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TELANGIECTATIC LESIONS OF THE SKIN OCCURRING IN THE SUBJECTS OF GRAVES' DISEASE.

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IN the study of exophthalmic goitre the symptoms described as tremor, thyroid gland enlargement, exophthalmos, and tachycardia have long been recognised as classical. There are, however, other morbid conditions occurring either during the active manifestations of the disease or after these last have disappeared, which are commonly considered as of minor moment. Among those affecting the skin-organ may be named: pruritus, hyperidrosis and hydrocystoma, erythematous flushing, scleroderma, myxœdema, and lastly, telangiectasis.

The interesting and important problems with which the student of the ætiology of this disease is confronted may well be referred to the men of the laboratory and those devoted to internal medicine. Whether eventually the affection will be shown to be a pure neurosis, or to be due to a central lesion of the medulla, to hyperthyroidism, or to athyria, whether the initial point of the pathogenesis be intra- or extra-thyroidal, these are questions the answers to which are not at present satisfactory. The dermatological aspects of some of these cases, however, present symptoms of the highest importance with respect to diagnosis, as they are displayed in what seems to be but a small number of the subjects of Graves' disease. Viewed as a group, it may be said of them all that while they are recognised in subjects

other than those suffering from exophthalmic goitre, it is none the less clear that some of them are very intimately related to the diseases of the thyroid gland. In the group of symptoms which may be described as of minor import may be named, as of great rarity and special significance, cutaneous telangiectasis.

Subjoined is a brief summary of four personal observations made in the case of women who exhibited telangiectatic lesions of the skin, chiefly of the face, and who at the time of examination were either suffering from Graves' disease, or having secured relief from its active manifestations exhibited the stigmata of the pre-existing disorder.

CASE 1.—Mrs. J—, aged 57 years, having passed the menopause, weighing 180 lb., married and the mother of four children, three deceased; came for consultation October 10th, 1907. She was a healthy-looking, well-preserved woman, who stated that she had suffered from Graves' disease at the forty-fifth year of her life with classical symptoms for which she had been treated by a competent physician. The exophthalmos in her case had not been a pronounced feature of the disorder. She had lately been suffering from dysuria due chiefly to indigestion, with occasional pain in the left hypogastrium, and complained somewhat of shortness of breath on undue exertion. Otherwise she declared she was in excellent health. The face had exhibited the abnormal condition recognised at the time of the examination soon after she had secured relief from the active manifestations of exophthalmic goitre.

When examined the cheeks were seen to be the seat of well-nigh symmetrically disposed telangiectatic macules, somewhat more conspicuously displayed on the left side. The lesions varied in size from a small pin-head to half a split-pea. The definition was indistinct, but sufficient to permit definite localisation of each lesion. None was the seat of any subjective sensation. The smaller spots wholly disappeared under slight, the larger only under deep and prolonged, pressure. The hue of each was similar—a shade of light purple deepening at once with acceleration of the heart's impulse on exertion and when subjected to a high temperature. The cutaneous lesions were limited to the region of the face with the exception of a conspicuous macule over the left sterno-clavicular articulation. The heart and blood vascular system were normal, the urine free from evidences of

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disease, the tongue clean, and the functions of the body in general properly performed.

The patient was presbyopic and wore glasses to correct the visual error. There was a small egg-sized fatty tumour over the left scapular region which apparently bore no relation to the condition of the face.

The thyroid gland was moderately large and soft, in size not exceeding that of a small orange. There was no exophthalmos and no tremor.

CASE 2.—(Mrs. R—). The patient was a widow, aged 50 years, past the menopause, with one living child, seen by me in March, 1907, in consultation with my colleague, Dr. Louis Schmidt. She had been for several years under the successful treatment of a skilful practitioner of the city for relief of well-marked Graves' disease, having had typical thyroid enlargement, exophthalmos, and tremor. At the time of the consultation she had a contracted kidney, hypertrophic heart, and a scarcely perceptible enlargement of the thyroid gland. The exophthalmic symptoms had disappeared, as also an albuminuria with renal casts.

When examined the patient was found to be fairly well nourished, the eyes not prominent, lips red, tongue clean, and the heart-sounds normal, though the pulse was hard and bounding, the impulse being possibly exaggerated by strychnia which had been regularly administered by the mouth.

On the right side of the brow was a split-pea-sized, dull red, globoid lesion, distinctly defined and fairly well projected from the surface, which disappeared under pressure. On the left cheek was a small bean-sized similar lesion with the epidermis thinned at the apex. This also could be made to disappear under firm pressure, though there was some redness and thickening of the integument. Smaller, satellite-like, pin-head-sized lesions were visible at the periphery, all disappearing under firm pressure. Scattered about the right cheek were diffuse, vaguely defined, dull purplish-red puncta wholly disappearing under pressure.

The patient exhibited a moderate degree of seborrhœa of the scalp, where were a few scattered papules; also two seborrhoic areas, one on the back of the neck and one on the thigh, the last scarcely larger than a pigeon's egg, superficial, slightly scaling, and reddened.

This woman was subsequently examined by two experts of repute, one declaring that she was the victim of *Mycosis fungoides*. Another, an eminent European colleague, unhesitatingly asserted that her facial nodules were lupoid and would disappear under a course of treatment by phototherapy. This was practised under his direction without securing relief.

CASE 3.—Mrs. C—, aged 43 years, weighing 143 lb., married fifteen years and the mother of two children, was sent on October 11th, 1907, by my colleague, Professor Herrick, for relief from a dermatosis affecting the face.

Five years before she had suffered from Graves' disease characterised by extreme exophthalmos, enlarged thyroid gland, and tremor. About two years before, under treatment, the patient had recovered, since which time she had developed considerable irritability of the skin of the face with subjective sensations of itching, burning, flushing, etc. The patient was fairly well nourished, and evidently belonged to the class of women less comfortably circumstanced than that of others whose cases are here described. She did her own housework, and was occupied about the kitchen stove in cooking for her family.

When examined no goitrous enlargement was found and no other signs of Graves' disease. A few small, telangiectatic-like macules were found on the upper chest. One perfectly typical vascular lesion was discovered on the upper lip. Upon the malar prominences were diffuse areas of vascular dilatation, of the type often recognised in rosacea, due to distension of the facial capillaries. On slight stimulation she reported that the lower part of the face became diffusely red and the skin appeared to be thickened.

The patient was of neurotic type, moving the hands constantly and rubbing or scratching the various parts of the body on slight provocation. She also suffered, she stated, from a pruritus hiemalis.

The symptoms in this case were much less conspicuous than in the others herein described.

In conjunction with my associate, Dr. E. L. McEwen, I made, in the year 1903, a survey of the series of cutaneous syndromes in Graves' disease, including hydrocystoma, cutaneous pruritus, and

telangiectases. The second of the four cases reported by us was described as follows :

CASE 4.—Miss N. M—, aged 24 years; family history good; had broncho-pneumonia at two years, scarlet fever at eleven, with no untoward sequelæ, diphtheria at fourteen, and measles at twenty. Menstruation began at thirteen, and has since been practically normal, except for occasional dysmenorrhœa. She gives no history of pelvic trouble.

The patient had goitre at twelve years after a severe sore throat, and the gland had remained of about the same size since the beginning of the disease, increasing in volume slightly during "colds."

Two years before, the patient noticed a marked redness of the skin over the right frontal eminence. This gradually spread over the forehead. At this time she began to have cardiac palpitation on exertion. There were no other subjective sensations except weakness in the legs.

On examination she is seen to be poorly nourished, of sickly appearance, and of slender build. Her weight is 112 lb. The forehead shows a diffuse redness extending to the roots of the hair. On close inspection a fine network of vessels is visible throughout this area, at some points more conspicuously than at others. Pressure under a glass shows new vessel-formation with small scattered areas of brown pigment deposits. The redness extends over the cheeks and angles of the jaws to the neck, especially on the left side, where it appears as a tongue-like prolongation over the enlarged left lobe of the thyroid gland. Part of the redness disappears if the patient remains perfectly at rest for a brief time. New vessels are, however, present over the frontal eminences, the prominences of the cheeks, and over the lobe of the thyroid. The eyes show normal reflexes. Von Graefe's, Stelwagon's, and Möbius' signs are absent. There is slight exophthalmos. The circumference of the neck measures 29·5 cm. Both lobes and the isthmus of the thyroid gland are moderately enlarged, the left showing the greatest change; the gland is soft and not sensitive. The lungs are normal; the heart is normal in size, there are no murmurs; the cardiac pulse is 130 per minute (while the patient is quietly resting), regular and forcible; a murmur is present over the right side of the neck; there is no unusual cervical

pulsation. The abdomen is normal (pelvic organs not examined). There is no œdema. There is a well-marked tremor in the out-stretched hands. All the reflexes are greatly exaggerated. The urine is negative; there are no red or brown patches on the body; the skin is moist and irritable.

At the time of the publication of this article we were able to find but one record of telangiectases occurring in Graves' disease, the case recorded by Létienne and Arnal. These authors give the history of a female patient, aged 27 years, neurotic (hysterical crises at twelve), menstrual and digestive derangements, and an attack of rheumatism at fifteen. At the age of twenty-six she had noticed a small red macule over the sternal region. Similar lesions appeared elsewhere, and one year later these were irregularly disseminated over the entire surface of the body. The macules were round and oval in shape, scarlet to dark-red in colour, and of variable sizes. The shoulders and neck were exempt. The spots showed dark centres surrounded by areolæ, and were gradually lost in the area of the surrounding skin. These disappeared on pressure. Two larger areas were present over the malleoli, which were painful on pressure. The mucous membranes were exempt. The right lobe of the thyroid was hypertrophic. The pulse was registered at 105; there was marked tremor, no exophthalmos, and great nervousness.

Regarding these cases as a group illustrating one of the rarer complications of Graves' disease, it will be seen that the patients were all women averaging forty years of age. In two only was the health seriously impaired; these were the youngest of the group, one only suffering from active manifestations of the disorder. In the other of these two patients the dermatosis was more profusely developed and widely disposed than in the others. In one only had the enlarged thyroid gland been apparently reduced to its normal dimensions.

The lesions were generally of a purplish tint, and chiefly disposed over the face. In one instance the integument covering the gland was involved, in one the telangiectases were distributed over the general surface of the body. The lesions as a rule were pin-head to larger sized telangiectases; in a few instances single new-formed blood-vessels could be traced for several inches in the skin. In one patient globoid, pea-sized, papillomatous growths, compressible and practically disappearing under pressure, were projected by the side

of telangiectatic new growths scarcely differing from the lesions of facial rosacea, vascular in type.

The cutaneous symptoms here described are without question intimately related to the circulatory disturbance occurring in the course of Graves' disease. The tachycardia (or, as Barker prefers to name it, the "pyncocardia") may produce a pulse-rate of more than ninety beats to the minute, which may be increased to two hundred. This is one of the persistent and constant of the semeiotic phenomena of the disease, occurring in cases where even the exophthalmos and the struma may be wanting. When seemingly absent it is producible by definite artificial tests. In well-marked cases not only are the normal cardiac sounds strongly exaggerated but systolic murmurs occur, attributable solely to the extraordinary ventricular exertion, the heart at times mechanically dilating in its effort to sustain the unusual output from the left ventricle. The carotids throb; the abdominal aorta distends; the struma or gland itself may visibly pulsate; the ocular globes are protruded until there is an obvious encroachment upon the normal distance between the anterior pole of the eyeball and the supra-orbital crest of the frontal bone. All these are signs of an enormous cardiac strain.

"Hic labor, hoc opus est."

The really remarkable feature of these cases is not that telangiectatic lesions and blood-vascular nodules occasionally develop in the skin of a region like the face, normally provided with an abundant vascular plexus, but that these obvious results of high arterial pressure are not more constant and conspicuous. One of the chief features of the goitrous swelling is its own vascularity.

In connection with increased pulse-pressure must be estimated the tissue weakness which the disease produces. Often the skin of the face of these subjects is bedewed with sweat, erythematous blotches develop over the upper segment of the body, the weight perceptibly declines, while the blood-count may be nearly normal with even an excess of hæmoglobin. Indeed, one need not seek any more recondite explanation of the dermatosis here described than is furnished by the *vis-a-tergo* of the labouring heart impulse, the vaso-motor instability, and the tissue weakness of that part of the body which is endangered by its anatomical proximity to the circulatory centre, and its special exposure to the bombardment from the left ventricle.

The chief reason for directing attention to this subject in its dermatological relations concerns its importance in the establishment of diagnosis. It has been seen that errors have been made by experts who failed to recognise the purport of these surface-symptoms. The facts which it has been attempted to set forth here have a special significance for the reason that the telangiectatic and other blood-vascular lesions of the skin, in the subjects of exophthalmic goitre, may develop after the chief thyrotoxic phenomena have vanished. As a result of the studies recently conducted by trained observers the belief, once prevalent, that Graves' disease may be unaccompanied by thyroid enlargement is not now generally accepted. That such an opinion once prevailed is not without significance in this connection. As a matter of fact voluminous enlargements of the thyroid gland are not symptomatic of Graves' disease. In not a few cases of exophthalmic goitre the tumefaction of the gland is neither conspicuous nor suggestive.

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LUPUS CARCINOMA.

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THAT cancer may develop upon *Lupus vulgaris* was known to Alibert, Rayer, and Devergie, and from time to time considerable attention has been paid to this complication. Bayha (1) in 1887 collected forty-two cases. An article upon this paper with addi-