

fection; with, however, an increased knowledge of the infecting agent and especially as a result of experimental investigation, it was demonstrated that transmission from male parent to offspring, *i.e.*, by infection of the sperm cell does not occur. From female parent to offspring infection may be transmitted through the placental circulation especially at the time of birth but not by direct infection of the ovum. This form of transmission can hardly be called congenital but rather an intrauterine infection.

Traumatic infection is an occasional source of the disease but such introductions of the bacilli are rarely of a serious character.

Infection through the alimentary tract undoubtedly sometimes occurs and has been demonstrated by experimental evidence, but as the great source of primary intestinal tuberculosis is probably infected milk, the whole question is still in a state of uncertainty on account of the contention of Koch that the bovine bacillus has slight virulence for man. This question which has aroused considerable discussion during the past summer, owing to the stand taken by Koch at the Congress of Tuberculosis, depends upon the difference in virulence for different animals of the human and bovine organisms. This was first clearly shown by the work of Theobald Smith, of Boston, and his work has been confirmed by others including Koch, but the conclusions which the latter drew are hardly justified by the facts at our disposal.

The bovine variety of the bacillus is more virulent for cattle and the ordinary experiment animals of the laboratory than the human form. But this is hardly good evidence that the bovine bacillus is consequently not virulent for man. The contrary opinion might be held from the evidence with perhaps better right, but before a definite opinion can be formed we must have more facts; especially we require more accurate clinical observations and fuller studies of the virulence of cultures from cases of alimentary and other forms of tuberculosis in young children and perhaps also evidence as to the virulence of the two varieties for such animals as the anthropoid apes.

By far the most important result of modern investigation, however, is the clear demonstration of the commonest method of human infection, *viz.*, by the respiratory tract. To Cornet, in his studies upon tuberculosis among the nursing classes of Germany, belongs, perhaps, the greatest credit for placing the whole question upon a thoroughly scientific foundation. Yet Cornet, as will be shown, did not properly appreciate the factors in respiratory infection in giving too much weight to the danger from dried sputum. His investigations, and those which followed had, however, this result, that the public were made fully aware of the danger