Aesthetic plastic surgery education: The Vancouver approach

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The challenges in developing resident training in aesthetic surgery persist. To address this issue, the plastic surgery residency program at the University of British Columbia created a senior resident aesthetic clinic in place of the previous preceptor-based program. The clinic is now entering its sixth year. An outline of the program is presented, and issues that are relevant to the design and function of senior resident aesthetic clinics are discussed.

Key Words: *Aesthetic surgery; Cosmetic surgery; Resident clinic; Resident education*

Formation en chirurgie esthétique : l'approche de Vancouver

RÉSUMÉ : Les problèmes de formation au niveau de la résidence en chirurgie esthétique persistent toujours. Alors, pour tenter de les résoudre, les responsables du programme de résidence en chirurgie plastique de l'University of British Columbia ont mis sur pied, il y a six ans, un service d'esthétique pour résidents supérieurs en remplacement de l'ancien programme fondé sur le préceptorat. Le présent article décrit le programme dans ses grandes lignes et fait état des aspects relatifs aux visées et au fonctionnement des services d'esthétique pour résidents supérieurs.

Origins of plastic and reconstructive surgery date as far back as 3000 BC, when Egyptians recorded descriptions of nasal operations on papyrus (1). It was not, however, until the 19th century that marked progress was made in the field of aesthetic surgery, which paved the way for the explosion of related information in the 20th century. Today, a copious volume of information on aesthetic surgery exists in the form of books, journals, videos, Web sites and CD-ROMS; yet, the challenges in developing resident training in aesthetic surgery persist.

The problems of aesthetic surgery training in university programs have been the topic of discussion for decades. In 1970, authors expressed concerns that "much of the justification for our specialty's existence is undermined" if residents are not trained in this major component of plastic surgery (2). Hal Bingham (3), in 1980, indicated that the aesthetic patient's

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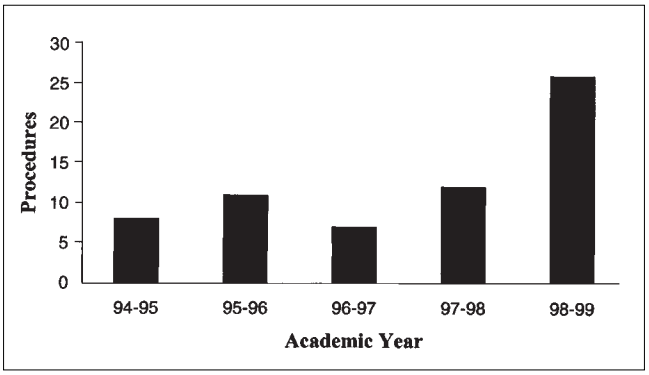

Figure 1) *The number of patients operated on by the residents during each of the past five years at the resident aesthetic clinic, University of British Columbia, Vancouver*

desire for privacy and personalized service did not lend well to the team-based approach of most university programs. The teaching of aesthetic surgery at that time, and to some extent, even today, was achieved through the preceptor-based method and descriptions that appeared in the literature (2-4). While this type of training does expose the resident to private practice, the exposure to patient selection and hands-on experience was limited at best.

To deal with these shortfalls, university programs began developing and integrating academic aesthetic surgery clinics into their clinical residencies (5,6). In 1994, at the 21st scientific meeting of the Canadian Society for Aesthetic (Cosmetic) Plastic Surgery, October 15 and 16, Toronto, Ontario, Williams (7) and Graham (8) discussed this topic as the Carlsen Lectureship. That same year, the University of British Columbia, Vancouver, introduced its resident aesthetic clinic. In the present paper, we share our experiences.

ORGANIZATION OF THE PROGRAM

The Division of Plastic Surgery is based on the practices of 17 plastic surgeons at the Vancouver General Hospital, St Paul's Hospital, Vancouver, and British Columbia's Children's Hospital, Vancouver. One or two residents and one or two fellows are accepted into the program each year, as funding permits. For residents, it is a five-year program beginning with two core surgery years. Postgraduate years (PGYs) 3, 4 and 5 provide ample opportunity for the progression of responsibility and acquisition of knowledge in all major areas of plastic surgery.

In PGYs 3 and 4, residents are exposed to aesthetic surgery through didactic and preceptor-based components. During PGY 5, the resident functions as the administrative chief resident for at least eight months, during which time he or she is responsible for the coverage of the resident aesthetic surgery clinic. On a yearly basis, each surgeon in the group donates the equivalent of one week's worth of elective surgery operating room (OR) time (one day per year on average).

Referrals to the clinic come from a variety of sources, primarily word-of-mouth from either previous patients or patients within the hospital. Referrals from the private practice sector are not uncommon and are usually driven by monetary issues. The initial consultation is at no charge to the patient. Hospital-based outpatient departments (OPDs) are used for the initial visit, during which the patient meets only the resident. The resident then meets with the supervising staff to review the cases at the clinic or in the consultant's office. Operative candidates are scheduled for a second consultation, at which time both the staff and resident are present. From the beginning, it is made clear that the resident is the primary surgeon, and that the attending staff is there for consultation and supervision only. To emphasize the concept that the resident is the surgeon, the review of the patients with the staff occurs, as much as possible, in the hospital OPD and not in the attending physician's office.

On average, current senior residents assess 40 to 50 patients in the resident aesthetic clinic. Some patients will not be appropriate for surgery in the resident's clinic, and reasons cited include patient expectations, resident availability and/or ability, equipment availability and OR time. Also, patients referred for abdominoplasty and liposuction are currently too numerous for residents to do if they hope to experience a variety of aesthetic procedures. This has resulted in a differential waiting list of one month for rhinoplasty and up to three years for body contouring.

Patients seen during a consultation receive an information sheet with contact numbers for the clinic. The sheet gives the resident's name and states that he/she is responsible for their care, including complications. The patient is also informed that, should a complication arise that requires revisional surgery, an additional charge will result. Consent forms are procedure-specific and state that the resident, under direct supervision, will perform the surgery. The forms are derived from the American Society of Plastic Surgery consent forms in the patient consultation resource book and are modified for the resident's clinic. Preoperative and postoperative photographs are taken and follow the Plastic Surgery Education Foundation Committee's photography guidelines.

A $250 surgery fee is charged. This money is placed into the Resident Education Fund, which is made available to the residents for the purchase of books and attending conferences. This low fee, again, underscores the notion that this is a resident's aesthetic clinic. The hospital fee of $400 is directed to each institution. Anesthetic fees are set by the respective anesthesia groups at each site and average $250/h. Payment must be made in full a minimum of two weeks before the scheduled operation. Residents participating in the clinic require coverage from the Canadian Medical Protective Association.

In 1998/99, the senior residents operated on approximately 20 patients each as the primary surgeon. Figure 1 shows the increase in the number of patients operated on during each of the past five years. Follow-up is in the resident clinic, even after the patient's operating resident has graduated. Postoperative photographs are taken. These

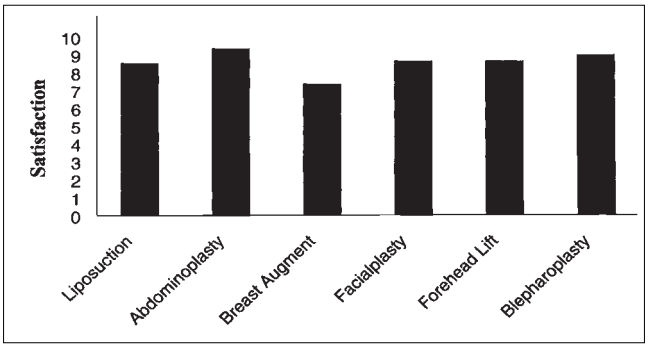

Figure 2) *University of British Columbia, Vancouver, patient satisfaction levels with the resident aesthetic clinic*

photographs, along with the preoperative slides, constitute the senior resident's aesthetic case series that is presented each year at the Annual Plastic Surgery Resident's Day, which is likely the most critical appraisal of all.

Should a complication arise, it is discussed in conference with the patient, the resident and the supervising surgeon, and a management plan is designed. If the supervising staff is unavailable and the problem is urgent, the staff person on call is contacted. Where possible, all postoperative visits are in the hospital OPD, except in situations in which urgency dictates otherwise.

Patients are encouraged to make their family physician (FP) aware of the surgery. Professional courtesy allows the FP to participate in the preoperative evaluation and postoperative care, as required. Patients' charts are kept up to date in the hospital OPD and the residents' room. Copies of the operative reports are sent to the supervising surgeon and FP if requested. If patients do not wish to have their FPs involved, this is of course respected.

To ensure continuity of care, a resident finishing the program provides a list of patients who were seen in consultation and had undergone surgery for the upcoming senior resident. Before leaving the program, the resident contacts the patients who did not undergo surgery to notify them of the change in senior resident. Incoming residents then have a reference list of patients seeking surgery and can draw on this as well as new referrals for their aesthetic clinic.

DISCUSSION

In Canada, only two of the nine plastic surgery programs have established resident aesthetic clinics. An article that examined 19 western United States-based plastic surgery programs found that greater than half (51.6%) of these programs were without senior resident clinics. Their survey of recent graduates found a need for more hands-on experience and an overwhelming call for senior resident aesthetic clinics (9).

Drawing on the observations of other programs and the experience of the University of British Columbia staff, a senior resident clinic was established at the University of British Columbia five years ago. The goal of the clinic was to provide the critical, hands-on experience that aesthetic surgery residents need during their training. For the clinic to be a success, a set of strict rules was established, as outlined in the organization of the program section above. Selected rules were similar to those developed at the University of Toronto, Ontario (5).

Pricing and advertising were important issues. The current $250 surgical fee is in line with our Canadian colleagues; however, it is significantly less than the surgical fees charged in American resident aesthetic clinics (6). In the United States, the clinics are often designed as independent, self-supporting clinics using pricing strategies and economic analysis to set the fees (10). This design places much higher time constraints on the resident. With the current, busy clinical practice at this centre, it was decided that the self-supporting approach would not be feasible at this time. At the inception of the clinic, a letter was mailed to local FPs and plastic surgeons. While other clinics have found it beneficial to advertise in the media (11), we found that word-of-mouth was sufficient to generate more than enough referrals to the clinic, which has waiting lists of up to three years for certain procedures.

Potential problems of a resident clinic have been discussed (5). In our program, the change in resident, which occurs once a year, has been efficient. We have not, as yet, encountered any difficulties in these changeovers, and attribute this success to the professionalism and organization of the residents and clinic. OR time continues to be an issue in the university teaching hospital setting. Each surgeon has donated, on average, one day per year of OR time. The senior resident is responsible for the aesthetic clinic for eight of the 12 months of their final year. On average, 10 OR days are made available. The time-span provides the senior resident with more opportunity to follow-up his/her own patients than shorter rotations and has proven to be sufficient for the resident to be exposed to a wide variety of surgical procedures. The limiting factor has been the work involved in the other aspects of patient care. Residents have been responsible for booking appointments, ORs, anesthetists, etc, and they noted this to be very time consuming. To resolve this issue, a clerical assistant has recently been hired to take over these tasks.

Outcomes in plastic surgery "may simply be what the patient tells us it is" (12). As such, it is subjective and sensitive in nature, and represents a challenge to determine accurately. The use of questionnaires is common, but the reliability of this tool has yet to be validated (13). An informal questionnaire of patients operated on at the University of British Columbia resident aesthetic clinic revealed an average satisfaction of 8.63 (0 to 10 score). Patient satisfaction levels with specific procedures are shown in Figure 2. These results are comparable with those found in the literature for resident clinics (14,15) as well as for those for the private sector (16-21).

In 1993, the American Society for Aesthetic Plastic Surgery established a Committee on Aesthetic Training. The committee worked with the American Society of Plastic and Reconstructive Surgery, the Residency Review Committee for Plastic Surgery, the Association of

TABLE 1
Association of Academic Chairmen of Plastic Surgery (AACPS) suggested minimum levels of aesthetic experience in plastic surgical residencies

Category	Resident operated	Total
Facial	8	13
Facelift and/or browlift		
Reshaping		
Liposuction (independent procedure)		
Ostectomies and osteotomies		
Autogenous, homologous or alloplastic implants		
Chemical peel/dermabrasion		
Eyelid	5	12
Blepharoplasty		
Orbital modification and repositioning		
Micropigmentation (tattooing)		
Ear	1	3
Repositioning		
Reshaping		
Nasal	4	9
Reshaping		
Augmentation		
Breast	6	12
Augmentation		
Mastopexy		
Trunk and extremities	7	15
Reshaping		
Total	31	64

Recommended to the AACPS by the Committee on Aesthetic Training, Fritz E Barton Jr, Chairman, May 9, 1993. Reprinted with permission from reference 8

Academic Chairmen of Plastic Surgery and the American Board of Plastic Surgery to create a suggested minimum level of aesthetic experience for graduating residents. After just five years, our clinic's numbers are rapidly approaching those recommended guidelines, and we have every confidence that within the next five years, we can exceed them.

The creation of the senior resident aesthetic clinic has been well received by the hospital, the anesthesia service, the plastic surgeons in private practice, the residents and, most importantly, the public. With this service in place, the residents have been able to increase their appreciation and understanding of the aesthetic patient. This is a major step toward eliminating the discrepancy between what we teach and what we practise. We feel that this program will help to benefit the field of plastic surgery by improving the training of future plastic surgeons.

REFERENCES

1. Breasted JH. Treatment of fractured noses. In: McDowell F, ed. The Source Book of Plastic Surgery. Baltimore: Williams & Wilkins, 1977.
2. Murray JK, Baker TJ. Aesthetic surgery and the plastic surgeon. Plast Reconstr Surg 1970;46:389.
3. Bingham HD. Training in aesthetic surgery: some problems encountered in a university program. Plast Reconstr Surg 1980;65:227.
4. Baker TJ, Gordon HL. The training of aesthetic surgeons in a private practice. Plast Reconstr Surg 1981;68:774.
5. Freiberg A. Challenges in developing resident training in aesthetic surgery. Ann Plast Surg 1989;22:184-7.
6. Schulman NH. Aesthetic surgical training: the Lennox Hill model. Ann Plast Surg 1997;38:309-14.
7. Williams HB. Aesthetic plastic surgery education. Can J Plast Surg 1994;2:13-5.
8. Graham WP. Trends for the future in aesthetic surgical education. Can J Plast Surg 1994;2:16-7.
9. Linder SA, Mele JA, Capozzi A. Teaching aesthetic surgery at the resident level. Aesthetic Plast Surg 1996;20:351-4.
10. Krieger LM, Shaw WW. Pricing strategy for aesthetic surgery: economic analysis of a resident clinic's change in fees. Plast Reconstr Surg 1999;103:695-700.
11. Stadelmann WK, Rapaport DP, Payne W, et al. Residency training in aesthetic surgery: maximizing the residents' experience. Plast Reconstr Surg 1998;101:1973-7.
12. Coady MSE. Measuring outcomes in plastic surgery. Br J Plast Surg 1997;50:200-5.
13. Wengle H. The psychology of cosmetic surgery: a critical overview of the literature 1960-1982 – Part I. Ann Plast Surg 1986;16:435-43.
14. Zweifler M, Glasberg SB. An outcome-based study of aesthetic surgery in a clinic setting. Ann Plast Surg 2000;44:355-60.
15. Freiberg, Giguere D, Ross DC, et al. Are patients satisfied with results from residents performing aesthetic surgery? Plast Reconstr Surg 1997;100:1824-31.
16. Hetter GP. Satisfactions and dissatisfactions of patients with augmentation mammaplasty. Plast Reconstr Surg 1979;64:151-5.
17. Ersek RA, Zambrano J, Surak GS, et al. Suction-assisted lipectomy for correction of 202 figure faults in 101 patients: indications, limitations and applications. Plast Reconstr Surg 1986;78:615-24.
18. Reich J. Factors affecting patient satisfaction with the results of esthetic plastic surgery. Plast Reconstr Surg 1975;55:5-13.
19. Klassen A, Jenkinson C, Fitzpatrick R, et al. Patients' health related quality of life before and after aesthetic surgery. Br J Plast Surg 1996;49:433-8.
20. Goin MK, Rees TD. A prospective study of patients' psychological reactions to rhinoplasty. Ann Plast Surg 1991;27:210-5.
21. Wright MR. Management of patient dissatisfaction with results of cosmetic procedures. Arch Otolaryngol 1980;106:466-71.