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Epidemic Sore-Throat.

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The Microscopic Inquiry has been too limited in extent to be of much value, having been altogether neglected in the earlier cases, from the writer's mind being convinced as to their real nature, and it being difficult to obtain specimens from the throats of young children without such a struggle as a medical man would hesitate to inflict, even where he finds a mother that will endure it.

Neither has this narrative the advantage of many necroscopic investigations. The only two fatal cases attended by the writer were at a considerable distance; and, as they were seen in consultation, little had been said of the post mortem examination in either case; and his medical friend who was in attendance did not. But, though unable to give any account of post mortem appearances in my own cases, I have been supplied with the following account of one by Mr. Clapp, of Evershot, the medical friend to whom either larynx and trachea, just as described in many reported cases of diphtheria. The report is most interesting and important, as exhibiting another most striking feature of resemblance between those cases and those of reported diphtheria.

The destruction of the membranes of the mouth and pharynx and of the larynx and trachea, the latter being the same family of cases in which there was, severe throat affection, and the regular course of symptoms of the disease. The third, Emily Tompkins, aged 94, had severe sore-throat, with yellowish exudation on the tonsils; but she had no rash. Very soon her voice became stridulous and croupy, with great dyspnoea; and she rapidly sank.

Post Mortem Examination. The mucous membrane covering the tonsils and palate was only slightly inflamed, with a very little exudation on the right side. The epiglottis was very much inflamed and tumeffed, and covered with flakes of exudation, which, when removed, showed little ragged ulcerated spots, very perceptible with the magnifying glass. The mucous membrane of the larynx was also found much inflamed in the swelling, and covered with flakes of exudation, in numbers but not so large as on the epiglottis. The swelling of the mucous membrane extended as far as the thyroid cartilage.

The Treatment of those cases which came early under my direction in the instance a supporting treatment with beef-tea, wine, quinine, or decoction of bark, and the application of solution of nitrate of silver (3½) on a large pledge of raw cotton, so as to swab the whole surface of the fauces. Chlorate of potash was also in almost every case directed to be constantly taken by siops; a drink containing one drachm of the salt was thus consumed daily by adults, and proportionately less by children. The cases were all marked by asthma; and all thus treated from the commencement did well. Some of the cases among the lower orders, which had ended fatally, would probably have had a happier termination, but for the invincible reluctance of parents to consent to submission in their children to the application of remedies and the administration of nourishment. Two cases, in striking contrast with each other, came under my notice, in Groups 5 and 6, fully verifying this observation.

I have been asked on what therapeutic principle I prescribed the application of nitrate of silver to the surface of the tonsils, etc. My reply has been, that I conceive the discussion of those phenomena a morbid condition of the capillary vessels. But, according to Weil (Pathological Histology, Syd. Soc., p. 309), this remedy exerts a further beneficial influence in those affections of mucous membrane accompanied by purulent exudation, by destroying the loosely joined leucocytes, which, according to him, "multiply by division".

A singular circumstance has been observed in this epidemic—that it has been almost wholly confined in its attacks to women and children. The oldest male seen by me was 18; and, in the large number of patients affected by the throat-disease, alone or in connexion with the rash of scarlatina, referred to in Groups 4 and 5, the oldest male was 20; during the epidemic of this autumn, the oldest male was about 14.

In two patients lately seen, there was considerable affection of the larynx, without visible extension of exudation; and this extension has not appeared to me to be the cause of dyspnoea in any of my cases. This absence of exudation was found also in one case related by Mr. Clapp, of Evershot, in which tracheotomy was in vain performed for this affection; and in two children seen during the writing of this paper, and taken ill within an hour of each other, one had a well developed attack of the regular croupy exudative sore-throat, while her little brother, aged 21 months, was taken ill with a slight croupy breathing voice and cough, in whose fauces there was no exudation or other visible alteration. In Dr. Semple's case it was far otherwise.

But we come now to consider for a moment what is the Natural local irritation of the cases here reported. In the district, diphtheria is said to be prevailing; and, as already stated, this has been assigned as the cause of death in the returns made to the registrar of the district. In short, are the cases here reported cases of true diphtheria or of a febrile febrility of great inclusiveness? Can they be cases of the subacute variety of purulent inflammation of the throat? (Copland's Dict., p. 1000, 26 c.)—of diphtheria, that is—and yet have had their origin in the poison of scarlatina, transmitted by cases of that disease affecting the throat only, and producing no signs of a modified endemic or epidemic diphtheria?

Now, it must be admitted, that in the first three groups, no evidence of communication with persons or places affected with scarlatina was found; but then none was looked for. The importance of not the absolute, but the relative frequency of instances of the last, and in some cases at least in children of the same family, the occurrences had been very much more frequent than might be supposed.

I have been told by the superintendents of the poor that neither eruption nor sore-throat had been complained of previously to the appearance of the drosy—that, being renal drosy, he takes as sufficient evidence of the proximities of scarlatina. Here, however, we have narrated instances of renal drosy, with aluminurias, in the second, fifth, and seventh cases, following scarlet sore-throat: a fortiori, therefore, these may be set down as cases of scarlatina. But they formed part and parcel of the cases of the epidemic sore-throat called diphtheria, and all occurred in families where the sore-throat was the only ailment of other than a constitutional character. Cases of this nature occurred in 1848; and Dr. Copland says of them (p. 671): "Cases of most severe fever and sore-throat, with all the indications of malignity, or putro-adyemia, may occur, as I have observed in several cases, in persons who have already had scarlet fever; and they may thus appear in several members of the same family, probably owing to the existence of endemic contaminating causes, to which I have had occasion to impute them."
disorder unlike its parent; viz., the susceptibility to some only of the symptoms of scarlatina in a severe form, with the power to propagate the same symptoms only in others; and the probable effect of "endemic contaminating causes"—the having had scarlatina already—plus the being subjected to its poison and endemic contaminating causes at the same time: and, in
Groups 5 and 6, it would seem that the latter may exist, as many of the cottages in that village are on the banks of a little stream into which their sewage is discharged. In that place, too, a very recent and well-prevented and materially prevented.

But let us further suppose, that the prevailing epidemic constitution, so well observed and described first by Sydenham, may be of a different character from that which has ordinarily prevailed, not be different, suppose that even cases like that of Dr. Semple might depend on this cause—

searlatina poison. "There is no kind of fever which displays a greater diversity in its nature and complications, according to the prevailing epidemic constitution, than scarlet fever." Some epidemics are remarkable for the number of cases, in which the eruption is not observed, the disease being characterized by the other usual symptoms, especially by the sore-throat, by the appearances of the mouth and tongue, occasionally by the desquamation of the cuticle, especially in adults; and by consecutive symptoms, communally, there are eruptive diseases; or, as already quoted, "and they may thus appear (i.e., without eruption) in many members of the same family." (Copland.)

What shall be the diagnostic sign—the pellucida or membranous exudation on the fauces. What is it? and what is its value? In the article "Angina Membranacea", under which title Dr. Symonds treats of this disorder in the "Library of Medicine" by Dr. Tweedie, the exudation is described as consisting of "the pale, white, and, by its name—Throat—Pellicular Inflammation of it", is defined as "an exudation of a buff or grey coloured lymph in spots or patches. These exudations, we are further informed by writers, vary in their consistence, being in some tough and membranous, in others soft and pulvaceous. What I have examined have been rather soft and glutinous, more resembling some forms of mucous pus than membrane. And as it has been objected by some, that in scarlatina the appearances of exudation are limited to the tonsils, I have true diphtherite they may extend all over the faucial mucous. I will describe what I have observed in the case of a patient in Group 7—a young woman attacked since the commencement of this paper, and referred to in a note in the last number. In my first examination of her throat, I observed only a generally diffused redness; but, on a second examination, by depressing her tongue, there was seen behind and below the right tonsil, on the side of the pharynx, a yellowish white patch, a portion of which was detached by forceps, and instantly placed in the microscope; which was a trace of granular or globular matter, which, on the addition of acetic acid, presented its its spirit; and it was attached with cells with one to four nuclei—good pus cells; none of the striated appearance of mucin—none of the appearance of connective tissue. But then these pus-cells may have been formed from the albumen, although there were obstacles in the throat infection was quite recent; for, in works on pathological histology, we are instructed, "Put appears to be developed from a principally albuminous exudation, which, as was first remarked by Boklande, in cases combined with one of a fibrinous nature," etc. (Wells’ Pathol. Histol., p. 291.) So that what was an albuminous pellicle may become rapidly converted into a pus-clot, and the diagnostic sign disappears. And surely an epidemic constitution, capable, as we have seen, of changing so much of scarlatina, is capable of causing some change in the state of the cutaneous of the fauces as the cause induces an exudation of albuminous matter a little more extensive than usual, and not so quickly converted into pus, and so not so readily removed from the surface as in ordinary cases of scarlatina fever. If, however, cases of sore throat not presenting the pellicle of Copland’s pellicular inflammation, the membrane of Dr. Symonds’ angina membranacea, the skin of Brontee’s diphtherie or of the more modern French physicians’ contamination—if these cases are nevertheless cases of diphtheria, we have a delicate piece of diagnosis to make out.

In the fifth group, there was a fatal invasion of a family by sore-throat soon after two domestic had returned to it, after being in contact with scarlatina, and, to all appearance, having transmitted it to a number of persons. Sore-throat spread through that large family, from one to another, till all in the house had it except the father and the two

youngest children. A more striking instance of proved infection seldom comes under the notice of the physician than in the chain of cases narrated in that group. An instance as convincing proving the infectiousness of so-called diphtheria has very recently occurred in my own family. A little girl, my niece, returned with her grandmother from a visit to the seaside perfectly well. In about twenty-four hours, she was attacked with sore-throat, pronounced to be diphtheria, and she speedily succumbed. Her mother, who had not been from home, and was perfectly well, was never attacked, and nearly lost her life; and her only remaining child, who had been summoned from school to see her dying sister, was subsequently seized, but she also happily recovered. Hence it is further established, that so-called diphtheria differs not from sore-throat in its infectiousness.

Then we have before us cases of a highly infectious disease becoming epidemic, as scarlatina often does, and presenting, in many of the cases receiving this comparatively new name, very recent appearances in the family. A little girl, my niece, returned with her grandmother from a visit to the seaside perfectly well. In about twenty-four hours, she was attacked with sore-throat, pronounced to be diphtheria, and she speedily succumbed. Her mother, who had not been from home, and was perfectly well, was never attacked, and nearly lost her life; and her only remaining child, who had been summoned from school to see her dying sister, was subsequently seized, but she also happily recovered. Hence it is further established, that so-called diphtheria differs not from sore-throat in its infectiousness.

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