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ŒDEMA IN GRAVES' DISEASE.

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ŒDEMA is a very common phenomenon in Graves' disease, and affects several sites, apparently from several causes.

Slight swelling of the ankles and feet has been present in one-third of the cases in which I have sought for it. Dr Hector Mackenzie, in his excellent lectures on this disease, states that many of his patients complained of slight swelling of the feet towards night, but in all instances save two he found some good cause to account for it, such as varicose veins.[1]

Marie[2] noted œdema of the legs in two cases, but the only important paper I can discover on the subject is Millard's thesis, *Les Œdèmes dans la Maladie de Basedow* (Paris, 1888), in which he has collected ten cases.

Dropsy in this disease has three varieties.

I. *Œdema of cardiac origin.*—These cases have no characters distinguishing them from those of ordinary cardiac dropsy, as presented in mitral disease; in fact, they may be due to mitral disease co-existing with Graves' disease. Organic valvular dis-

[1] *Lancet*, ii. 1890, p. 545.

[2] *Les Formes frustes de la Maladie de Basedow*, 1883.

1891.

ease is, however, a comparatively rare accompaniment of this disorder, and the commoner cardiac lesion producing dropsy is dilatation with mitral insufficiency and feeble ventricular action (asystole). To this cause Marié, following Debove,[1] ascribes the occurrence of dropsy in all cases.

We must bear in mind, moreover, the fact that dilatation of the heart in Graves' disease need not be a gradual process secondary to muscular enfeeblement of the walls, but may be a sudden active condition of nervous origin.[2] And, as Dr. West points out, dilatation of this sort may account for those mysterious cases of sudden death in the disease which are not infrequent.

Obviously œdema of cardiac origin may be progressive, become general, and extend to the serous cavities or the lungs.

A case was reported years ago by Dr. Lauder Brunton,[3] in which rapid, almost sudden, death in Graves' disease was found (*post-mortem*) to be due apparently to an insidious and rapid œdema of the lungs.

II. *Œdema of nervous origin.*—In a far more numerous class of cases we find a slight anasarca of the insteps and lower legs, which does not tend to increase. Though it may show itself from time to time for years, it is transient, appearing usually at the close of day, and disappearing with the maintenance of the recumbent position. This condition may be found without any signs of cardiac dilatation; in fact, when the heart is hypertrophied and acting with considerable force. If, however, the œdema tends to extend up the legs, the condition of the heart should be carefully investigated. For dropsy, which has been at first nervous in origin, the characteristic dropsy of Graves' disease, may be perpetuated and extended by cardiac disability.

III. *Transitory œdema.*—The rarest class is that of irregular, fugitive, unsymmetrical dropsies. Puffy swelling appears in various parts of the face, neck, arms, and hands; the cheeks

[1] *Les Accès d'Asystole dans le Cours du Goître exophthalmique, Soc. Méd. des Hôpitaux*, June 1880.

[2] Dr. S. West: *St. Bartholomew's Hospital Reports*, 1881, xvii. p. 199.

[3] *St. Bartholomew's Hospital Reports*, 1874 x. p. 259.

and eyelids are favourite positions, while both limbs of one side of the body may be affected.[1]

This form of œdema is very transitory—in fact may only last a few hours.

I have under observation a woman, aged forty, who has had Graves' disease about three years. There is little and a very varying degree of goître, and no exophthalmos; but the rapid pulse, tremor, gastro-intestinal crises, hæmorrhages (chiefly pulmonary), and psychical conditions are well marked.[2]

The feet and ankles are frequently, but not constantly, swollen, the swelling sometimes extending to the knees. Her cheeks and lower eyelids are often swollen in the mornings, and the backs of both hands sometimes swell. The œdema in the upper extremities never lasts more than a few hours. The patient has old-standing tenosynovitis of the extensor sheaths of one wrist, and when œdema occurs in the hands these sheaths always swell. This is not the result of exertion, for she has been almost bedridden for a long time. I have examined the urine repeatedly, and never found albumen. There is no evidence of valvular disease, and when the œdema first appeared there seemed no cardiac dilatation; latterly, however, dilatation has certainly come on, but at the same time she has become so feeble as to be confined entirely to bed, and there has lately been no œdema at all.

On one occasion I gave her a subcutaneous injection of digitalin in one arm, which was followed by complete and absolute paralysis of all the muscles of that arm below the shoulder, and slight puffiness of the whole limb. This condition lasted only a few hours, and there were no signs of cellulitis. Her family is very neurotic.

Rendu[3] has described an œdematous swelling which appeared in both supra-clavicular hollows in several patients having Graves' disease. It resembled a double hernia of the lung. "*Il donne la sensation d'un empâtement diffus d'un œdème dur et résistent, parfaitement indolent, non fluctuant, mat à la percussion, et semble être produit par un sorte de fluxion congestive du tissu*

[1] Cuffer; *France Médicale*, 13 July 1878; case given in full by Millard, *op. cit.*

[2] Full notes of this case appear in *St. Bartholomew's Hospital Reports*, 1892.

[3] *Nouvelle Dict. Encycl. des Sciences Méd.*; article, "Goître Exophthalmique."

cellulaire souscutané. Ce phénomène sur lequel M. Potain a depuis longtemps attiré l'attention ne se voit guère que chez les femmes névropathiques et parait être sous la dependance d'un trouble de l'innervation cervicale."

Swelling of the eyelids has been described at great length by M. Parinaud. Dr. Hector Mackenzie found it in three of his cases, all of old standing, and he had seen it in two others at St. Thomas's Hospital. Dr. Gowers [1] also mentions its occurrence after apparent recovery from other symptoms. It affects the upper lids chiefly; it is not a true œdema; no pitting follows pressure, and it does not cause the closure of the lids which is produced by ordinary œdema, in fact it may be present with retraction of the lids. There is generally an injected condition of the small veins with it. The swelling may accompany proptosis, but has no relation to it, for M. Parinaud found it present in two patients who had neither goître nor exophthalmos, and in my case the eyes have never been prominent.

In my case also the condition was transitory, but Vigouroux [2] remarks that it is very persistent, and this must have been so in Dr. Gowers' case. Vigouroux ascribes it to paresis of the orbicularis, and states that when contraction of that muscle is effected by an electric current the swelling disappears, driven back by the pressure of the subcutaneous fascia.

Another form of dropsy still more rare I find noted in two instances.[3] This is a transitory swelling of joints, an "intermittent hydroarthrosis." The condition has been described by Pierson, but I am unable to find the reference.

My second and third group of dropsies are clearly of vasomotor origin, as are the serous secretions into the stomach and intestines so common in Graves' disease,[4] and are probably due to a paralysis of vaso-constrictor nerves. A point I noted in my case above was that she is singularly free from the flushes which are so common, though sweating and diarrhœa are very excessive at times.

In distinguishing these various forms of swelling, we must be

[1] *Diseases of the Nervous System*, vol. ii.

[2] *Progrès Méd.* 1887, October 22, p. 319.

[3] Pletzer: *Deutsche med. Wochensch.*, 1881. Goix: *Journal des Sciences Méd. de Lille*, 1886. Both quoted by Gauthier, *Rev. de Méd*, No. 5. 1890.

[4] Maude; *Practitioner*, September 1891.

guided by the position and degree. If situated only on the face and upper limbs, or if unsymmetrical, it is certainly of nervous origin, and it may be so if it affects the feet, but is only slight and evanescent. In all cases of course the heart and urine should be carefully examined; for the occurrence of œdema due to dilatation of the heart is a serious symptom. There is little to be said about treatment. When merely local the ordinary means of rest and position will be sufficient. If it be due to cardiac conditions digitalis should be used freely.

When purely nervous in origin M. Dieulafoy recommends small doses of ipecacuanha at frequent intervals, which it is better to combine with opium, as in the form of Dover's powder.