

they are to be denied the stimulus that comes from the study of the living, growing part of sciences of such fundamental import as physiology?

One word more, and I am done. I have recently been asked my "opinion on the subject of a department of applied physiology." I have replied that I am heartily in favor of it. I would put it in the fifth year of the medical course—such as Cornell is planning—and I would place it in charge of a man who has had sufficient experience in general practice to know, not merely to theorize on, the applications of physiology; more than this, I would give him a place on the general staff of the college hospital and require him to demonstrate both normal and abnormal physiology at the bedside. Ultimately, such opportunity and training would develop the physiologist as a diagnostician. The state boards would be less inclined to scale down the value of an examination in physiology to 50 or 70 per cent., as has been done in some places. And the thus demonstrated practical value of this scientific branch of medicine would more clearly justify the expense of modern physiologic laboratory equipment. The field is vast and the fruits already gathered are by no means insignificant. But for applied physiology the surgeon could not operate for the relief of a localizing cerebral lesion, nor could he have warning of an impending intestinal perforation save through blood-pressure observations. The general practitioner and the specialist in nerve and mental diseases would be lost without a knowledge of spinal reflexes. Indeed, about all that we can do, in disturbances of the nerve and vasomotor systems, is the resultant of applied physiology.

With full appreciation of the dangers of dogmatic assertion, I venture to suggest a few of the remedies for the conditions here outlined:

1. Our standard of preliminary education should be raised, and entrance examinations be made more general and more stringent. No student should be advanced to a higher grade until his thorough mastery of the fundamentals has equipped him for an appreciation of their practical bearings. University registration statistics show that the schools which have already effected this are thronged with students.

2. The courses offered in the so-called scientific branches, whether by text-books, by didactic instruction, or by laboratory training, should be at the same time both more scientific and more practical. There is no necessary conflict here, for, after all, "science is nothing but trained and organized common sense."

3. Medical schools should quickly recover their birth-right, which they sold for a mess of pottage. It is to their shame that much of recent progress toward higher medical education has found its initiative, not with them, but with the state examining boards.

4. The elevation of our professional standards is a duty which we owe to our patients, to each other, and to the public; its accomplishment will be the full fruition of the high ethical spirit which animates our guild.

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The Hairpin in Emergencies.—The hairpin of domestic life may in emergencies be put to a variety of medical uses—as an esthesiometer, a probe, a wire for fractured bones, a cauterizer, a harelip pin, a tenaculum, a nasal or aural speculum, a wound retractor, an aneurism needle, a tracheal retractor, for drainage, as a female catheter and a wound approximator.—*Medical Times.*

CONJUNCTIVAL IRRITATION EXCITED BY PROXIMITY TO A HORSE.*

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A number of years ago I was consulted by a banker from one of the New England towns, on account of a high muscular error, which occasioned marked asthenopia. During the treatment of the case, it was elicited that in addition to the symptoms of eyestrain, the patient was the subject of a peculiar kind of inflammation of his eyes, which occasioned him great annoyance and distress, and from which he despaired of obtaining relief. This affection, as told in his own words, was as follows:

CASE 1.—Since I was 30 years of age, whenever I drive behind a horse, I usually begin to sneeze somewhat during the first mile, but by the end of the second or third mile the sneezing gradually increases until I sneeze once every 100 feet. If the drive is a long one, the sneezing may relax somewhat for a time, only to recur, however, with the same vigor. During this time the eyes are watery and weak, the lids become much swollen and the eyeballs red; the inside of the lids is also discolored, and my whole appearance is that of a person who has been on a very bad spree. After a night's rest the eyes look as well as ever. The time of year has no influence on the irritation, the symptoms appearing in both summer and winter. I thought for a time that the dust raised in driving might have something to do with it, but then I noticed that it was just as bad after sleighing. Then, too, in recent years I have found that, no matter how dusty the road might be, the symptoms were never provoked if I rode in an automobile. I have suffered just as much in the White Mountains as at home, and climate seems to make no difference.

The trouble is greatly aggravated by rubbing my eyes or even by bathing them in warm water, so that I have learned to avoid touching them, as far as possible, after driving. I have had the same symptoms, though not nearly so bad, after stroking a cat, and if I put my hand to my face directly afterward the irritation is much aggravated and I feel tired, "head-achy," and as though I had a cold. So far as I know, no other members of my family have been similarly affected, though repeated attacks of sneezing have always been a family trait.

I have never had any treatment which could control the symptoms.

Some time after this, I was consulted by a lad, aged 10 years, who was suffering from an attack of simple conjunctivitis, which he said had been excited by driving in the country.

CASE 2.—It was elicited that driving, or even approaching a horse in the stable, always caused his eyes to water and itch so badly that he was compelled to hold a handkerchief up to them, though he could ride in an automobile without discomfort. He was a subject of hay fever and was compelled to go north in August and September to escape the annoyance of that disease, but even in Maine or in the Adirondacks, whenever he would drive or come near a horse, the irritation in the eyes and nose would reappear.

Examination.—Inspection showed both the bulbar and tarsal conjunctiva to be swollen and injected, and the follicles enlarged. Lachrymation was profuse and the edges of the lids were covered with mucus. Unfortunately no bacteriologic examination was made of the secretion at the first examination, and, as the usual local treatment for conjunctivitis caused a rapid subsidence of the symptoms, when the patient was seen a second time, a few days later, the inflammation had almost entirely disappeared.

Subsequent History.—The patient shortly afterward removed to a distance, so that I have not had an opportunity

* Read before the Section in Ophthalmology of the College of Physicians of Philadelphia, 1905.

of observing the case further, but a letter was recently received from him from Pomfret, Conn., where he is at school, saying that the same peculiar irritation of the eyes and nose is still excited by the proximity of a horse, though in recent years his hay fever has caused him but little annoyance.

Three years ago, I had an opportunity of obtaining the notes of a third case, that of a physician, but as I made the acquaintance of this patient at sea, on a trip to Europe, I had no opportunity of examining the eyes while they were in a state of irritation. A letter directed to him a short time ago brought the following response:

CASE 3.—I am still suffering from the horse. I felt fine this morning when I started out to visit my patients, but had not gone but a few feet when my nose began to run and my eyes to itch, so much so that I have used up four handkerchiefs and had a strong desire to rub my eyes out. This evening I feel tired, "headachy," and as though I had a cold in my head, and it is hard for me to breathe. Now, this has been my daily experience since the snow came. Previous to that time I had done my work in an automobile and never felt better in my life and never thought of my nose and eyes. Two of the coldest days we had, when the thermometer was a few degrees below zero, I had very little trouble, but as soon as the weather moderated a little my trouble began, and now I am hoping for rain to come and take the snow off so that I can take up the automobile and once more be happy. My eyes become red, just as in an acute conjunctivitis, and my nose runs continually and it is hard to breathe through it. It seems to make no difference as to the time of the year nor where I am; if I go into a stable or near a horse I have to sneeze and blow my nose and rub my eyes, on account of itching. When we were in Lisbon (Portugal) this summer we went out to Mafra and Bathalla, where we had to ride some 16 miles. After going but a short distance, I had the same symptoms and it took me some days to get over the effects. Also in Granada, in driving from the hotel to the railroad station, I had a bad attack. We arrived home in October, and a few times during that month, when the auto was out of order, I had to take a horse for a few hours, but always with the same uncomfortable effects.

After a rather careful search through the ophthalmologic literature which might bear on the subject, I was unable to find any reference to this peculiar form of irritation of the conjunctiva, but a rhinologic friend, Dr. W. J. Freeman, told me that the action of emanations from animals on the respiratory tract had been long recognized and that it is a matter of not infrequent observation that attacks of asthma may be excited by the proximity of a cat or other animal. Mackenzie¹ says:

Some people experience symptoms somewhat analogous to those of hay fever from smelling certain fruits, whilst others are troubled in the same way by the presence of cats, rabbits and guinea-pigs, and Bastian² suffered from an affection closely resembling hay fever in dissecting the *Ascaris megalocephala*, a parasite which infects the horse.

Zamiko³ and Heymann⁴ attribute the inflammation of the mucous membrane in these cases to an irritation of the olfactory nerves, others to direct microbic infection. In a paper read before the Seventh Annual Meeting of the American Laryngological, Rhinological and Otological Society, Dr. H. Holbrook Curtis⁵ said that in a previous communication he had cited a case in which a man had been unable to live in London since twelve years of age, as he could not pass a horse in the street without having a dreadful coryza. Many specialists in London had experimented with this patient and it had been found that he could ride behind a horse that had

been vaselined without the symptoms developing until an hour later. Dr. Curtis added further that some subjects are sensitive to emanations from elephants, cats and mice, and said that he knew several opera singers who were unable to sing after being exposed to such emanations in a room. In a personal communication made to me within the past few days, Dr. S. Wier Mitchell said that in a research on cat fear which he is making, he had come across many cases of conjunctivitis caused by the nearness of cats. In one case, in which he was particularly interested, the ocular symptoms arose in a family where nearly all the members had some means of telling when a cat is present, even though unseen and unheard. He had known of two other persons who had conjunctival symptoms excited by coming near horses; one of these suffered invariably in driving behind a horse, but escaped entirely when mounted on horseback.

The nature of the conjunctival and nasal inflammation which is excited by these animal emanations is, as far as I am aware, unknown, although it would appear that it possesses some association with hay fever. That the process in the two conditions is not identical, however, is indicated by the fact that two of the three cases which have just been reported were not subjects of this disease. It is to be regretted that no bacteriologic study was made in the case which I observed at the time of the attack, though it is probable, from the unsatisfactory results obtained from cultures of the nasal secretion in hay fever, that the findings from the conjunctival secretion in this case would have been negative.

It is of interest, in this connection, to note the observations of Kyle regarding the etiology of hay fever. This investigator is persuaded, after making a series of examinations of the saliva in certain individuals afflicted with hay fever and those not so affected, that in some cases the causes, direct or indirect, of local irritation in the nasal mucous membrane are brought about by chemical change in the constituents of the secretions of the mucous-secreting glands. With a system so predisposed chemically, the contact of a pollen or of an irritating salt like ammonium, is sufficient, by provoking the flow of secretion from the mucous membrane, to precipitate an attack of local inflammation. Dr. Kyle has recently written to me that he has seen a number of cases of nasal and conjunctival irritation excited by animals, in which the symptoms were almost identical with those of hay fever, and in nearly all of which the secretions showed an excess of the ammonia salts. While this theory explains the cause of the susceptibility of certain individuals to affections of the mucous membrane, it does not designate the nature of the agents which excite the irritation, so that it is impossible, therefore, at this time, to do more than conclude that the irritation of the conjunctiva in the class of cases under discussion, is occasioned by a peculiar individual susceptibility to certain substances, chemical, bacteriologic or otherwise, which emanate from the horse.

THE ETIOLOGY OF CHOROIDITIS.*

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The following observations regarding the causal relations of choroiditis with rubeola are the results of observations of numerous cases of this disease which have come under my observation. It has always seemed to the writer that the pathology of choroiditis has not

1. Text-Book on Diseases of Throat and Nose, vol. ii, p. 307.

2. Med. News, Philadelphia, April 17, 1883.

3. Die Krankheiten der Nase, p. 257.

4. Die Nase, vol. iii, p. 67.

5. The Immunizing Cure of Hay Fever.

* Read before the Florida State Medical Association, 1905.