

Lymph noevus and other lymphatic derangements of the eye and its appendages / Herr Mules.

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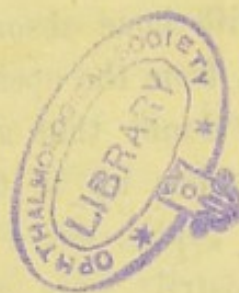
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Herr MULES (Manchester). — Lymph noevus and other lymphatic derangements of the eye and its appendages. (Hierzu Farbentafel II.)

The title of this communication may be taken to include not only all cases of manifest „lymph noevi“ but those of so-called „acute or persistent“ „Oedema“ of the various structures of the globe and orbit, as well as examples of „persistent dropping of fluid“ from one or both nostrils which, occasionally associated with „head symptoms“ and „optic nerve atrophy“, are amongst the rarer affections found in our clinics.

Great diversity of opinion exists as to the source and cause of the nostril-dropping fluid, some, holding that it is invariably con-

nected with polypi (simple myxomata) either within or without the antrum, others, that it is an oozing from the lymph channels around the pituitary membrane of the nose, and lastly, we have the authority of Professor Leber „that it is the result of hydrocephalus internus, with bone absorption from pressure, and escape of cerebrospinal fluid from the opening thus formed“. Whatever be the reason there is no doubt that a certain number of cases have been recorded, in number up to the present time seven, in which „cerebral symptoms“ „optic. nerve atrophy“ and „persistent dropping of fluid from the nostril“ were associated, and this „association“ has been accepted as „consequence“. I shall hope to convince you that it is accidental, the symptoms being in no-way inter-dependant.

Within the last few months I have had the opportunity of examining a patient with an affection which, whilst I believe it to be unique, appears to me to shed considerable light on the Pathology of this disease:

M. W. Aet. 11. attending the „Womens' Hospital Manchester“ was sent to me by Dr. Walter one of the Physicians under whose care she had been placed. The child was bright, intelligent, and in appearance might be considered a favourable example of a girl of her age. She became an in-patient of the Womens' Hospital for a copious discharge of fluid from the umbilicus, of six months continuance, no visible fistula being present. Besides this, for the last four weeks, fluid apparently identical with that from the umbilicus, has dropped from under the upper right lid. She became an in-patient of the Manchester Eye Hospital for careful examination. We found at frequent but irregular intervals during the day and night a fluid, bearing all the physical characters of lymph, oozing from under the upper eyelid in the region of the lachrymal gland, yet no care could detect its exact point of exit. The fluid was opalescent though faintly muddy and whilst usually dropping quickly, occasionally ran in a stream. The amount lost in 24 hours was variable but may be estimated at from 4 oz. to 6 oz. or even more, the quantity depending much on the discharge from the umbilicus. Lachrymal stimulation failed to induce or increase the flow. Dr. Mac Munn of Wolverhampton, who had spectroscopically examined the nasal fluid in three previous cases, kindly examined it. He reports, „that it agrees in all essentials with Priestley-Smith's

two recorded cases¹⁾, Emrys-Jones's case²⁾, and those mentioned by Leber³⁾.

The Sp. G. was 1,006. The patient had normal vision with corrected astigmatism; no head symptoms; the discharge still persists.

This drawing, from a boy Aet. 12 on whose conjunctiva dilated lymph vessels stet ramify forming at the lower part an oedematous mass, is a patient of Mr. Wright, Surgeon to the Childrens Hospital, Pendlebury, by whose kindness I mention the case. It is a representation of „congenital lympho-angioma of the conjunctiva and brow“ a rare affection but one that has been figured and recorded by Professor Hirschberg, Mr. Nettleship, and doubtless other Surgeons. It may be taken as an exaggerated though congenital condition of the so-called „persistent oedema of the conjunctiva“ which in a greater or lesser degree is familiar to many of us, but which I believe to be sub-conjunctival lymph-extravasations. I would further point out that many of those „transient“ vesicles which appear under the conjunctiva are examples of ruptured lymph tubes analogous to capillary rupture with ecchymosis. Dr. Riehl relates a case³⁾, in which so-called acute oedema formed behind the eyeball causing protrusion, the effusion extended to the lids and conjunctiva lasting 12 hours. There were two relapses. The affection is easy of explanation on the hypothesis that it was a lymph extravasation. The same view will suffice for many of those cases of sudden proptosis which appear and pass away without apparent cause. Even the proptosis of Exophthalmic Goitre⁴⁾, associated as it so frequently is with defective nutrition, may be due to a lymph congestion amounting almost to stasis of the orbital lymph stream the outcome of vaso-motor paresis, this is the more credible for coincidently with improved nutrition so suggestive of healthy lymph circulation, comes relief to the proptosis¹⁾.

1) Ophthalmic Rev. Vol. II, No. 15, p. 4.

2) Ophthalmic Rev. Vol. VII, No. 78, p. 97.

3) Monat. f. Prakt. Derm. p. 444.

4) See „case of acute goitrous-proptosis occurring in a single night“, Stokes „Diseases of heart“, p. 295, 1854.

1) This view is more easily appreciated than that of „Virchow“ who attributes the exophthalmos to arterio-venous engorgement of the orbital fat, any such appearance of arterio-venous congestion during life being conspicuous by its absence.

The third case with which I shall trouble you is specially interesting as a rare clinical study, still more so, as to my mind it explains:

- a) The danger to the cerebral circulation of a sudden alteration of the vascular balance by the suppression of these fluxes.
- b) The source of these fluids.
- c) Their escape by the formation of fistulae through over distention.

Miss A. an elderly unmarried lady with a hyperopia of 4 D. complained of increasing weakness of sight; her marked emaciation arrested attention and she acknowledged:

„to suffering for three years from continuous diarrhoea;“

„that she had had a prolapsed rectum three months after the diarrhoea commenced;“

„that a careful examination of the prolapsed bowel detected a growth, nature unknown to her;“

„that for three years her diarrhoea had alternated with a watery discharge from the bowel necessitating the use of five or six diapers daily;“

„and that she had consulted many Medical Men who failed to check the diarrhoea with drugs.“

There was found just inside the sphincter, a pale pink lympho-angioma the size of a small walnut with several minute fistulous openings from which trickled a clear fluid presumably pure lymph, the growth was ligatured and with its removal the diarrhoea ceased and she rapidly recovered flesh, but unfortunately with her, as in the case of those with dropping from the nostril, with sudden arrest of the lymph-waste, came alteration of the vascular balance and six weeks after the removal of the noevus an apoplectic attack occurred, with permanent paresis of the left side.

Now Sir — in the absence of all post-mortem evidence to the contrary¹⁾ — I hold that these cases taken together, show that the nasal flow, over the source of which so much debate has arisen, may be definitely considered to be a lymphorrhoea, due to over-distended lymph tubes of the pituitary membrane, which by their bursting, cause fistulous openings, the difficulty of finding them

¹⁾ Determined in Leber's cases.

post-mortem, being due to the fact that they collapse and the number of the valves precludes their demonstration by injection.

In the case of the boy whose drawing you have had before you, you have seen the distended lymph channels on the conjunctiva without fistulae.

In the girl, the lymph dilatation is concealed, but we know that it is there, we know also that a fistulous opening in a lymph vessel must exist, and we also know that the escaping fluid is lymph, identical in character with the nasal dropping of the other reported cases, and the cerebro-spinal fluid.

In the third case that of a „rectal lympho-angioma“ occurring in an woman Aet. 64, which has its counterpart in Emrys-Jones's case of a man Aet. 65, with optic atrophy and nasal dropping commencing late in life, we saw the noevus, the fistulous openings, and the discharge of lymph, and we experienced the danger of suddenly cutting off the waste, a danger not experienced in Nettleship's case,¹⁾ a girl who improved in a corresponding ratio with the reduction of the discharge.“

We are thus brought to the logical conclusion:

That Hydrocephalus and Polypi are accidental associations of this lymphorrhoea. That the Nerve Atrophy is an incident rather than a necessity, due in some cases to the wasting character of the disease in others, as in Leber's, to undoubted Hydrocephalus, while in a 3rd. class (Benson and others²⁾) it is conspicuous by its absence.

In conclusion we may say that the rarity of these cases is due not to the fact that an individual may have Hydrocephalus, Optic Nerve Atrophy, or persistent nasal Lymphorrhoea, but that they should be found associated in the same individual forming an exceptional triad not a chain of symptoms.

References.

- Lymphorrhoea and Lymphatic abscess, Mosetig — Moorhof, Vien. Med. Bl. 1887, No. 1.
Ophthalmic Review No. 15, Vol. II, p. 83. Do. Vol. VI, No. 74, p. 348.
Transac. Ophthal. Society Vol. IV, p. 47.

¹⁾ Ophthalmic Review Vol. II, No. 15, p. 1.

²⁾ See report on Emrys-Jones case Oph. Rev. Vol. VII, No. 78, p. 97.

Graefe's Archiv, XXIX, 1, p. 273.

Oph. Review Vol. VII, No. 78, p. 97.

Oph. Review Vol. II, No. 15, p. 4.

Qualitative Examination of Mules' case of persistent dropping fluid from the orbit. By Dr. Mac Munn.

Sp. G. 1006.

Opalescent with heat and acetic acid.

. nitric acid.

Violet when boiled with Fehling (albumen).

Chlorides abundant.

Sulphates present.

Spectroscopically. No bands except faint traces of oxyhoemoglobin due to accidental presence of blood and traces of serolutein.

Note A. The absence of sugar in these cases has been made a point but according to Hoppe-Seyler sugar is not a normal constituent of cerebro-spinal fluid but is due to irritation of the brain or cord.

Note B. Exception may be taken by some, to the inclusion of cerebro-spinal fluid under the term „Lymph.“ By Lymph we understand the fluid contained in the lymphatic vessels as well as the liquid found in the extra-vascular spaces, such as the lacuna of connective tissue or the interior of the great serous sacs, from which the lymphatics originate or communicate.

In-as-much as divers organs possess different separative power, so lymph varies materially in composition, according to the region from whence it is derived, thus, whilst lymph coagulates, as a rule, into a soft trembling jelly Ludwig¹⁾ points out, what some of the above cases fully substantiate, that „some lymph does not coagulate at all“ but is identical in appearance and composition with cerebro-spinal fluid, the fibrin or coagulating substance being due to its further elaboration in the glands.

The Lymphatic diseases of the interior of the eyeball.

The lymphatic diseases of the interior of the eyeball are analogous to the dropsies of the serous sacs and are usually associated with the glaucomatous state, increased tension being the earliest evidence of lymphatic stasis. The lymph streams of the vitreous chamber have been investigated by many observers, notably Stilling, Deutschmann, Schick, Leplat, Ann. d'oc. 1887 p. 75, and Priestley Smith, Oph. Rev. vol. VII. No. 81 pag. 193,

¹⁾ Quoted by Gorup. Besanez' Lehrbuch p. 378. Vide — Gassegee — Physiological Chemistry p. 220.

the outcome of whose experiments shew the watery fluid permeating the vitreous and filling the hollow of the anterior chamber to be lymph in its earlist stage, drawn from the primary lymphatics off the ciliary processes, and perhaps the back of the iris, and like all primary lymph — lymph that has not passed through lymphatic glands — wanting in fibrin-albumen and other constituents found in more highly organised lymph.

The eyes may be considered as lymph-sacs with the lymph diffused through their contents, not contained in distinct channels but moving in two directions shewn by a feeble posterior current which filters through the lymph spaces surrounding the arteria centralis and an anterior-main current passing through the circumferential space and leaving the eyeball through the canal of Schlemm. Blockage of the efferent channels of the front of the eye produces manifest lymphatic stasis = glaucoma: persistent, or intermittent as the blockage is more or less complete, or constant; whilst arrest of the posterior lymph stream does not appear to cause increased tension of the eyeball. It is no part of the purpose of this paper to enter into the theory of glaucoma but it is well to remind ourselves that Glaucoma is the term used to express the „sum of the effect of increased tension on the interior of the eyeball.“

As Lympho-angioma of the conjunctiva is a congenital-lymphatic dilatation so we seek its analogue in the interior of the eye and find it in true **Hydrophthalmos** or **Buphthalmos** which must be classed as a dropsical distention of the globe at an early stage of its development, due to hypersecretion of the ciliary lymphatics or partial blocking of their anterior efferent channels. That this is the true explanation of the phenomena observed, there can be no doubt, for the appearances of the eyes at birth and the subsequent course of the disease can only be explained on the hypothesis of persistently increasing intraocular tension upon very yielding tunics. inducing cupping of the optic nerves, enlargement of the eyeball in every meridian, visual defects depending on the stage of the hydrops, and eventual destruction by inflammatory disorganisation or rupture.

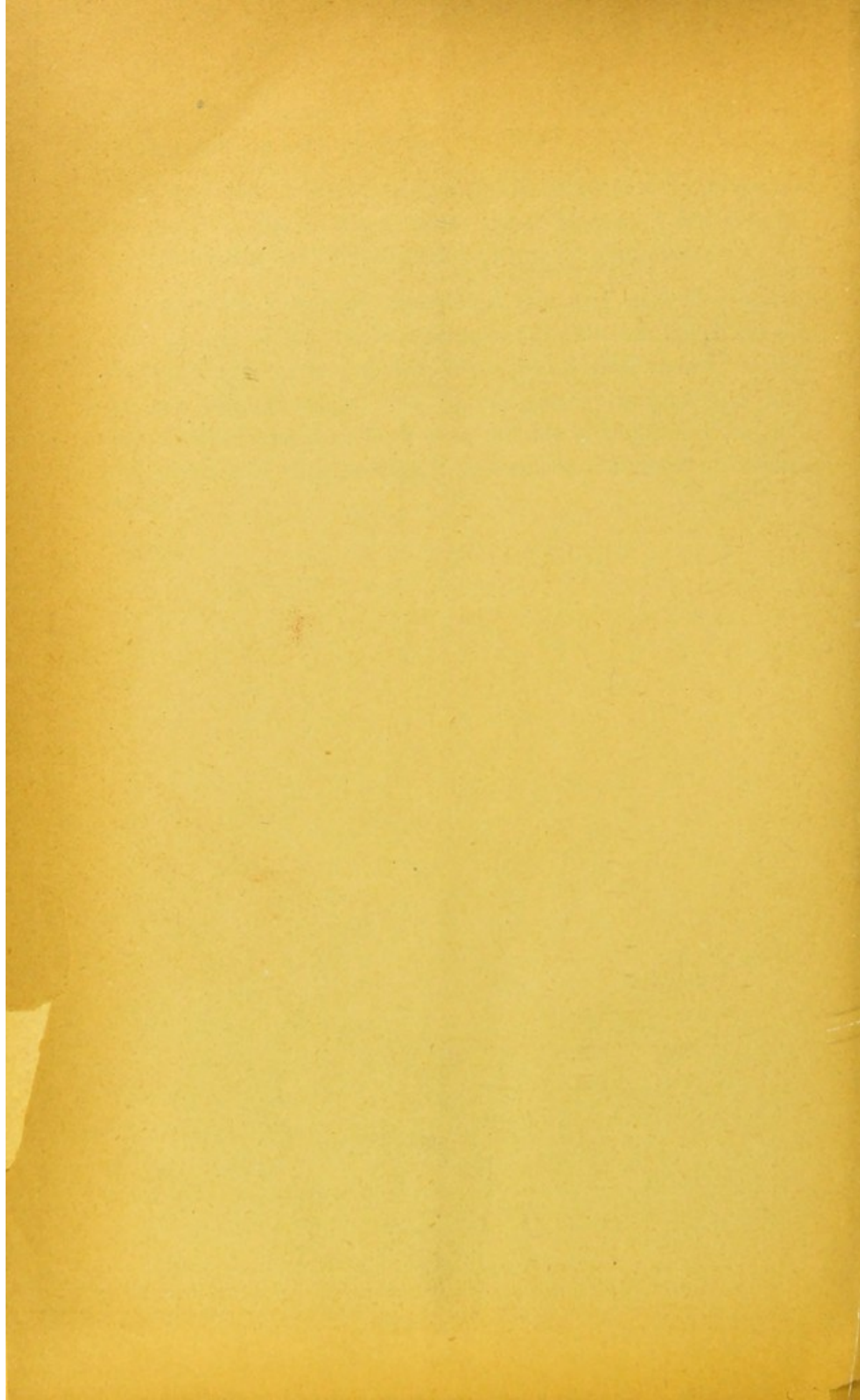
The view of „many“ that Hydrophthalmos is a cystic change

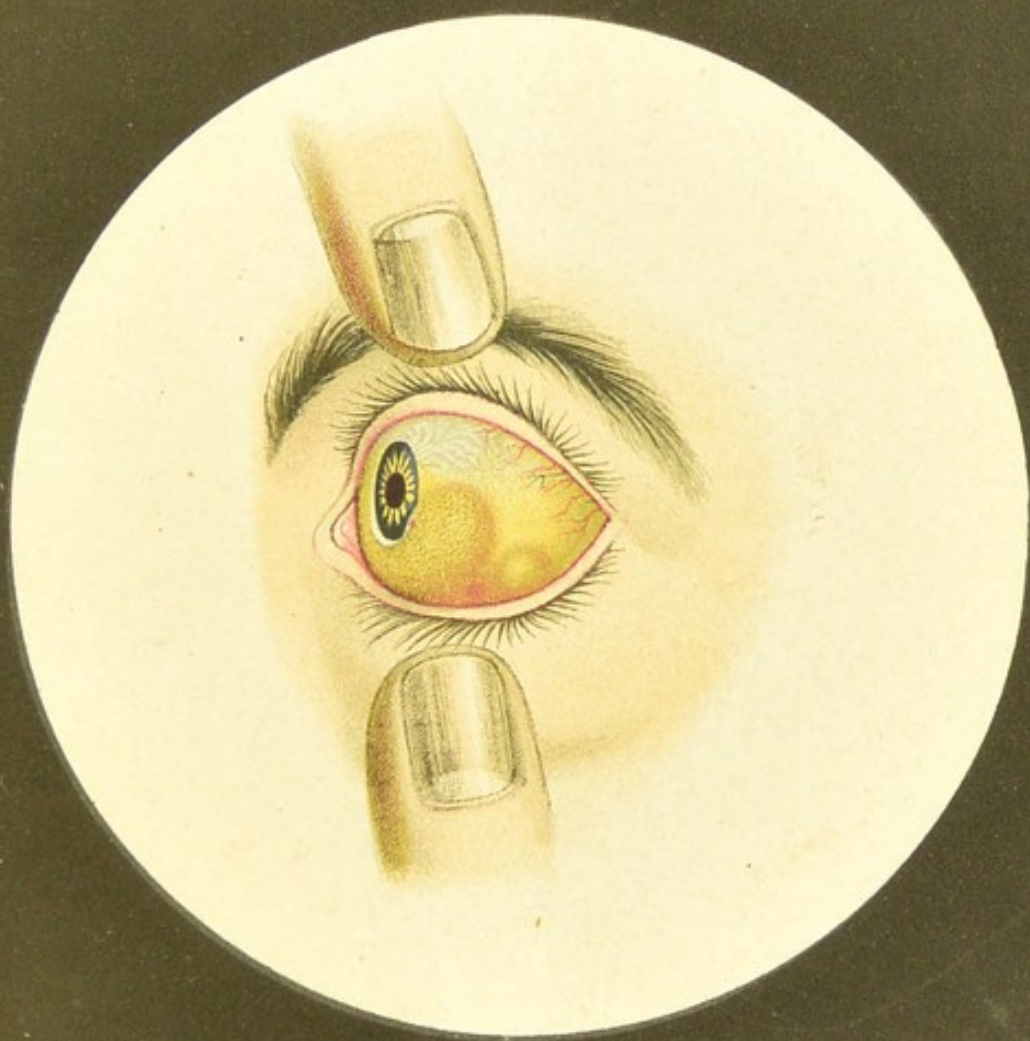
is founded on dissection of two eyes with choroidal cysts. The theory has nothing to support it.

We may then define true **Hydrophthalmos** as a lymph-dropsy of the globe — due to Intra-uterine lymph blockage: Which practically amounts to an „Intra-uterine primary glaucoma“.

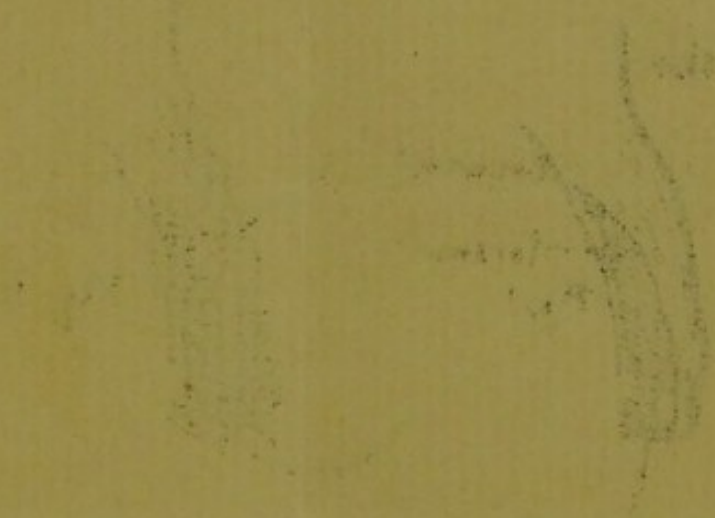
A condition somewhat resembling this may and does occur at later periods of life where blockage of the anterior lymph stream is associated with softening and other pathological changes of the cornea and adjacent sclera; but typical primary hydrops is a congenital affection attacking both eyes, not due to keratitis and should not be confounded with secondary distensions the result of corneal affections.



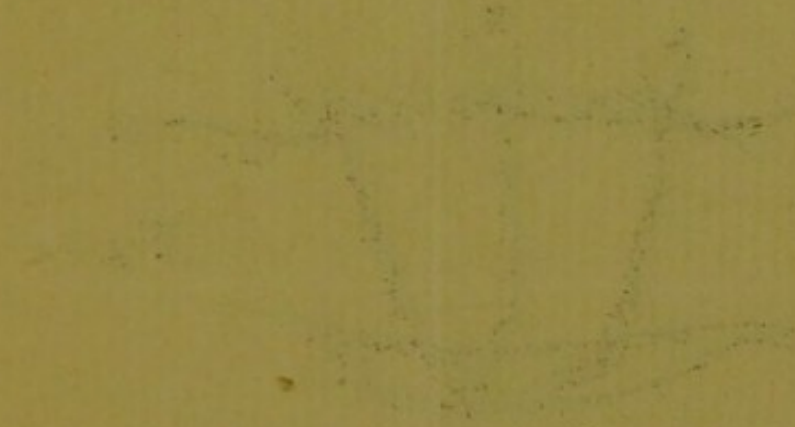








Notes on the map of the coast of the Gulf of Mexico, showing the location of the various ports and the course of the river.



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Diagrammatic Sections of Lid

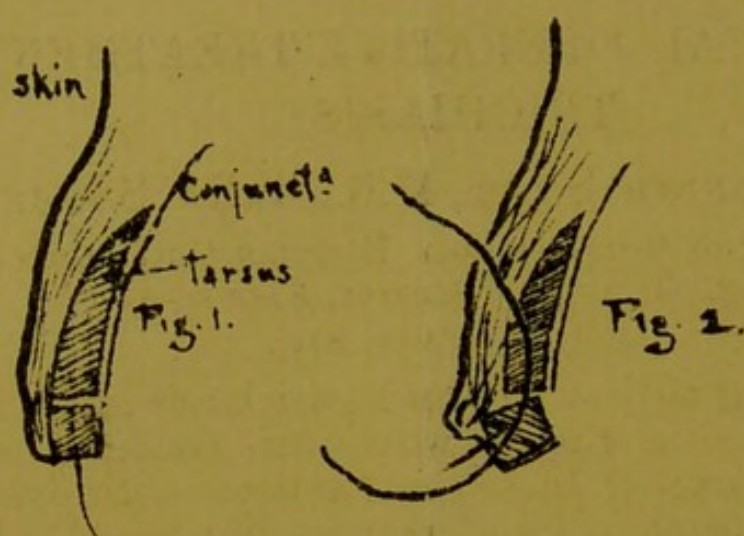


Fig. 1. Showing incision on conjunctival surface dividing tarsus.

Fig. 2. Position in eyelid of silver suture, the lower marginal portion of tarsus having been forcibly everted.

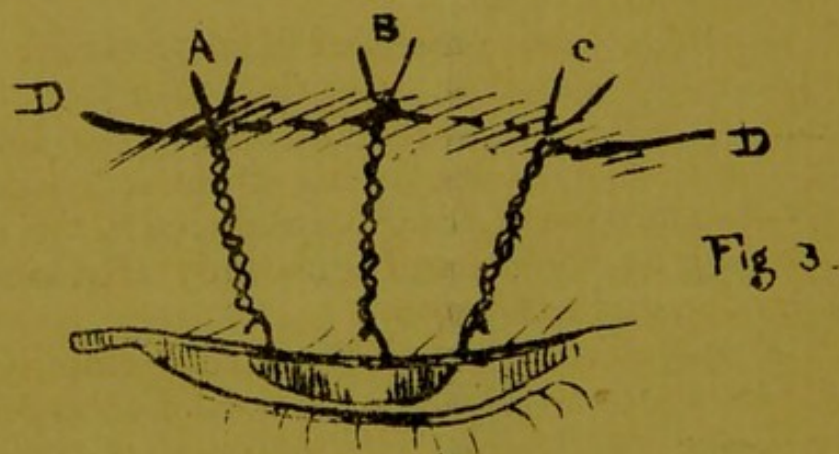


Fig. 3. Completed operation, showing fixation of three vertical strands by means of horizontal eyebrow suture (D).