement and carries the principal blood and lymph vessels as well as the nerves which supply the uterus and to some extent the ovaries also. Traced downwards it will be seen that this dense connective tissue envelope of the uterus arises from that part of the fascia pelvica interna which surrounds the vagina. The great ganglionic apparatus of the uterus lies imbedded in the parts surrounding the lateral portion of the Laquear vaginæ but above the level of the Laquear.

From this part of the Parametrium which immediately sur-

rounds the cervix uteri proceed certain pathological changes of a chronic inflammatory character analogous to similar affections met with in other organs (such as the liver, kidneys and lungs) not only in progress and results of the disease but also in the phenomena they give rise to during life. The chronic inflammatory process begins insiduously and carries first a hyperplasia, then a cicatrical contraction of the affected connective tissue and spreads in every direction, more especially along the base of the broad ligaments as far as the walls of the pelvis, spreading from this to the cellular tissue surrounding the rectum and bladder. It spreads upwards very often to the round ligaments which rest in the anterior leaf of the broad ligaments but seldom to the Fallopian tube; lastly it extends downwards as far as the upper third of the vagina. The broad ligaments are thickened by hyperplastic proliferation of connective tissue, especially in their lower parts these two surfaces are, so to speak, glued together and cannot be made to slide over each other as in the normal condition. The ureters are drawn towards the cervix uteri, and their lumen contracted just where they are most closely surrounded by the shrinking connective tissue.

Blood-vessels coursing through this tissue participate in the same process and nerve fibres running through this hard scar tissue are often found more or less destroyed by it.

The action of this disease upon the pelvic organs is manifested at first in a considerable disturbance of the circulation which occasions a venous hyperamia of the genital tube with chronic inflammatory swelling (Metritis Chronica hæmorrhoidalis) which is associated with similar changes in the rectum and bladder, catarrh of the genital mucous membrane, irregular and often profuse menstruation. In the later stages of advanced atrophy, there is atrophy of the pelvic cellular tissue generally, involving even parts which are not directly connected with the cicatrizing process, atrophy of the genital canal, especially of the uterus, which frequently acquires an uneven surface, partly caused by varicose nodules and partly by the irregular pressure of cicatrizing areas upon the adjacent uterine substance.

The analogy between this disease and cirrhosis of the liver, fibroid degeneration of the lungs and granular degeneration of the kidneys is most striking.

The disease is not a rare one, it occurs in women who have borne children as well as in those who have not. Clinically most cases may be traced to undue excitation of the genital organs complicated with excessive secretion. The course of the disease is essentially chronic, the prognoses in respect to a restitutio in integrum is unfavorable; although the organic changes are permanent the nervous phenomena ultimately subside.

Kopiopia hysterica is not curable. It always disappears in time, though often not until the patient has spent years and years of suffering. I have never observed that it tends to induce any other disease of the eyes either inflammatory or non-inflammatory.

According to my experience, there are not many remedies that can be relied upon to relieve the symptoms, such as pain and intolerance of light, but a certain degree of improvement may be confidently expected after the patient has taken, in the course of four days, castoreum Canadense 2.0 and Ext. Valeriana 4.0. The improvement lasts at the most some four weeks. Acetate of zinc takes second rank as a remedy in this affection, quinine, narcotics, and cold eye douches are either useless or of problematic value.

Protective glasses are always indispensable, only care must be taken to avoid the darker tints. On no account should the patient be permitted to remain in darkened rooms, such a course never succeeds in diminishing the intolerance of light. On the contrary protracted seclusion in a darkened room invariably augments the functional irritability.

Measures should be chiefly directed to the cure of the parametritis chronica; this, however, is unfortunately not very amenable to treatment when the restoration has become complete.

At or about sixty years the hyperæsthesiæ are likely to subside entirely, at least in so far as the optic and fifth nerves are concerned."

It will be observed from the foregoing that the kopiopia hysterica so well described by Förster is attributed by him to a form of wasting parametritis chronica.

It will be our object to show that other morbid conditions affecting the uterus and pelvic organs are also capable of giv-

ing rise to persistent forms of asthenopia, and we believe the opthalmologist and gynecologist will have conferred a mutual benefit upon each other, and assisted the progress of medical science when they have succeeded in defining more accurately the various morbid conditions in and about the uterus which give rise to [illegible] perpetuate asthenopia. Physiology has not yet been able to disclose the several links in the chain of nerve perturbation which associates functional weakness of the visual organs with parametritis chronica and although pathology may discover wide deviations from the normal condition at one end of the chain there is often nothing at all to account for symptomatic disturbance at the other.

We have seen severe and obstinate cases of asthenopia relieved by the removal of morbid conditions in other parts supplied by the fifth nerve, and we have observed certain inflammatory affections of the eyes relieved in the same way, but in those the reflex area is all within the domain of the same nerves.

When however, the primary lesion is in parts so remote as the genital organs it is far more difficult to understand the complex relationship which must exist between parts so widely separated from each other, in order to account for this reflex form of asthenopia. It cannot be explained by assuming mere loss of tone or debility of the system generally, since extreme debility often exists without the least visual disturbance, and on the other hand disturbance of the uterine functions associated with asthenopia is quite consistent with robust general health. That this should be exceptional may be granted without diminishing the importance of the fact, indeed it is all the more reason for further investigation of such cases. When the opthalmologist and gynecologist shall have compared notes sufficiently often we may perhaps be in a position to understand these Hystero-neuroses better than our predecessors have done.

Cases have been reported by MacKenzie, Von Gräfe, Meyer, and others, which shew a certain connection between diseases of the eye and the organs of generation, but which are not of a reflex character; they are not neuroses, but cases of actual amblyopia, in connection with amenorrhœa and dysmenorrhœa, caused by extravasation of blood into the retina during intense

cerebral congestion depending upon the retention of the menstrual flow. Oculists have informed me that the majority of cases of asthenopia consulting them, except those due to overuse of the eyes, errors of refraction, or muscular anomalies, are found in females, many of whom suffer from menstrual irregularities or other evidence of uterine disturbances. These patients are carefully treated with tonics to invigorate the debilitated system; the eye condition is attended to, but it is found that they do not improve, and will not until the uterine lesion has been cured. Decrease in the power of vision, dimness of sight as if a cloud was passing before the eyes, occur both as menstrual and pathological neuroses, and are relieved by treatment of the uterine disease. Meyer relates the case of a maiden lady, aged 40, in whom the menstrual flow was ushered in by an amaurosis of several hours' duration, which disappeared as suddenly as it came on, but was never accompanied by symptoms of cerebral congestion—evidently a menstrual reflex which would have yielded to proper uterine treatment. Engelmann says: "In all cases of true reflex neurosis no structural changes exist, in the early stages at least, and the ophthalmoscope will reveal an absolutely healthy condition of the fundus of the eye, but after a duration of years the disease, heretofore simulated, may develop in place of the phantom. In no organ is the persistent continuance of a reflex so liable to result in actual changes as in the eye." Cases are reported by Dr. Fordyce Barker where Drs. Agnew and Noyes failed to find any pathological changes in the eye, and after proper treatment of the uterine lesion the patient lost all morbid affections of the eyes. The more trivial forms of ophthalmic disease yield but slowly with improvement of the uterine affection, if treatment has not been begun early, and it is only the more violent and rapidly developing symptoms which respond as readily to uterine treatment as do the other reflex neuroses. In fact, experience seems to show that ophthalmic reflex neuroses are more persistent and yield more slowly to treatment than those of any other organ, and if they have existed for years they are liable to result in structural changes or disease proper of the eye, which is not the case with other reflexes. Although this view may not be accepted by many ophthalmologists, all will con-

cede the fact that asthenopia, as a hystero-neuroses, may persist for an indefinite period, defying all measures for its relief until the uterine defect has been corrected. According to Rampoldi,* there are five groups of sexual diseases which affect the eye, as follows:

(1.) Hysteria and chronic metritis are causative of asthenopia and retinal hyperæsthesia.

(2.) Menstrual disorders. Amenorrhœa is causative of conjunctivitis, keratitis, iritis and phlyctenulæ. To suppression of the menses he refers diseases of the choroid, with neuritis and retinitis. The tendency to glaucoma is known to accompany a sudden suppression.

(3.) Inflammatory diseases occur in hyperæsthesia and neuralgias of the trigeminus.

(4.) Pregnancy causes the difficulty accompanying the albuminuria of that state. Amblyopia and amaurosis have been common from three to fourteen days after hemorrhage.

(5.) During lactation and the puerperium the following have been observed: Panophthalmitis, ulcers of the cornea, retinitis, photophobia, disturbances of accommodation and other morbid conditions resulting from debility.

These views are held by Rampoldi in regard to eye affections associated with pelvic disease, but it is difficult to trace any positive relationship of individual ophthalmic affections to such pelvic disease; few indeed of them are reflex neuroses. We believe, however, that there are many cases of asthenopia which are undoubtedly of a reflex nature, and will now relate a few examples.

Case I.—Aged 19, unmarried. Consulted me Dec. 7th, 1891. Menstruation began at 15. She has suffered severe pain at her periods ever since. The pain has been gradually increasing to the present time. Periodicity shortened to three weeks. Great premenstrual exhaustion. Duration of flow 5 to 7 days. Quantity large. Profuse leucorrhœa. Constant backache. Constant headache. Distressing asthenopia. Supraorbital pain. Wears glasses. Irritation of bladder. Nocturnal frequency 5 to 20 times each night.

Examination.—Uterus retroverted 2°. Pelvic floor painful to touch. Cervix eroded, catarrhal endometritis. Profuse glairy mucoid discharge issuing from cervical canal.

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*Ann.' Univ. de Med., Sept., 1888.

Operation.—Divulsion of cervix with steel dilator. Endometrium curetted. Removed catarrhal patch. Iodoform gauze drain. Shortened round ligaments, using buried sutures. Convalescence perfect. Uterus anteverted when left for home.

June 27th, six months following operation, this lady writes as follows: "My eyes are very much better. I still wear glasses, but with them I do not suffer pain, and the moving sensation over my left eye, from which I have suffered so much, is also removed."

CASE II.—aged 28, unmarried. Consulted me September, 1889. Menstruation fairly regular. Duration 6 to 7 days; rather profuse. Within the past six months has suffered severe menstrual pain, chiefly in back and hypogastrium. Has also constant intermenstrual backache. A false step or sudden jar greatly increases pain. Has severe headaches and supraorbital neuralgia at times. Suffers from asthenopia, and cannot read but for a short time.

Examination.—Uterus retroverted and fixed in well of pelvis. Both ovaries prolapsed into Douglas' pouch. They are very tender to touch.

Operation.—Shortened the round ligaments after a few weeks' preparatory treatment, chiefly rest. Result very good. Uterus in normal position four weeks afterwards, and pelvic floor free from tenderness.

June 24th, 1892 (three years), this young lady writes me as follows: "I can assure you my eyesight has improved very much indeed, and I was very fortunate to have undergone the operation. I have become fleshy and strong, and can walk miles; in fact, I am a new creature. Patients similarly affected can rest assured, with care for a year or so, they will be as well as I am." These statements are made three years after treatment.

CASE III.—Aged 28, unmarried. Consulted me January, 1889. She menstruated every third week; somewhat profuse; duration 5 to 6 days. Complains of great prostration, constant backache and a bearing-down pelvic sensation. There is asthenopia and an inability to read or do needlework without glasses. Pain in back of eyeball.

Examination—Uterus retroverted, found low down, lying in axis of outlet. Whole pelvic floor tender to pressure. Cervix elongated and conoid in shape, glairy mucus issuing from cervical canal. Chronic endometritis.

Operation.—After due preparatory treatment, I shortened the round ligaments on September 23rd, 1889. I saw and examined patient October 24th following. Found result very perfect, uterus anteverted and fundus lying close to pubic

bone. Pelvic contents free from tenderness. I heard from this patient two months ago. She has continued to work as saleswoman up to the present time. She is well; her eyesight is good, and has not given her any trouble since treatment, now three years ago.

CASE IV.—Aged 42; married eleven years, five children, youngest 3 years of age. Menstruation has been very profuse; duration 8 to 9 days as a rule; quantity very large. Profuse leucorrhœal discharge. Constant back and side ache, increased on fatigue, but no special dysmenorrhœal pain. Suffers from distressing headaches, especially post-menstrual. Has great impairment of vision, granular lids, and even with aid of glasses cannot read but a few minutes. Great impairment also of general health.

Examination.—Perineum lacerated and pelvic floor destroyed. Vaginal walls prolapsed. Cervix much congested and eroded, but no evidence of laceration. Extensive hæmorrhagic endometritis. Uterus enlarged and retroverted. Pelvic floor excessively tender to pressure.

Operation.—After preparatory treatment, removed cervix, curetted endometrium, restored perineum by flap-splitting method and shortened round ligaments.

I received a letter dated June 24th, 1892 (one year after), from this lady, as follows:—"I am happy to be able to say that it is many years since my eyes have been so well. The sight is better, but the great improvement is in the lids and strength of the eye. Before the treatment my eyes felt as if they would burst, were much inflamed and were always glued together in the morning. Now I do not know what it is to have anything wrong with them."

CASE V.—For many years a sufferer from uterine disease. Is a great invalid and obliged to spend most of her time in bed or on a couch. Suffers much from pain in the eyes and asthenopia. No error of refraction or muscular fault. Accommodation good. Referred to Dr. Alloway.

Sexual history.—This lady was in greatly reduced health; suffered great pain during menstruation, with excessive flow and intramenstrual leucorrhœa. Examination shows bilateral laceration of cervix with eversion of the cervical segments; hyperplastic endometritis; destruction of pelvic floor and perineum; uterus retroverted, no adhesions. Had borne two full-term children. Wears glasses.

Operation.—Curettement, excision of cervix, restoration of perineum, and shortening of round ligaments. Last report

from this patient said she was healthy; had nursed her husband through typhoid fever one year after her operation, and is at present (four years after operation) enjoying excellent health.

Case VI.—Seen shortly after recovering from Alexander's operation for retroflexion of uterus. Has suffered from weakness of the eyes for several years. Vision normal; no error of refraction beyond a slight compound hyperopic astigmatism; $180° + 0.25 + 0.50$; V. $= 6/5$ each eye; these prescribed for. No muscular anomaly or fault in accommodation. When last heard from was able to use the eyes comfortably without glasses. No treatment other than the operation performed by Dr. Alloway (see Case I) was pursued.

Case VII.—Aged 34; a delicate-looking woman. Sent to me on account of headache and pain in the eyes, always aggravated by their use in any near work. Complains chiefly of pain in top and back of the head much increased by use of the eyes. The eyes appear normal and there is no lack of accommodation. Not more than 0·50 of hyperopia. No abnormality in the muscular functions. V. $= 6/6$, each eye. Sent to Dr. Alloway on account of pain in the back and side, leucorrhœa, etc.

Sexual history.—This case was a wretched, confirmed invalid, in constant pelvic pain, and unable to follow her occupation of seamstress. The uterus and appendages were firmly fixed to the bottom of the pelvis *en masse*.

Operation.—Laparotomy; found appendages densely adherent to uterus and broad ligaments in Douglas' pouch. Removed appendages with much difficulty (chronic purulent salpingitis). Sutured uterus to anterior abdominal wall. Recovery perfect. This patient reports herself (eighteen months after operation) being in perfect health, works hard at her trade, and has good eyesight.

Case VIII.—Aged 40. Eyes weak, and painful when used. Often pain even when not used, and always intolerant of artificial light. No muscular anomaly beyond a general want of power in the ocular muscles as tested by prisms. Acc. good. Hyperopia $= 0.50$ D., but unable to use the eyes continuously—either with or without glasses. Referred to Dr. Alloway on account of supposed uterine trouble.

Sexual history.—Married 21 years; four full-term children, youngest 12 years of age. Has had many miscarriages. Last pregnancy six years ago. Menstruation irregular; duration eight days. Severe dysmenorrhœa, increasing in severity of late. Is a great sufferer from constant pelvic and abdominal pain, and incessant vomiting for days at a time. Has had cervical canal dilated upon several occasions by sponge tents.

Examination.—Uterus anteflexed; both broad ligaments seem thickened and fix uterus and appendages to the side walls of pelvis; whole pelvic contents extremely tender to touch; cervical canal open and issuing glairy muco-purulent discharge. Patient has been for years a confirmed invalid.

Operation.—Laparotomy. Removed appendages; they were so adherent and encased in organized exudation that they had to be removed piecemeal. Recovery perfect.

This patient, when seen a year after operation, reported that she had no attack of vomiting since operation. Her eyesight was much better, but, from a feeling of precaution, wore glasses. Quite recently this patient reports that her health has been quite restored. Has no pain whatever; has become stout and strong. Her eyesight normal.

Case IX.—Has been a chronic invalid for years. For the past twelve months subject to great weakness of the eyes, which has taken the form of recurrent attacks of kerato-conjunctivitis. The right cornea presents a central nebula, the left a zone of fine blood-vessels encroaching on its upper third. The conjunctiva of eyelids is very hyperæmic and decidedly roughened near their anterior margins; the lids, too, press more closely than is usual upon the eyeballs. This patient also presents a hypertrophic rhinitis and acne of the external integument of the nose. The irritability of the eyes may be due in part to the nasal trouble. Pain and intolerance of light are much complained of. These conditions have persisted, with occasional remissions, since last autumn.

Sexual history (May, 1892).—Extensive laceration of cervix with eversion of segments. Pelvic floor destroyed and perineum torn to sphincter. Hyperplastic endometritis. Pain and menorrhagia. Intermenstrual leucorrhœa. Constant headache and backache.

Operation.—Curettement; excision of cervix; restoration of pelvic floor and perineum.

The husband of this lady writes, date October 24th, 1892; "She is now enjoying very good health. Her eyes are much better and stronger. I am hopeful the improvement will be permanent."