

VENEREAL DISEASES AS CAUSES OF DEATH.

by

Kenneth G. Smith.

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The prevalence of venereal infections in this country, as in others, has long been recognised, but that a large percentage of deaths each year may be laid directly, and a far greater percentage, indirectly, to the various manifestations and complications of these diseases, is not so generally appreciated.

Mortality statistics are of only slight value in determining the actual number of deaths due to venereal disease, as in the complications such as cerebral hemorrhage, meningitis, insanity and others, it is seldom specified as to whether the affection is of spirochital or gonococcal origin, or whether due to some other cause -in fact, this may not even be determined by the Physician unless an autopsy is performed. Another reason for the invalidity of the statistics is, that in many cases, the death of the individual is directly due to a terminal infection which gained its hold only after one of the venereal diseases opened the way, by the lowering of the individuals resistance.

Those infections considered as venereal diseases include Syphilis, Gonorrhoea, and Chancroid, altho the latter, in the strict sense, is the only true venereal disease. Chancroids are local ulcers, and cause no sequellae or general systemic effects, and are much less frequent and serious than the other two.

In civil life, accurate figures as to the prevalence/are not ^{of venereal inf.} obtainable. Cunningham(1), however, has estimated that 60 percent of men acquire venereal infection at some time, while Morrow(2), believes that 75 percent of all males acquire Gonorrhoea, and that 5-10 percent acquire Syphilis

As to the direct fatality, it is variously estimated from 8 percent by Rosenau(3) to 10percent, as given by Moore(4). From an analysis of the Registrar General's statistics, for 1915, he estimates the actual deaths

from Syphilis in England and Wales, at about 60,000., bringing it first, above even Tuberculosis in the list of killing diseases! These figures do not include the stillbirths, a large percentage of which are also due to Syphilis.

Inherited Syphilis is responsible for an enormous waste of life. Dr. George F. Still, of London, found in the family history of 87 children, who were under treatment for congenital Syphilis, that there were 39 still births, 36 miscarriages, and 25 deaths all attributable to congenital Syphilis. In other words, out of 187 born or unborn, 113 were sacrificed thru the Syphilis of their parents!(5)

Belding and Hunter(6) give a more favorable report in this country, In the Massachusetts Homeopathic Hospital, in Boston, they found that Syphilis was responsible for 27 percent of all foetal deaths, in women with positive Wassermans, and for 64 percent in clinical Syphilitics. This, however, does not indicate the number lost by previous miscarriages, or those which later died, due to their acquired defects.

In the acquired forms, Syphilis is by far the most virulent of the venereal diseases, altho Gonorrhoea is the most prevalent. In the tertiary stage, the characteristic lesion, the gumma, may localize in almost any portion of the body and from its progressive enlargement, erode and destroy some vital part, causing either a sudden death, or a long and invariably fatal illness. The actual number of deaths, as has been said, is hard to estimate, but is probably high.

To enumerate all the manifestations of the disease would necessitate a long list, including every system of the body, so I shall take the two which cause by far the greatest number of sudden deaths- the cardiovascular and the nervous systems.

Organic diseases of the nervous system rarely occur in the acute stage of Syphilis, altho occasionally, even before the primary sore is healed, symptoms of an acute meningitis are manifest. From five to

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fifteen years after the infection occurs, however, diseases of the nervous system are common. It has been stated that from five to ten percent of syphilitics develop nervous lesions, but no reliable statistics on the subject are available. The two most frequent manifestations are tabes dorsalis and general paresis. Frequently these two diseases are combined or succeed each other in the same individual. H.M. Pollack(8) in writing of his series of 10,060 patients under treatment for paresis, states that the average length of life in the hospital is 1.5 years for females, and 1.3 years for males and that 34.6 percent of males and 28.5 percent females die each year. This shows the rapid advance of the disease, once localized within the brain.

Tabes dorsalis, which occurs in about 5 percent of all syphilitics, according to Stevens(7) and other authors, is a very much slower progressing disease. It may, in fact, extend over a period of two or three decades, altho reaches the paralytic stage in two or three years. It may be considerably improved by treatment, but authentic records of complete cures are quite lacking. Williamson(9), however, regards the prognosis of spinal as better than that of cerebrospinal Syphilis, while Oppenheim(10) holds the opposite view. Of course, and advanced age, existing disease in other organs and intoxications such as alcoholic, renders the prognosis worse in all forms.

The prognosis in spinal and cerebral Syphilis also varies with the types of lesions. The pathological changes which occur in the nervous system may be classed, according to Ball(10) into four groups; first, the syphilitic new growth; secondly, the chronic hyperplastic inflammation, thirdly, the primary parenchymatous degeneration; and lastly, the disease of the blood vessels. The consequences produced from this last group should not be considered as Syphilitic in origin, as they are merely the results occurring whenever the nutrition is shut off. None of these, of course, are found unassociated, as a rule, with any other type, but two

or more are generally in combination.

The gummata, as has been said, are the most common, and may vary in size from that of a hemp seed to that of an orange, may be single, or multiple, localized or diffuse. They may cause symptoms by pressure upon the brain substance or cord, but more often there is a rather uniform infiltration of the nerve substance, with a breaking down of the parenchyma rather than a definite gummatus formation. In the cord, in tabes, there is most often a generalized thickening of the pia mater, especially over the dorsal surface and a general, diffuse degeneration of the posterior columns. There are seldom circumscribed gummata formed, but more often a diffuse endarteritis associated with extensive degeneration of the dorsal nerve roots.

The effects of this disease upon the blood vessels plays an important part in the prognosis of Syphilis. The vessels may be mechanically compressed thru meningeal tumors or gummatus masses, but the arteries themselves frequently are the seat of pathological changes. An inflammatory change occurs around the vasa vasora, which leads to a round cell infiltration and thickening of the intima with considerable decrease in size of the lumen. Following this is a breaking down of tissue with scar formation, which is quite characteristic in the larger vessels as a longitudinal wrinkling of the intima. These changes produce a weakened wall, which may lead to hemorrhage in various organs, and cause a sudden death, or by dilatation, produce an aneurism which may lead to fatal hemorrhage by its rupture into some viscus, or to the outside. According to the Mortality Statistics for 1921(11), there were 1,564 deaths in the registration area from Aneurism, all of which were undoubtedly due to Syphilis, and 71,046 deaths from cerebral hemorrhage, of which, it has been estimated that Syphilis is the direct cause in from 40 to 60 percent.

The heart, also, may be the seat of gummatus formation which may so weaken the walls that acute dilatation and decompensation may follow,

or may cause and endarteritis, with coronary occlusion and infarct formation,- also resulting in sudden death.

Of the indirect effects of venereal infection, especially of Syphilis, which lead to death, it is very difficult to obtain accurate data. The actuaries of a German life insurance company, estimate that the mortality of luetics is 130 to 100 for normal individuals, and in the 36 to 50 year period, the average mortality in Syphilitica is doubled. Fisk(12) says that Syphilis is an important cause of many circulatory and other organic troubles, and is an important factor, and in some industrial classes, a very serious menace. He has pointed out that while the death rate from the usual infectious diseases has steadily declined, during the last three decades, the death rate from apoplexy, kidney diseases, and heart and circulatory disturbances have steadily increased. The death rate during the early years of life is being decreased, but but it is increasing during the period beyond forty years of age. From these statistics, Vedder(13) asks if the influence that of the Syphilitic infection that pervades society is not observable here? He goes on to state that probably 20 to 30 percent of the ordinary class of consumptives have Syphilis also to contend with. He says that the importance of Syphilis as a predisposing cause of tuberculosis must be given serious consideration, and sanatoria should make provision for the diagnosis and treatment of Syphilis, if they wish to give their tuberculous patients a reasonable chance for recovery.

It is not necessary to go into details of the percent of Syphilides in insane asylums and feeble minded schools, as it is well known that only a relatively small percentage of children born of Syphilitic/ parents reach maturity and are mentally normal. Vedder and Hough(14) on an investigation in the Government Hospital for the insane, found approximately 30 percent syphilitic, and concluded that at least 10 percent were the direct result of venereal infection, while in a much higher

percentage, their presence could indirectly be laid to Syphilis.

Gonorrhoea, while much more prevalent than Syphilis, runs a more benign course. In the registration area, in 1921, only 644 deaths were laid directly to gonococcal infection, but as a cause of ill health and disability, the Gonococcus occupies a position of the very first rank among its fellows. The two most frequent fatal manifestations are from gonorrhoeal meningitis and endocarditis, with general features of a pyemia.

In Gonorrhoea, as in Syphilis, however, the prominent feature is the shortening of the length of life by undermining the so called vital resistance, and allowing an easy entrance for terminal infections by such organisms as the Pneumococcus; the Streptococcus and the Tubercle Bacillus, which readily flourish on the already diseased soil.

From the standpoint of Public Health, it will be seen that Syphilis and Gonorrhoea are a far greater menace to Society, even than Tuberculosis. The mortality from these two diseases are approximately 10 percent of the total yearly deaths, and the morbidity, in causing permanent disability insanity and sterility is such as to place it far above all other known diseases. Furthermore, it has been shown, by life insurance statistics and others, that the expected span of life is reduced almost one half, as a result of the complications from venereal disease, not considering the large number of miscarriages and extremely high infant mortality rate which can be directly ascribed to them.

Therefore, all possible measures should be used to control these infections and prevent their spread, which due to the devastating influences brought about by their various manifestations thruout the entire world, have been rightly called "-The Great Plague of Modern Times"!

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