ANOTATION

Blindness in Animals in 1641

The 33rd volume of the publications of the Surtees Society, dated 1857, is entitled "Rural Economy in Yorkshire in 1641; being the farming and account books of Henry Best, of Elmswell, in the East Riding of the County of York." On page 79 occurs the following note on blindness in animals which may prove of interest to our readers.

"It is usuall with sheepe, and especially with hogges and lambes, to fall blinde by reason of a humour that falleth out of the head into the eye, wharby groweth (as it weare) a scumme over the stive of the eye; many shepheards will undertake to cure this by bleeding them in the wykes of the eye with a penne-knife, but the onely way is to take groud-ivy-leaves, and to chewe them in the mouth, and take out the leafe by the finger after you have sucked the juice from it, this juice you are to spurte into the eye morninge and eveninge, or if you will thrice a day; and duringe the time of the blindnesse, if it bee in summer time, you are to putte into some little place wheare it can neyther hang itselffe in briars nor runne into any water; if it bee in winter time, you are (to putte) to some hey-mowe, and in a fortnight or three weeks it will eate of the scumme and the sheepe will see again."

None of the dictionaries at our disposal shed any light on the meaning of the words stive and wykes, but a possible cause of the blindness may be suggested in an attack of traumatic interstitial keratitis; we have seen an excellent example of this years ago, in a retriever, at the end of the shooting season, and by the following September the corneae had recovered their transparency and the vascularisation, to superficial examination, had disappeared. The method of treatment here outlined may possibly have some bearing on the idea among a certain section of the community that fasting spittle is a good eye wash.

ABSTRACTS

GENERAL MEDICINE


(1) Albrich makes the following postulates with regard to the influence of general infection upon diseases of the eye.
1. All diseases which tend to remove the sensitivity of the skin to tuberculin may alleviate scrofulous diseases of the eye.
2. Local infections in the vicinity of the eye (such as facial erysipelas) tend to alleviate diseases of the eye.
3. General systemic infections (such as measles, malaria, cholera) similarly affect favourably diseases of the eye, the bacterial infection tending to promote immunological activity.

Many cases are quoted in support of this thesis; such as the clearing of trachoma, scleritis, keratitis, etc., during measles, erysipelas, cholera, etc. Whether or no the treatment of intractable infections endangering vision can be justifiably undertaken on the lines of treatment of general paralysis of the insane by inoculation with malarial parasites, is a matter which should depend upon the opinion of the individual surgeon—or, perhaps, of the patient.

W. S. Duke-Elder.


(2) Borgeson and Wagener, of the Mayo Clinic, review in an instructive article the ophthalmoscopic findings in a series of 138 cases of leukaemia observed at the Mayo Clinic. Of these cases 17 were acute and 121 chronic cases, and 89 out of the 138 showed some change or other. The changes the authors observed appear to be more varied than those described in their smaller series by Leber and by Foster Moore, both of whom recognised three distinct groups or stages: (1) engorged veins, (2) engorged veins with haemorrhages and (3) engorged veins with haemorrhages and definite leukaemic infiltrations into the retina—true leukaemic retinitis. The changes observed by the authors are described as falling in five groups apart from one case in which the retinal changes were indeterminate: (1) Engorged veins, 27 cases. (2) Engorged veins with haemorrhages or exudates of no characteristic type, 35 cases. (3) Leukaemic retinitis, 10 cases: definite leukaemic or leucocytic infiltration into the retina particularly in the form of white lines sheathing the peripheral portions of the distended veins, but often also in the form of localised nodules with associated haemorrhages. The nodules have a characteristic appearance; they are round, sharply circumscribed, often elevated and are frequently surrounded by a haemorrhagic margin. Usually they are one-sixth to one-third of a disc diameter. In almost all these cases the discs were full and blurred and in some they were measurably swollen. (4) Apparently isolated retinal haemorrhages, 8 cases. (5) Retinitis of anaemia, 8 cases: “A type of retinitis which could not be distinguished ophthalmoscopically from that seen in cases of pernicious anaemia or in cases of severe anaemia secondary to
carcinoma of the stomach or colon.” There is definite anaemia of the disc, dilatation of the retinal vessels, scattered haemorrhages and exudates of the superficial cotton-wool type. The diagnosis of leukaemia was established by the blood counts and other clinical features and not suggested particularly by the retinal picture.

The authors do not agree with the opinions expressed by earlier observers that the retinal changes have little prognostic significance. It is true that nothing clear emerges if all retinal changes are considered as one entity: but definite prognostic indications are available if the different changes observed are considered separately and correlated with the various subdivisions into which leukaemia is divided, i.e., myelogenous and lymphatic, each of which has acute and chronic types. Furthermore it is seen that some lesions are particularly prone to occur in some special variety of leukaemia. Thus (1) retinitis of anaemia occurred most frequently in acute myelogenous leukaemia. (2) Leukaemic retinitis was found only in cases of chronic myelogenous leukaemia (in 10 out of 72 cases of this type), and in all these there was a high leucocyte count.

Reviewing the lesions in the light of the different types of anaemia the authors hold that:

1. In the acute types of both the myelogenous and lymphatic leukaemias, the essential cause of the appearance of retinal lesions seems to be anaemia, for in these cases, as in pernicious anaemia, it is rare to find retinitis when the haemoglobin is above 40 per cent.

2. In chronic myelogenous leukaemia retinal lesions are decidedly more likely in those cases in which the haemoglobin is low and the myelocytes are high. It is not so much a question of a high total leucocyte count as a high differential myelocyte and myeloblast count.

3. In chronic lymphatic leukaemia the factors influencing the onset of retinal lesions seem rather less definite than in other types. The most significant would seem to be the associated anaemia.

The authors point out that the retinal exudates seen in myelogenous leukaemia are infiltrations of mature or immature myelocytes, and the myelocytes have a greater tendency to these infiltrations than the leucocytes. This explains the greater frequency of retinal exudates in cases of myelogenous leukaemia with a high myelocyte count.

On the question of haemorrhages it would appear that retinal haemorrhages may be isolated as far as haemorrhages in other tissues are concerned, in the case of myelogenous leukaemia; but in lymphatic leukaemia retinal haemorrhages indicate the presence of haemorrhages elsewhere.

As to prognosis the authors hold that in acute cases the presence
or absence of retinal changes seems to be of no significance; in chronic cases on the other hand it has some value. In chronic lymphatic leukaemia the average length of life after observation was 248 days for patients without retinitis and 72 for those with retinitis; in chronic myelogenous it was 1,039 and 314 days respectively.

By correlating the blood picture and the expectation of life with retinal changes it would appear that retinal changes occur in the stages of heightened pathological activity in the case of chronic myelogenous leukaemia; in the case of chronic lymphatic leukaemia the connection is not quite so clear.

A. SOURASKY.


(3) In a study of 137 cases verified by necropsy, Yater and Wagener have investigated the significance of fundus appearances in cases of heart disease. In these investigations (conducted at the Mayo Clinic) a sharp distinction is made between the cardiac failure due to hypertension and that due to sclerosis of the coronary arteries; likewise a clear distinction is laid down for sclerosis of the retinal vessels as between the senile and the hypertension type. By the senile type of retinal arterio-sclerosis the authors characterise the changes seen as reduction of the calibre of the retinal arteries, with little or no irregularity in the lumen; arterio-venous compression is absent and the light reflex is dulled. The opposite features are shown by sclerosis of the hypertension type, the light reflex is exaggerated, while arterio-venous compression and irregularities in the lumen of the arteries are present. Retinitis is only present in cases of sclerosis of the hypertension type, and according to the severity is benign or malignant.

The 137 cases represented the main groups of heart disease, and the only changes in the fundus that are of diagnostic and practically pathognomonic significance are the embolic lesions of the retina in cases of subacute bacterial endocarditis. But apart from this, retinal changes have considerable significance in the prognosis of heart disease. This is brought out by a study of 72 of the cases in which retinal arterio-sclerosis was present.

All but three of these 72 cases of heart disease with retinal sclerosis showed hypertension; in the three in which hypertension was not present, there was reason to believe that it had existed at some time. There was an important difference in the lesions associated with the two types of retinal sclerosis. Those cases in which the retinal sclerosis was of the senile type had hypertension of only a mild degree, whereas the hypertension in the cases
of the hypertension type of retinal sclerosis was more severe and the hearts were much more hypertrophied. Furthermore all those with retinitis had severe cardiac disease, apparently due mainly to the hypertension, and all of those with the malignant type of retinitis had evidence of renal injury in addition to cardiac injury.  

On the basis of their study the authors point out that:  
(1) If retinal sclerosis of the hypertension type is present in a patient with heart disease, less than sixty years of age, who does not have other evident cause for such disease, hypertension may be assumed to be the cause.  
(2) If in addition to the retinal arteriosclerosis retinitis of the hypertension type is present, hypertension is always the most important factor in the cardiac disease; and the course of the disease is likely to be more rapid and severe than in uncomplicated cases of retinal sclerosis.  
(3) If, however, retinal arteriosclerosis of the hypertension type without retinitis is present in patients old enough to be the subject of severe coronary sclerosis, the existence of this type of fundus picture indicates only that hypertension is or has been present. One must rely in such cases on the symptoms for the interpretation of the degree of sclerosis of the coronary arteries.  
(4) The hypertension associated with retinal sclerosis of the senile type is usually not severe, and if cardiac disease exists, the hypertension may be excluded as the important causal factor and severe coronary sclerosis may be assumed to be present.  
(5) Ophthalmoscopic examination yields negative results in cases of heart disease unless the heart disease is due to or associated with hypertension or coronary sclerosis, or subacute bacterial endocarditis.  

The article is by no means easy reading, but will repay careful study.

A. SOURASKY.


(4) Exophthalmos, though its origin is unknown, is generally regarded as one of the cardinal symptoms of hyperthyroidism, and operative relief of the hyperthyroid state is expected to cure or at any rate improve the exophthalmos. That this happy result does not always follow is well known, and now Zimmerman calls attention to the rather paradoxical condition of exophthalmos supervening or becoming decidedly more marked in cases where operation successfully relieved the other symptoms of hyperthyroidism.  

Eight such cases are reported in detail and three more mentioned
in a postscript. In three of the eight cases the exophthalmos was unilateral and in some of the cases conjunctivitis, chemosis and oedema were present. This post-operative exophthalmos developed with a falling basal metabolic rate, and was associated in most instances with subnormal metabolism and sometimes with frank myxoedema. Thyroid medication or the withholding of it seemed to have no effect on the ocular changes.

A. SOURASKY.

**BOOK NOTICES**


The literature of the slit-lamp has been enriched by an atlas of the biomicroscopy of the cornea produced by Dr. J. López-Lacarrère, of Madrid. The volume is the first of its kind to appear in Spanish literature. The first part of the book, which comprises about a third of the whole, is devoted to a very clear and complete account of the general theory and the technique of the slit-lamp, wherein the apparatus and the principles of its use are described. The instrument of Gullstrand is preferred with the modification of the "double slit" whereby two slit-images are simultaneously produced, one with a thick L-shaped beam and the other with a thin linear beam. This was introduced by Lacarrère some two years ago (Rev. gén. d’Ophthal., April, 1927) who is enthusiastic over the advantages of the double optical section, which, it is claimed, simplifies the technique and enhances greatly the sense of relief. The modification can be applied to any slit-lamp, while the examiner remains free to use either this or the old method.

The second part of the book deals with the normal cornea, and the third describes the pathological conditions occurring in this tissue, each being clearly and adequately dealt with in the text. After a bibliography which extends over twenty-eight pages there follows an atlas comprising nineteen plates depicting in colour the various conditions described in the text. Each plate is accompanied by a full clinical history which greatly increases the interest and value of the illustrations; these are uniformly good, and although they do not come up to the standard of those of the original atlas of Vogt, they bring out clearly the points of importance which are emphasized in the text. The author and the Hispano-American Society of Ophthalmology, under whose aegis the atlas is produced, are to be congratulated on the production.