appearance of the rash and the distinctly atypical rash, it was varicella. The rash began to disappear on February 18th, and the temperature became normal. On account of the pain in the back and head at the onset of this case it was regarded as one of influenza until the rash appeared.

I did not see this case until after my attention had been called to the first contact (M. N.), as follows:

Second case: M. N., aged 29, Greg Street, Stockport, baker. Date of onset, February 24th; pain in the back, severe headache, generally feeling very ill; on February 28th a rash developed, and I was called by the doctor to see the case on March 1st. The rash consisted of thickly set papules covering the face and head, also thickly distributed on the arms, forearms and legs, less thickly on the trunk. The papules were hard and shotty to the feel, and several were present on the palms of the hands, also three or four on the soles of the feet. pressure of these papules; the temperature was 101.4 deg. The rash was perfectly uniform so far as the stage of eruption is concerned, and was not in any way polymorphic. The case was diagnosed as smallpox, and removed at once to the smallpox hospital. The case progressed as a typical rather severe case of smallpox, the pustules becoming confluent to a limited extent on the face and neck. On inquiring into the probable origin of this case it was discovered that the girl (E. R.) had been in the habit of helping occasionally at the house of M. N., in Greg street, and that M. N. had visited her at David street on February 16th, and that she was then supposed to be suffering from influenza, but he had heard since that she had developed a rash. Inquiries were made, and the information concerning the first case (E. R.) was obtained.

Third case: M. R., aged 47, David street; mother of E. R.; malaise, February 27th; headache and pain in the back, March 1st; rash, March 3rd. The rash was that of modified smallpox, occurring on face, arms and legs, and consisting of a few discrete papules, hard and shotty, on the forehead. Temperature 100 deg.; patient complaining of feeling very ill. Removed to hospital on March 3rd. The rash passed through typical stages.

Inquiry into the possible origin of the cause of infection in the first case (E.R.) elicited the following facts:

This person had worked in a cotton mill until February 12th, when she was taken ill. The only people with whom she had come in contact for two or three months, besides the employees at the mill, were the family of M. N., where she occasionally helped, and M. N., who visited her when she was ill.

Her occupation was that of a drawing tenter, and in the course of her work she occasionally had to piece broken strands together. This process consists of hauling in a certain amount of slack in order to overlap the broken ends, and then rolling them together with the forefinger and thumb, or between the palms of the hands.

The cotton in use at the mill was grown at Zifteh (a town in the delta of the Nile) in 1908, and the consignment which probably contained the suspected source of infection was shipped from Alexandria about January 13th, and was received at the mill on January 30th, 1909. I further ascertained that smallpox was very prevalent in the Delta towards the end of 1908 and the beginning of 1909, several deaths from this disease occurring weekly both at Cairo and at Alexandria.

Operatives are supposed to do the operation of piecing without moistening the hands, but I ascertained that each of the cases, A. B. and E. R., actually used saliva for this purpose, and I have on several occasions observed operatives facilitate the process of piecing by introducing the thumb and forefinger to the mouth in order to piece the finer strands together, and to lick the palms of the hands when piecing coarser strands. It is easy to see thus how it is possible for infection to be conveyed directly to the mouth, and infected material which might be quite harmless with *ordinary handling* becomes dangerous when thus *introduced into the system* of a susceptible individual.

In January, 1910, seven cases of smallpox occurred among employees at one cotton mill at Heywood, Lancashire, and I am indebted to Dr. Hitchon, medical officer of health, for the following particulars:

The two primary cases were employed at the same machine, each being a stripper and grinder. The raw cotton is passed over revolving cards, from which a number of small spikes project, and by this means it is taken up and cleaned, the useful material adhering to the cards, and the waste