

were gone, and nature was able to care for the rest by establishing normal forces of occlusion.

I might further say that any type of malocclusion which develops is the result of the forces of occlusion going wrong, and if all the forces of occlusion act normally there is a normal occlusion as shown in Fig. 12, which is the ideal for every type of malocclusion treated.

TEACHING ORTHODONTIA*

BY W. E. STOFF, D.D.S., OMAHA, NEBR.

THE teaching of orthodontia is a difficult proposition, especially in the dental college, where it is presented with the idea that the course is not expected to fit the student to practice this branch of dentistry with any degree of success and only gives him the theory which he may or may not retain after he passes the final written examination of the college and the state board, and which then, will have to be worked out in practice attended by the usual difficulties, incident to initial attempts at the correcting of malocclusion. That student-dentist is an exception, who succeeds in spite of these conditions and the percentage is indeed small. There being a number of teachers in the alumni association and probably some among the present graduation class, I offer these suggestions.

Since there is so much malocclusion to be corrected, I believe we should endeavor to give the students under us as much practical knowledge as we possibly can.

The following, I offer mainly because I believe many colleges are not giving orthodontia the attention that Creighton gives. The junior class gets the usual thirty-two weeks of lectures during the year, while the seniors are handled a little differently.

Each senior is required to handle one case all through the year, the clinic being ample for this. Besides treating this practical case he is required to write a paper on it and read it before the class, during the regular lecture period: the schedule for these papers being so arranged that the student has had time to get a working knowledge of his case and, too, that each will have time to prepare well. I usually have two papers each period and that allows us a little time for general discussion and "fill-in" explanations by the lecturer. This gives the entire class a good insight into all the orthodontia cases, widening their scope of experience, etc.

The system used to prepare the students to handle their cases and which helps them materially in writing their papers was suggested to me by Dr. Brady and consists of three diagrams illustrating, on the first, the malpositions of the teeth being drawn with black ink and over this the correct positions in red ink.

*Read before the Alumni of the International School of Orthodontia, Kansas City, Mo., July 9, 1918.

On diagram No. 2, which is a carbon copy of the malposition as shown on Diagram 1, I draw the appliances to be used; on diagram No. 3, I draw over the carbon copy of the correct positions as shown on Diagram 1, the retaining appliances.

All this, of course, takes time and is only successful when studied and understood by the student, so insisting on a careful study by the student is important.

This eliminates that terrible condition of misunderstanding and misapplication by students who forget what you have told them about the case the minute your back is turned and, taken all together, is a time saver.

I have found in my five years' experience that the hardest thing to overcome is the student's estimate of the importance of orthodontia, so I hail with delight the fact that I now have two years of blood test figures before and after the treatments to show how the correction of malocclusion in one hundred per cent of cases raises the red cell count. In some cases there has been an increase of over one million red cells and this increase seems to correspond to the

ORTHODONTIA CASES—RED CELL COUNT—1916-17—1917-18

PATIENTS	SEX	AGE	BEGINNING	CORRECTED
1. Helen M.	F.	16	3,392,000—	4,560,000
2. Catherine M.	F.	13	3,632,000—	4,600,000
3. Gladys C.	F.	12	3,680,000—	4,896,000
4. Dorothy H.	F.	15	3,808,000—	4,784,000
5. Raymond G.	M.	12	3,888,000—	4,768,000
6. Beatrice C.	F.	14	3,904,000—	4,512,000
7. Elizabeth N.	F.	13	4,064,000—	4,848,000
8. Foster C.	M.	14	4,080,000—	5,040,000
9. Frank F.	M.	11	4,144,000—	5,120,000
10. Waldron G.	M.	15	4,400,000—	4,624,000
11. Gayle W.	F.	11	4,608,000—	5,024,000
12. Thos. D.	M.	15	4,512,000—	5,040,000
13. Esther C.	F.	13	4,720,000—	4,800,000
14. Helen S.	F.	13	4,736,000—	5,072,000
			57,558,000—	67,688,000
			FOURTEEN PATIENTS' AVERAGE = 4,112,000— 4,834,857	
15. Tom M.*	M.	12	4,080,000—	3,904,000
16. Roy A.†	M.	16	3,520,000—	
17. Tom C.‡	M.	13	3,712,000—	
18. Josephine A.†	F.	14	3,824,000—	
19. Robert W.†	M.	8	4,000,000—	
20. Catherine M.‡	F.	14	4,800,000—	
			81,504,000—	
			TWENTY PATIENTS' AVERAGE = 4,075,200—	

*Occlusion disturbed in the process of correcting—not so good as when started.

†These cases started but failed to finish.

‡Malocclusion only slight, no final count.

amount of occlusal surface contact increase. This has a wholesome effect upon the students and stimulates interest in orthodontia.

The jubilee is coming for orthodontia, so I hope no one will become discouraged because it is yet a little ways removed. I don't claim to have cleared up all the difficulties incident to teaching this subject, but I hope only to have offered a suggestion or two worthy of consideration and modified application.

SECOND YEAR'S TEST
ORTHODONTIA CASES—RED CELL COUNT—1917-1918

PATIENT	SEX	AGE	BEGINNING	CORRECTED
Lois S.	F.	13	3,296,000—	4,640,000
Helen H.	F.	14	3,920,000—	4,720,000
Everett H.	M.	11	4,000,000—	5,008,000
Helen E.	F.	12	4,080,000—	5,120,000
Dorothy R.	F.	11	4,128,000—	4,640,000
Minnie S.	F.	15	4,144,000—	4,880,000
Francis N.	M.	11	4,352,000—	5,168,000
Esther R.	F.	14	4,384,000—	5,008,000
Vera B.	F.	15	4,880,000—	5,040,000
Alma A.	F.	15	5,040,000—	5,360,000
Gertrude G.	F.	16	5,088,000—	5,184,000
Corine A.*	F.	12	4,222,000—	4,168,000
Barney R.*	M.	9	4,928,000—	4,768,000
			56,462,000—	63,704,000
			THIRTEEN PATIENTS' AVERAGE = 4,343,231—4,900,307	

*In these two cases the occlusal surface contact was decreased in the process of treatment.