

such cases rapidly increased just as the number of cases of small-pox invariably increase during a cold spell in winter. (During the present winter the great scarcity of water has continued to favor the emanation of foul gas from the sewers.)

These diseases are of course epidemic, but not in their malignant character; necessarily this type or characteristic is in constant relation to poverty of some kind, either of outward circumstances, or of constitutional condition. The malignant types of disease find a congenial soil in such subjects and under such circumstances, and become increased in their virulence and fatality. This will be borne out by a reference to epidemics of typhus, cholera, yellow fever, &c., in years gone by.

The great similarity existing between the septæmia in their evidence of blood contamination, general characteristics, and results, leads to the inquiry whether we can in any way identify similarity of cause with similarity of effect. Certainly not, so far as the true nature of the disease is concerned, but decidedly so in reference to the general type and characteristics. It is quite true that one exanthem will not produce another, but often a combination makes its appearance, producing anomalous affections. It is also quite true that a typhus cannot produce a cerebro-spinal fever, and yet their manifestations too frequently bear a striking similarity. Neither will cerebro-spinal fever be considered contagious, or capable of inducing a malignant scarlatina, but we have violent manifestations of a similar pathological change or anatomical lesion occasionally presenting themselves.

I do not forget that our knowledge of the very existence of several of these "morbid poisons" is inferential only, our ideas of their nature purely conjectural and our reasonings upon their mode of action upon the blood and general system entirely speculative.

The concurrent existence of spasmodic cough with scarlatinal cases, throws the mind back upon the observations of Sir Henry Holland, respecting the frequent concurrence of whooping cough with influenza, scarlatina and other epidemic affections involving the mucous membranes covering the fauces and air passages among the *morbus-loci*.

Again, in some scarlatinal cases we have cerebral disturbance, in others spinal symptoms most prominent, while all experience proves that in toxæmic fevers the great nerve centres—prominently the brain—are most involved, as in typhus, typhoid, spotted or cerebro-spinal fever, malignant exanthems, &c.

Now, as similarity of effect, even in isolated cases legitimately pre-supposes similarity of causation, may it not reasonably be inquired concerning the *materies morbi* present in the exanthems, typhus, typhoid, spotted or cerebro-spinal fever, diphtheria and the like, in what respects are they similar? How do they differ? And in what way may they be considered as related, if at all; are they all zymotics?

The one great point of similarity, to my mind, seems to be their undoubted septic nature, as occasionally illustrated by their toxæmic influence upon the vital fluid, lessening the number of red corpuscles, and so affecting the fibrine of the blood as to reduce its plasticity, firmness and coagulability, and to favor its purulent decomposition.

Secondly.—Their similarity of action upon the great nerve centres and their coverings, as evidenced in the cerebral symptoms of cerebritis and meningitis and the spinal symptoms of myelitis and spinal meningitis so often manifested in such diseases.

Left as we are, largely to rely upon inferential deduction for our conclusions, it is no novelty to conclude that the whole family of septæmic affections, while possessed of distinct individuality, are nevertheless closely allied in affinity of nature and pathological action. This we find ourselves borne out in by actual post mortem revelation as to similarity of lesion in various septæmic diseases.

Thus the head symptoms in the exanthems and other affections named, are found to be due to congestions primarily attributable to a vitiated state of the vital current, the membranes and substance of the spinal cord in scarlatina, and cerebro-spinal meningitis, the throat symptoms in scarlatina, diphtheria and other cases of blood poisoning. From these and various other considerations of their relation to, and action, upon the vital forces I infer a similarity in the general plan of treatment.

In this respect all require sustaining treatment. The sulphites or hyposulphites at once commend themselves to the mind, and where a *specific disease germ* is undoubtedly present, as in the exanthems a remedy antagonistic to sporadic development, or catalytic multiplication of disease *germs* or *virus* is suggested and fully met in carbolic acid. Hence we find the hyposulphites and carbolic acid not only recommended as, *par excellence*, the remedy for that most loathsome and contagious of all diseases, small-pox; but, on the suggestion of Dr. Bland, these remedies are being used with unprecedented success in the treatment of scarlatina and other anomalous and allied affections. Ziemssen has recommended