

PRACTICAL MEDICINE.

ON THE CAUSES OF SPASMODIC ASTHMA.

By DR. C. T. WILLIAMS, Physician to the Brompton Hospital.

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Bronchial Inflammation.—But of all the fruitful causes of asthma, the next on our list—viz, bronchial inflammation, is the most common. According to Dr. Salter, it is the origin in 80 per cent. of the cases. It is generally after whooping-cough, measles, or infantile bronchitis, that the tendency towards asthma, from which the individual was previously probably free, begins to appear; and from that date he is liable to well-defined spasmodic attacks. It would seem that these diseases, implicating as they do both bronchial muscle and nerve, leave their mark behind them. It may be an irritability of the bronchial membrane; it may be some induration of the root of the lung; it may be an enlargement of the bronchial glands giving rise to pressure on the pneumogastric or on some of its branches. But of this fact there is no doubt—that the diseases which implicate the bronchial tubes in childhood lay the foundations of asthma in after-life.

Dr. C. J. B. Williams has drawn attention to the fact that enlarged bronchial glands often accompany enlarged tonsils in children; and he has often noted, even in early cases of asthma, where the attacks are few and far between, that, in the absence of paroxysms, more or less tubular sound, generally accompanying expiration, is audible in one or both interscapular regions.

The division of *general* causes, acting indirectly on the lungs, is a large one; and includes many of a heterogeneous nature, which are only classed together for convenience. Two principal subdivisions appear:—1st, where the cause depends on some part of the nervous system; 2ndly, where it may be assigned to an irritating condition of blood circulating in the lungs.

The nervous causation may be *centric*—as, for instance, where asthma arises from a fit of passion, as sometimes occurs in children. Great fright and emotion, jealousy and disappointment, have all been stated to have induced attacks in asthmatic patients. Thery gives an instance of a French officer in whom an attack was brought on by the grief he experienced in seeing Paris occupied by foreign troops; and when we remember the great susceptibility of Frenchmen to the subject of “la patrie” we need not be surprised at this fact, but can class it with the other French disturbances of the nervous system following the siege of Paris. The centric form of causation will include those cases where, as Dr. Anstie has well shown, there is an alternation between asthma, angina, gastralgia, and even hemicrania, in the same individual. Here there appears to be some centric irritation in the medulla involving

the origins of the fifth and eighth pairs of nerves, and affecting one branch after another of those nerves.

The other and more common mode of indirect causation is the *excito-motor*; such as, for example, when the attacks follow from costive bowels, or catamenial periods, or indigestion of various kinds. More than one case is on record where an attack has been caused by constipation of some days' standing, and has been warded off by attending to the bowels regularly.

Indigestion is a very frequent cause of the attacks. Some asthmatics become more or less wheezy after the ingestion of any food; others, again, only after certain kinds, such as cheese, salads, pastry, new bread, and others of the unwholesome class. With many, however, it is not the *food*, but the *hour of taking it*, that is of consequence. They can eat a mutton-chop at breakfast, whereas at dinner or supper such strong meat would certainly be provocative of an attack. Attacks, as a rule, are more apt to come on after the later meals than after the earlier; and this the asthmatic soon finds out, and has to renounce late dinners and their accompanying sociability, and to devote himself to an extremely regular and even ascetic life. Some asthmatics only make one good meal a day, and that is at breakfast; and during the paroxysms patients have been known to go forty-eight hours without any food. Another point of connection between indigestion and asthma is the flatulence which either ushers in or follows the fit; and in one interesting recorded case, when the patient became free from fits she suffered from troublesome flatulent attacks of a periodic kind and apparently replacing the asthma. The usual explanation of asthma following on indigestion is, that irritation of the medulla takes place through the gastric branches of the pneumogastric, giving rise to a motor effect through the pulmonary branches; and this is probably correct where the simple ingestion of certain articles induces the fit. But when there is a large amount of flatulence, might not the distension of the stomach and intestines, involving mechanical pressure upwards and constriction of the thoracic cavity, alone account for the occurrence of the bronchial spasm? The fact of the peptic attacks, as they are called, occurring more frequently at night, after suppers, than at any other time, is, I am aware, decidedly in favour of their being the result of a reflex act; for we know that reflex irritability is always exalted by sleep, as is seen in the epilepsy and teething convulsions of childhood, which occur far more frequently at night than in the day.

The general causes acting through the blood are—(1) Gout, which towards old age often takes the form of asthmatic attacks, which can be considerably relieved by treating the gout and not the asthma. (2) Syphilis. This is not often an exciting cause of the asthmatic spasm, and M.

Séé has never known an instance. I happen lately to have seen a well-marked one, where the asthmatic symptoms were not severe, but showed a remarkable degree of stubbornness to the action of the ordinary remedies. At length psoriasis palmaris appeared, followed by scaly spots of a copper colour on the legs and scrotum, and the characteristic sore-throat. I treated the patient with iodide of potassium and calomel baths, and was pleased to find that both eruption and asthma took their departure together, indicating clearly that the principal cause was the syphilitic taint, possibly involving the bronchial glands. (3) Skin disease. The connection of skin disease and asthma was first noticed by Boillaud, and subsequently confirmed by others. Trousseau gives a case where the attacks coincided with the appearance of urticaria, and increased in violence when the eruption disappeared. Gueneau de Mussy furnishes an instance where the subsidence of chronic eczema of the head and ears was followed by fits of spasmodic breathing. Several cases have fallen under my notice where the appearance of eczema or psoriasis has been the signal for a cessation of the asthmatic attacks, and, *vice versa*, their disappearance has been followed by a renewal of the asthma. These instances, however, point rather to both diseases being due to some common cause, which is probably the state of the blood, than to the skin disease being the origin of the asthma.

We have now reached the last though by no means the least important in our list of causes—namely, Heredity. Fathers and mothers very frequently transmit to their children the asthmatic tendency. Out of Dr. Salter's 217 cases, 84 (or 39 per cent.) were clearly hereditary. When we consider that asthma is not, like phthisis, so common and so easily acquired a disease that it is difficult to say if the children would not have been consumptive whether their parents were so or not, if the parents had not been phthisical; but we find that, even in a small number of cases of asthma, the hereditary element comes out very strongly. We see the asthmatic chest transmitted from father to son, from mother to daughter; and we notice in catarrhal attacks how the spasmodic symptoms predominate over the inflammatory. In many instances the transmitted delicacy does not show itself till late in life. It is not uncommon, as Dr. C. J. B. Williams has well remarked, to find that the children of asthmatics are not asthmatic, but phthisical. This, when we take into account the miserable state to which the frame of an habitual asthmatic sufferer is reduced by the number of attacks, the insufficiently oxygenated blood, and the starvation necessitated, is not by any means wonderful.

Before closing the subject, some notice must be taken of the influence of sex and age. Asthma is far more common among males than females. This may be explained by the fact that bronchial