INDUSTRY INTERVENES

BY

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I am impelled to chronicle the following case because: (1) although the pioneer orthodontic clinic which I was able to institute by the enlightened outlook of my Borough Education Committee has been running for five years, this is the first case in which, during that period, industry has intervened by reason of the inability of the sufferer to carry out his duties; (2) in discussing orthodontics with general practitioners I find there is a general lack of understanding as to how much can be accomplished in the way of correction of deformities. I find also that there is a serious want of appreciation of the dire results that ensue from such habits as thumb-sucking, finger-sucking, blanket-sucking, etc. In children other than those who attend the maternity and child welfare clinic of the local authority, these results are only seen by the general practitioner as the family adviser, and he must be the person either to prevent the deformity by controlling the habit or to see that the patients are treated if the deformity is established. The age of onset of the deformity of course varies; the sucking deformities are produced early, but can only be dealt with at the same time as the hereditary ones—that is, at eruption of the second dentition at the age of ten or thereabouts. Professor Brash has pointed out how large is the proportion of these deformities that are hereditary in origin.

Importance of Dental Deformities

The physical injury that afflicts these sufferers is nothing to the psychological injuries. Many of them carry an inferiority complex throughout life as the result of their deformity, and some have their early days at school made utterly miserable by the cruelty of the remarks of their schoolfellows. Only recently I was talking to a late president of the Oxford Union, the possessor of a very marked inferior retrusion, who said his whole preparatory school days were made miserable by his dental deformity and his later years a constant worry owing to dental trouble and the impossibility of being fitted with an artificial denture.

It is true that orthodontic treatment has only assumed its real importance in the dental profession in comparatively recent years; but all dental students are now being adequately trained, and there should be in almost every district someone capable of dealing with the simpler, if not the more difficult, orthodontic deformities. The responsibility for seeing that these cases are treated must be with the family doctor, as he is the only person, other than the school medical officer's staff, who has access to the child, and, what is most important, the confidence of the parent.

To those who have not seen cases of these deformities it is difficult to appreciate (a) the difference in the mouth as a masticating machine and an asset to health, and (b) the psychological improvement as a result of the removal of the obvious deformity. One of the outstanding things that have been made manifest by this municipal clinic is that the mother with a bad congenital deformity, which has been the origin of a marked inferiority complex, will spare neither pains nor expense to see that her daughter to whom she has handed down the affliction is relieved of the deformity which spoils her own life.

Case Report

The case now reported was that of a boy who, just before the age of 11, came under our orthodontic clinic. The condition of his mouth at that time is shown in Figs. 1 and 3. Except to the understanding, the condition does not appear to be one warranting the most careful and, if necessary, prolonged treatment to ensure a satisfactory denture. Shortly afterwards, before treatment had begun, the boy won a county council scholarship and passed into the county secondary school out of my jurisdiction, and as this pioneer orthodontic clinic was at that time the only clinic in the county where organized orthodontic work was being carried out, nothing was done for the boy, although he was medically inspected at school in the ordinary routine manner.

FIG. 1.

FIG. 2.

FIG. 1.—Model showing lateral view of patient's mouth on April 24th, 1930, shortly before he obtained a scholarship.

FIG. 2.—Model showing lateral view of patient's mouth when brought by his mother to see the school medical officer on November 24th, 1934, after leaving school.

FIG. 3.

FIG. 4.

FIG. 3.—Model of upper and lower bite on April 24th, 1930.

FIG. 4.—Model of upper and lower bite on November 24th, 1934.

No one seems to have taken any notice of his increasing dental deformity, and nothing was done until, on the morning of November 24th, 1934, his mother brought the boy to me and stated that he had started on the previous Monday in an insurance office as an interviewing clerk, and because of his trouble with his mouth in his attempt to cover up the dental deformity his chief told him it was impossible for him to carry out his duties properly. (See Figs. 2 and 4.) She asked me what I could do for the boy, and my answer had to be "Nothing," by reason of the fact that he had left school and passed under the jurisdiction of the County Education Authority as he had passed out of ours in 1930. Also I had to tell her that by reason of his age there was little, in fact very little, chance of doing anything really beneficial.

I remembered, however, that Mr. Breeze, jun., had exhibited the results he had achieved in the case of a cinema actress who came to him at the age of 18. I therefore arranged that

Mr. Evans, our orthodontic specialist, should see him as a patient at the Royal Dental Hospital. The supernumerary teeth have been extracted and some improvements have taken place, but—and here is the tragedy—this boy's mouth if he had been less endowed with brains and remained under the charge of our orthodontic clinic would have had an almost normal-looking and functioning denture.

Deformities Due to Thumb-sucking

I find also that there is another class of deformity that develops as a result of this habit of thumb-sucking. The thumb-sucker (Fig. 5) pushes the upper front teeth out-

FIG. 5.—Thumb-sucker's mouth.

FIG. 6.

FIG. 6.—Model of lateral view of child's mouth showing severe deformity produced in the region of the upper incisors, together with the pushing in of the lower central incisors.

FIG. 7.

FIG. 7.—Front view of the model of patient's mouth, which shows the gap produced by the pushing out of the upper incisors, and also shows better than the lateral view the pushing in of the lower incisors.

FIG. 8.

FIG. 9.

Figs. 8 and 9 show the models of a similar case—namely, the deformity is due to thumb-sucking.

wards and the lower front teeth inwards in a much more marked way than the most persistent dummy-sucker. The child whose models are shown herewith (Figs. 6 and 7) is the elder of two, aged 3½. The father is a chronic invalid, and the mother has been only too glad to keep the children quiet by letting them suck their thumbs.

The models of the elder child's mouth show the great protrusion of the upper incisors and the inward slope of the lower incisors, and the front view shows the permanent open bite.

Figs 8 and 9, anterior and lateral views, show what can be accomplished in other cases of deformity due to thumb-sucking. It will be seen that the open bite has been closed up; the protruding incisors in the upper jaw have been brought back into place by means of a Badcock expanding plate carrying a labial wire, the expansion plate widening the arch to make room for the retraction of the protruding teeth, bringing them into perfect alignment. The lower incisors were pushed out into their proper position by means of a plate carrying screws, which were given half a turn every other day by the child's parent. We find in this clinic that we have no trouble in persuading the parent to move the screws, thus saving her time and money in coming up to the clinic for this purpose.

Conclusion

I am not going to enter into the administrative details that have been devised to make the clinic possible, beyond stating that we have had 700 cases under treatment and that the total cost to the parent was at first 37s., but since the authority's orthodontic specialist is now a member of my staff it has been reduced to 25s., which includes as many plates, bands, or other apparatus as are necessary for full treatment. There is no day but what I see, as I pass along the streets of London, mouths "crying out" for the treatment that should be made available to them. If any practitioner cares to see the clinic at work and he writes to me, I will arrange an appointment.

According to M. Bustamante, G. Varela, and F. R. Neri (*Bol. ofc. sanit. Panamericana*, May, 1935, p. 511), in January, 1934, an outbreak of typhus occurred in San José del Pacifico, a Mexican village with a population of 507 inhabitants, who never washed or changed their clothes, and were infested with head and clothes lice. Before the serum was used there had been 198 cases and thirty-two deaths. Injections were commenced in August, when there were forty-two cases and ten deaths. In September there were nine cases and one death, and in the next three months there were no cases at all. The serum was prepared by injecting white rats intraperitoneally with an emulsion of the tunica vaginalis of guinea-pigs infected with Mooser's endemic Mexican strain. Horses were injected intravenously with the washings of the peritoneal cavity of the rats so treated. Experiments on guinea-pigs showed that the serum thus obtained possessed prophylactic properties if injected seven to thirteen days before the injection of the typhus virus, the protection lasting for one month. Villagers to the number of 169 were injected subcutaneously with 5 c.cm. of the serum (149 with a single dose, and twenty with two doses), while thirty-nine who refused to have the treatment served as controls. The results were as follows. Thirteen of those injected (7.69 per cent.) developed typhus within sixty days, as compared with 9 (23.07 per cent.) of the controls. The fatality was *nil* among those injected, although ten of those who had had one injection, and three of those who had had two injections, contracted the disease, whereas six of the non-injected cases were fatal. The fact that 1.7 per cent. of those who had had only one injection, and 15 per cent. of those who had had two, contracted typhus after the lapse of fifteen days from injection, shows that the passive immunity conferred lasts about a fortnight.