

treated, principles of treatment that are diametrically opposed the one to the other, it is proof sufficient to my mind that this subject is as yet decidedly unsettled and indefinite, and that the lesser surgical mind may have an experience of its own without presumption.

Let us review most briefly then the different methods of treatment at present adopted, and the arguments advanced in favor of each. I presume we may classify the different methods as, I. The Expectant; II. The Operative; subdividing the latter into (a) Erosion, (b) Excision, (c) Amputation.

The expectant plan of treatment consists in maintaining the joint in a state of absolute rest, and building up the patient constitutionally with local treatment, as indicated more particularly in the subduing of local inflammation. By improving the patient's vitality we render the tissues more capable of resisting the invading force. By reducing local inflammation we render the soil less fit for the invading germ. Should the joint become distended with fluid, or caseous degeneration have occurred, it is pretty freely incised and drained.

The exponents of this plan defend their treatment on the following grounds:

I. The development of tubercle depends largely on "the fitness of the soil." But the period during which the soil is fit—and there is therefore danger of tuberculous development in joints—is quite limited, roughly speaking between the 3rd and 10th year. Therefore, if by well-known hygienic and palliative measures we can arrest development of tubercle during this time, can assist nature to encapsulate and isolate it during the short period, the joint is comparatively safe.

II. Heredity is certainly an important factor in rendering a joint liable to a tuberculous attack, but statistics prove that children of scrofulous parentage, and who may have strong evidence of tuberculous invasion, yet recover entirely with appropriate care, and without surgical interference.

III. The progress of an ordinary inflammatory process in the neighborhood may determine the course of a tuberculosis. For example, how often do we find the history of a tuberculous invasion in a joint, dating from some trauma in the neighborhood? As an apt illustration of this Mr. Marsh mentions the advance of a tuberculous epididymitis during a

gonorrhœal inflammation, and its recession when the inflammation subsided.

Therefore, he reasoned, should tuberculosis of joints be due to trauma, reduce the resulting inflammation and thus check the tuberculous process.

IV. Unhealthy surroundings often determine the invasion in those predisposed to the disease; yet it is equally true that when this is remedied and the patient placed under the most favorable hygienic conditions, and he is constitutionally built up, he will often recover perfectly.

V. Finally the gentlemen of the expectant school should claim that surgical interference is quite liable to excite generalization of the disease, and that it is impossible to be certain that every particle of tuberculous matter is removed unless the section go beyond the epiphysis. Now as the excisionist proposes to operate upon young children this would obviously destroy the utility of the limb. This is not by any means an ingenuous contention, and certainly adds nothing to the strength of the position occupied by the non-operators.

The excisionists believe briefly:

1. That tuberculosis is *practically* a malignant disease, or at all events, that it possesses the most dangerous elements of malignancy, viz.: inevitable systemic infection when not entirely removed.

2. That entire removal of the diseased portion precludes the possibility of generalization.

3. That excision shortens the period of suffering.

4. Finally that the operation should be done as soon as (so called) suppuration is present, or as Mr. Barker thinks, as soon as the presence of caseation were even suspected. Because danger, generalization, etc.

If the first of the contentions be true, viz.: that tubercle is practically malignant in its nature, then I fancy the discussions were closed most decidedly in favor of early and radical operation. But is it true? Ashurst (in his *Encyclopaedia of Surgery*, Vol. I., pp. 831, *et seq.*) says in effect that the most reliable, constant and perhaps only definite proof of malignancy is the invasion of neighboring glands. This does not of necessity hold good in tuberculosis of joints, and although metastatic recurrence is a frequent incident in the natural history of both diseases, it does not follow that they are identical.