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The Relationship Between Herpes Zoster, Syphilis and Chickenpox

The significance of herpes zoster is still a matter for speculation. While technically a disease of the skin, the condition is one that has always been of interest to the neurologist and to the general practitioner. Originally regarded as occurring along the distribution of peripheral nerves, it has been recognized, since the epoch-marking discoveries of Henry Head, as having a segmental distribution. Certain aspects of the disease, particularly its relationship to syphilis, have recently been discussed by Brown and Dujardin.¹ These observers noted that herpes zoster was distinctly more prevalent among a group of soldiers under observation for syphilis than it was among an unselected group of patients from the civilian population of the district. Among the syphilitics, zoster occurred in a proportion of four cases per thousand, while among the general population the disease occurred only in the proportion of one case per thousand. It was noted, too, that in the syphilitics the herpes had a predilection for the lumbar and sacral ganglions corresponding to the well known observation that spinal syphilis is more likely to attack the lower segments. In connection with these cases of zoster, the authors studied the changes in the spinal fluid and found that there was frequently a lymphocytosis occasionally accompanied by an increase in globulin, and in the case of the syphilitics sometimes accompanied by a positive Wassermann reaction. The authors assume that zoster is an infectious process, and that syphilis acts simply by producing local conditions which predispose the ganglions of the spinal cord to infection with the agent producing the disease.

This paper raises several interesting points. It is pertinent to inquire whether zoster is really a disease per se or whether it is a syndrome which may result from any condition causing inflammation of the spinal ganglions. It is well known that syphilis is frequently latent in the spinal meninges without clinical manifestations of spinal disease. Is it not possible,

then, that the unusual frequency of zoster among syphilitics is due simply to the frequency of inflammatory conditions of the spinal meninges in this disease?

There is, however, some evidence which suggests that zoster is a specific infection due to the virus that causes chickenpox. Scattered through the literature for a number of years are observations, such as those compiled by LeFeuvre and more recently those by Low, which indicate a curious relationship between zoster and chickenpox. Instances are recorded of one member of a family developing herpes zoster, to be followed later by the appearance of chickenpox in other members of the family. Instances of the opposite order, namely, the development of herpes zoster in a family after chickenpox, have also been recorded, and there are a few instances of herpes zoster and chickenpox in the same person. There are so many of these cases, now on record that it would seem that there was here more than mere coincidence. Many observers are convinced, therefore, that herpes zoster is simply an atypical manifestation of the chickenpox virus. Interesting though these observations are, they do not seem to warrant the conclusion that herpes zoster is invariably an evidence of infection with the chickenpox virus. Chickenpox is a disease that is usually so insignificant and so lacking in symptoms suggesting involvement of the central nervous system that it is doubtful whether anybody has investigated the spinal fluid in a large number of cases. It is quite possible that investigation may prove that a low grade spinal meningitis is a common accompaniment of chickenpox just as it is of the large pox. A careful study of the cerebrospinal fluid in this disease, as well as a more thoroughgoing investigation of the spinal fluid in all cases of herpes zoster, might reveal illuminating information on this point. Incidentally, it is difficult to see how Brown and Dujardin could be sure that the spinal lymphocytosis in their cases was not due to the underlying syphilis rather than the zoster.

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1. Brown and Dujardin: Brain, 42, Part 1, 1919.

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