

with a somewhat natural frequency, having made it three times on that day, and ever since then, this function has been fully re-established.

I will not detain the Association with further details of this case or its treatment. Suffice it to say, that with ups and downs, the ups happily predominating, the patient has gone on improving. She now suffers somewhat unless very careful—but is able to walk out and to go from home a little, is under a careful regulation of her diet—only milk and rolled biscuit being tolerated as yet, and a gentle tonic of bitter with chalybeate. She is steadily gaining in strength, and as the progress so far is marked and continuous, perfect restoration to health is at least hoped for.

MAL-ASSIMILATION IN ITS RELATION TO IDIOPATHIC ARTERITIS.

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Traumatic arteritis may arise from wounds or injuries to arteries. Idiopathic arteritis, including diffuse and chronic, in its several stages of atheroma and calcareous degeneration, is a primary affection arising from some constitutional cause generated within the system. Of both these varieties dry gangrene is a symptom. In the acute it is the result of the formation of coagula in the arterial canal, and in the chronic it is a consequent of the structural degeneration of the arterial coats. The determination of the primary causes of arteritis has in some degree been prevented by the difficulties in observing the relation of cause and effect in its production.

It is not my object in this paper to offer a full solution of these difficulties, or advance any new theories, but briefly to direct your attention to some of the processes of mal-nutrition operating as exciting causes. Arteritis, like other caco-plastic diseases, depends either upon a disordered condition, a disordered distribution, or upon the accumulation of morbid products in the blood, and an accurate knowledge of the extent to which these causes are operating, will be our safest guide in treatment and prognosis. In chronic arteritis the fibrinous deposits, atheroma, ulceration, and ossification, are the result of mal-assimilation, as it most frequently occurs after the middle period of

life in shattered constitutions, in those affected with scrofulous diathesis, in all of which the vitalizing powers are low. The older authors attributed it to venereal and mercurial poisoning; many recent writers have corroborated this view. Causes which operate in lessening the vitalizing powers of the system, affect the assimilative processes. In this way mal-nutrition is a primary cause of the deposition of morbid products. The various forms of degeneration, namely, the fibrous, the granular, the fatty and the calcareous, all present features of deterioration or degeneration in the scale of organizing power. Degeneration is exhibited in interstitial deposit. Fibrous degeneration principally affects the muscular structures, causing density by interstitial deposit. Granular deposit takes place in certain organs, as for instance in the kidneys, where it is observed as greyish-red, cheesy-like granular matter. Morbid ossification is the deposition of solid phosphate of lime in cartilaginous, fibrous, and fibro-cartilaginous tissue, and is also an interstitial deposit. All these forms of degeneration, which depend on causes that lower the vitalizing forces of the body, thus exhibit themselves as morbid products in the interstices of the various tissues and organs. Inflammation accelerates degeneration; mal-assimilation induces it. Inflammation is therefore the exciting cause, mal-assimilation the primary cause of all degeneration of tissue.

In diabetes we have an interesting example of the failure of the process of nutrition producing an accumulation of morbid products. In this disease, the process of nutrition evidently ceases with the conversion of the amylaceous constituents of the food into sugar, which instead of undergoing still further transformation into lactic acid, and thus supplying the C. & H. necessary for the formation of the elementary constituents of tissue, is retained in the blood in the form of diabetic or grape sugar, and in this form is excreted by the kidneys. This and similar morbid products of imperfect nutrition or assimilation, retained in the circulation, act as irritants. Thus lactic acid, generated in excess and retained in the blood, acts as an exciting cause of endocarditis, acute rheumatism and arteritis. As an example of mal-assimilation, the earthy salts, which through decay of the vital forces, have failed to be assimilated, produce ossification of arteries. Although common in old persons, it