

The Role of Ancillary Services in the Training of a Plastic Surgeon

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In trying to formulate the method of presenting this particular facet in the training of a plastic surgeon, I feel that emphasis ought to be laid not so much on immediate action giving the prospective trainee a panoramic glimpse of the various accessory services with which we are intimately associated, in our day-to-day activities.

It is probably true to say, that a plastic surgeon needs to be a "Jack of all Trades." Admittedly, the primary aim of the speciality is to restore the form or mould, but a sound working knowledge of various ancillary services is a must, for a fuller understanding of certain disorders, the diagnosis of difficult cases and for the planning of therapeutic procedures.

Now to define the role that ancillary services play in the training of a young aspirant, one needs to explore the part that each service has played in one's own training. The plastic surgeon was once likened by a friend, to the "Pituitary of the ancillary field." In other words he would behave very much like a bandmaster seeking the services of each speciality with discretion, while all the while holding on to the reins with a firm hand.

Nowhere else is this brought out more forcibly, than in the running of a Cleft

Palate Clinic. To describe how a typical case is handled, would, I hope, add a little clarity to a rather difficult subject. The trainee would examine the case and form his own impressions. First of all if a cleft lip had been repaired, he would make a note of the excellence or otherwise of the repair and thus form a critical assessment of the need for further corrective procedures, purely from the cosmetic point of view. The teeth and maxillae would next be examined, and notes made on the type of occlusion, the presence or absence of maxillary collapse and the need for expansion appliances. The palate is now inspected and the child then made to speak. Familiarity with the terms bandied about in speech therapy circles, helps at this juncture. A quick E.N.T. examination is also performed.

The patient during his rounds meets the paediatrician for a general check-up, the prosthodontist and/or orthodontist, the speech pathologist and the E.N.T. surgeon. When all assemble in the ball-room for a final discussion on treatment policy, on the day sits the plastic surgeon and his secretary. All the other members of the team sit in front of him. This is symbolic. Each case is now presented by the trainee, and then the plastic surgeon calls on each specialist for his views. The final treat-

ment policy is decided upon by the plastic surgeon, who dictates the overall plan to the secretary. This is what is finally entered into the records.

I have cited this particular example, in order to bring out the role that the several ancillary services play, in the training of the resident. It also serves to point out something that is vital. Unless the person at the helm, to wit the Plastic surgeon, has a good working knowledge of each specialty, he will very soon begin to flounder in the sea of his own ignorance.

ramic laminagraphy has now come in as an excellent screening device for most dental problems and is especially useful in difficult cases. One must of course remember that unlike the conventional radiograph, this X-Ray machine takes pictures from the back and hence the film has to be viewed as though the examiner were sitting on the back of the tongue.

For soft palate studies, in cases being investigated for velopharyngeal incompetence, a simplified still X-Ray study has been advocated by Randall et al (1958), (Fig. 1).

X-RAY FACTORS								
Milliamperes	Time	Distance of Tube from Patient				Bucky		
200	1/20	72 inches				No		
Transverse diameter of Neck in centimeters		5	7	8	9	10	11	12
Kilovolts		72	74	76	78	80	82	84

Fig. 1—X-Ray factors for performing Still Studies of the soft palate, as advocated by Randall et al (1958)

Let me now briefly, dwell on each related ancillary specialty. Radiography is a mainstay for many plastic problems. The single most important view of the face is the Water's view. For a quick survey of most of the facial bones, this is an ideal radiograph. When the integrity of the floor of the orbit is suspect however, a lamina-gram is a must.

With the advent of the Panorex, pano-

With the four basic sounds, Da, Ee, Mm, and Ss, the various positions of the palate can be very readily studied (Fig. 2).

Of course for a dynamic view of the function of the palate and pharynx, a cine-fluoroscopic study is essential. With headphones providing the words the patient has made and a rapid view of the film itself, a more complete analysis, including the important lateral pharyngeal wall move-

ment, can be made. The examples one can quite are legion, but the ones mentioned above I hope, will impress any prospective trainee, about the importance of this particular diagnostic tool.

Orthodontia and prosthodontia now form a major part, particularly in the care of patients with altered occlusal relation-

ships. Taking the cleft palate patient again as an example, each case is worked up completely, and where necessary impressions are taken, and split acrylic appliances fashioned. (Fig. 3). Usually, 3 such appliances are necessary before full expansion is obtained and then the patient wears a retention appliance. (Fig. 4) This is the stage

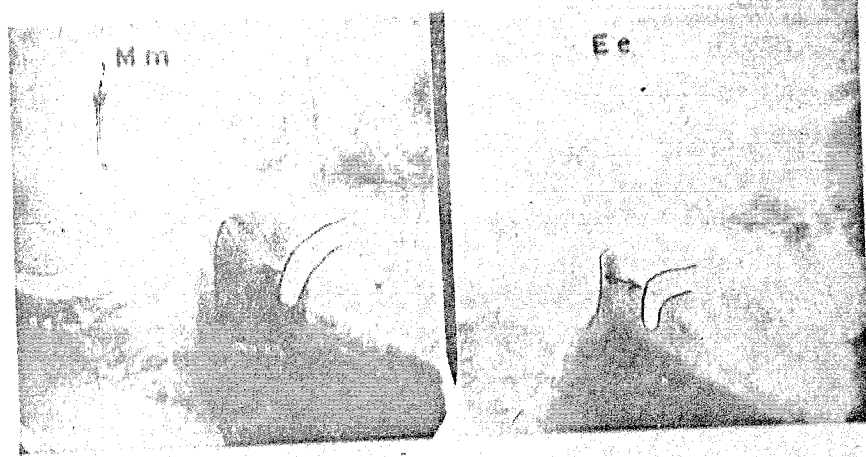


Fig. 2—Still X-Ray studies of patient with KLIPPEL-FEIL Syndrome and velopharyngeal incompetence, AT LEFT: Position of rest, RIGHT: Elevator eminence produced by pronouncing the sound, E-e, Showing marked V.P. incompetence

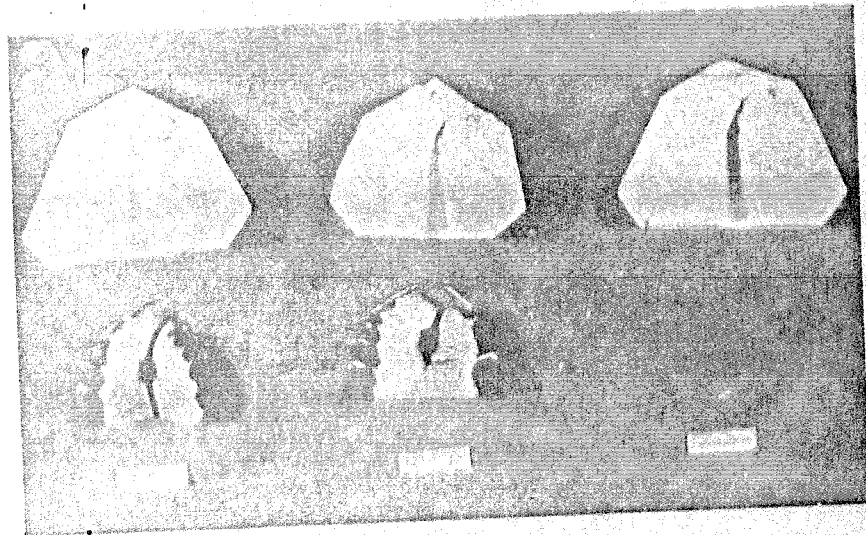


Fig. 3—AT LEFT Dental cast of patient with marked left maxillary segment collapse. The split acrylic appliance used showed below IN THE CENTRE: Some expansion obtained and a new appliance fitted AT RIGHT: Satisfactory expansion achieved, 9 months from time of starting treatment

at which the plastic surgeon may do a bone graft to stabilise the arch. Joint consultations throughout the care of each individual patient is therefore most essential since each specialty forms a part of the whole.

More recently, having been disgruntled with the inefficiency of external traction appliances for the badly protruberant premaxillae in bilateral cleft cases, we have been embarking on internal elastic traction methods. K. wires are passed through the maxilla above the tooth beds and in front, through the pre-maxilla. The anterior wire is bent into two hooks. Internal elastic traction from behind, very rapidly pulls the premaxilla in line with the alveolus (Fig. 5). Lip repair then becomes very easy. Our dental colleagues also prepare acrylic moulds for tracheal reconstructions and prostheses for use after radical maxillectomy. The contribution that this sister specialty makes, towards the smooth run-

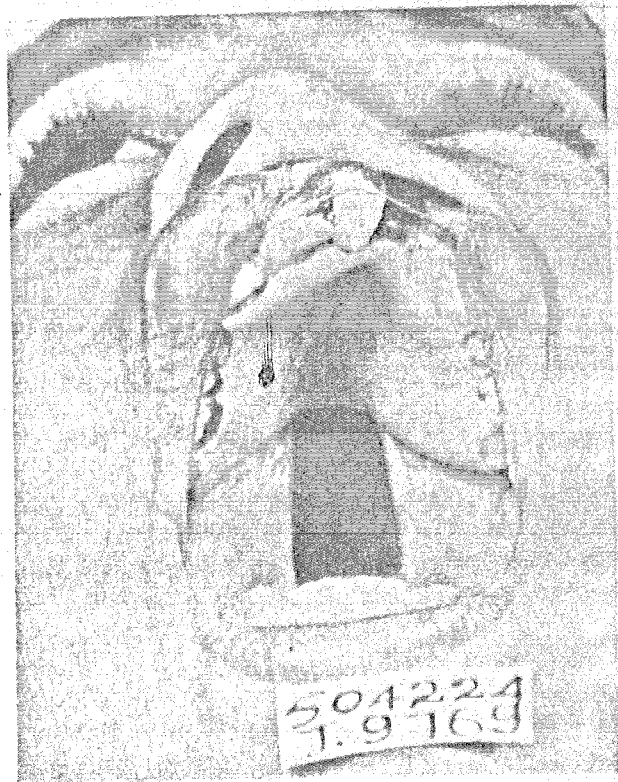


Fig. 4—Same patient as in Fig. 3, after full expansion has been obtained, with the retention plate in place.



Fig. 3—Orofixation and elastic traction of protruberant premaxilla as advocated by Gosselin et al (1958)

ing of the plastic surgery service, is enormous.

Now uniting the X-Ray, Dental and Plastic Surgery departments, is the whole new fields of surgical orthodontia, and prosthodontia.

The field of speech pathology and therapy is fascinating. As Spriestersbach (1964)

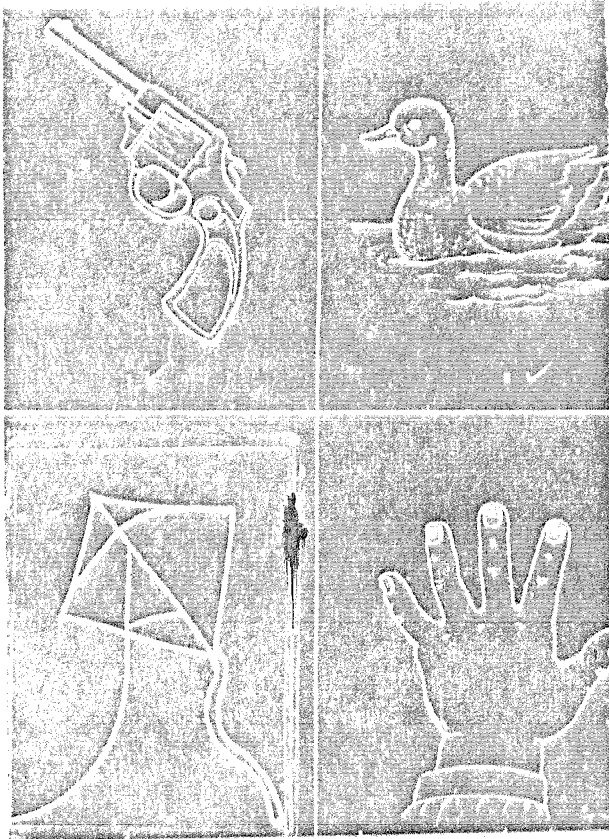


Fig. 6. Sample page from the Peabody Picture Vocabulary Test. The plastic surgeon should in fact be an amateur speech pathologist. He should for instance differentiate between a dental lip produced by a cross-bite, from frank velopharyngeal incompetence. Familiarity with stop-plosives, fricatives and other such terms, is very essential. To help

in making evaluation more easy, Adamson et al (1966) have recently introduced the Peabody Picture Vocabulary Test and these involve the recognition of 16 pictures with the sixteen basic sounds commonly used in speech. (Fig. 6) A score of only 1-4 wrong is excellent, 5-9, fair and 10-16, poor. (Table I).

Table I

No.	Picture	Sound	Age
1	Apple	p	3½
2	Book	b	3½
3	Duck	d	4½
4	Top	t	4½
5	Gun	g	4½
6	Kite	k	4½
7	Fish	f	5½
8	Van	v	6½
9	Ship	sh	6½
10	Lock	l	6½
11	Ring	r	7½
12	Chalk	ch	7½
13	Jump	j	7½
14	Zebra	z	7½
15	Three	th	7½
16	Sea	s	7½

Approximate age levels at which these 16 common consonant are acquired.

(Adapted from Adamson et al—1966)

In order to confirm or refute the diagnosis, soft palate X-Rays and cine studies will help. The role of the spirometer is also mentioned here briefly. Chase (1960) has devised an excellent method for detecting velopharyngeal incompetence, through the judicious use of the spirometer and the interested trainee is referred to his article. Weatherley White (1965) a young English resident who worked with Stark in New

York, studied velopharyngeal incompetence with a nasality meter. This would supposedly measure the nasal tone of various consonants. The nasality meter however has its drawbacks in interpretation. Quigley (1965), has more recently devised an apparatus which is fixed over the nose and then connected to a hotwire anemometer. If there is nasal escape, this can very readily be detected. With so many hundred dialects in our vast country, the possibilities of conducting further such research are enormous. I am sure the Kerala twang will be quite different from guttural Tamil and the fluid grace of Telugu and so on, when studied as wave forms.

Speech therapy however needs special training and most of all infinite patience and I will not dwell further upon this.

Physiotherapy is an important adjunct in the therapy of many types of patients. In the realm of hand surgery, preoperative assessments, goniometric measurements of joint ranges and subsequent post operative follow-ups with the same tools of measurement, give one an excellent pictorial re-

cord of a particular case. Suffice it to say, that a short spell in the Physio department for every trainee is absolutely vital, to give him the correct perspective. He will learn that plastic surgery has to do not only with the restoration of the form, but of the function as well.

A few words about occupation therapy can be briefly mentioned at this juncture. Nothing is more boring for a patient who has had a massive resection for cancer of the face, that to wait patiently, while the several stages are underway to restore his appearance. Depression hits him very forcefully. If something were to be given his hands to do, a lot will be taken from his mind. He could also learn a trade during this period.

Having had to cover a rather wide field I hope I have avoided stressing the obvious or neglecting the essential. My aim has been to steer a middle course, in bringing to the attention of the trainee of to-day, the vital role that the various ancillary services will play in shaping him to be the finished product - A Plastic Surgeon.

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