

in rheumatic gout, and uric acid alone (or as a urate) in gout, being the specific poisons. A proof of this may be offered in the fact that the lactates and urates have been invariably discovered, when sought after, in the urine of persons labouring under these diseases. Whether the *materies morbi* spoken of be of hereditary origin, or generated *de novo* in the system, seem proper questions for free discussion at any time, as the former theory only is universally admitted. My belief is, that the *materies morbi* is, in some cases, undoubtedly hereditary, and that it may be produced, under certain circumstances and under certain conditions of body, *de novo* as well. Facts and arguments are clearly against the idea of its introduction from without; and, as to the hereditary character of these diseases sometimes, no one now will care to question. Here I may remark, incidentally, that if Dr. Pritchard's views be correct—viz., that all original connate bodily peculiarities tend to become hereditary, and consequently capable of transmission, while changes in the organic structure of the individual, from external causes during life, end with him, and have no influence on his progeny—this may be a curious and rather interesting subject for investigation to those contemplating matrimony, as a slight mis-step in this respect might seriously and most painfully involve their subsequent peace of mind. Proofs of the existence of lactic acid in rheumatism, and lactic and uric acid in rheumatic gout, as their direct causes respectively, have been well presented by Drs. Fuller, Prout, and Todd, as well as by others of equal celebrity; but these facts known, the next most important questions appear to me to be, How are these substances produced, and what are the conditions of body most favourable to their production, and, so to speak, non-elimination? I shall speak more particularly now of rheumatism alone.

Dr. Prout believes that lactic acid is developed too freely in the system, in consequence of imperfect assimilation, and from various accidental causes is retained, and the disease results. Dr. Todd believes that though the lactic acid may not be formed in excessive quantities, its elimination is checked by defective cutaneous secretions; and hence the disease. Dr. Headland affirms that the starch in food is converted into

lactic acid, usually, and that before the latter can be applied to the production of animal heat, it must *first* be changed into carbonic acid and water by oxidation, and in some cases the latter change fails to be effected from the want of "vital energy or nervous force;" hence the acid accumulates, and the disease results as a consequence.

However presumptuous it may appear, I think somewhat differently; that lactic acid, in excessive quantities, in the system, is the product of *acid fermentation*, by the action of nitrogenized albuminous part of food ingested, in process of putrefactive change, on the saccharine elements of food, and the conversion of the latter into lactic acid. The whole body presents, at the time of invasion, a debilitated condition; the digestion is weak, the routine of assimilation is imperfectly performed, and by this general failure in the "vital forces," oxygen fails to be forthcoming, and the change from lactic acid to carbonic acid and water is arrested. The secretions, you may have observed, are almost entirely arrested in the earlier periods of the disease; the *materies morbi*, therefore, accumulates, and rheumatism results in a form more or less severe.

So much as to its cause, its production, and non-elimination. Out of the body, these chemical changes have been demonstrated repeatedly; and who can tell but that in the animal laboratory the same chemical changes are probable! The chronic form of this disease will not, I think, offer obstacles, if viewed as a milder form of the same complaint, for I have no idea that the chronic form is ever the result of the acute, though Dr. Cullen has fluently written, "*pro sequela rheumatismi acuti, rheumatismum chronicum dictum semper habes*"—an observation, I am sure, not warranted by closer subsequent investigation. In rheumatism or rheumatic gout, whether it be the acute or so-called chronic variety, the cause is the same (as before presented), and requires precisely the same plan of treatment.

(To be continued.)

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DR. HARLEY, Professor of Medical Jurisprudence in University College, advises great caution to be used in the administration of strychnine to women during the period of lactation.