Conferences, courses and cutting: continuing education in craniofacial surgery

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Craniofacial surgery is one of the newer subspecialties in plastic surgery, having developed from the pioneering work of Dr Paul Tessier in the 1960s. Craniofacial anomalies may be congenital, traumatic or oncologic in origin.¹ Major improvements in the lives of patients with these conditions have been achieved through the application of specific surgical approaches requiring expert anatomical knowledge, precise surgical technique and an appreciation of the science underpinning it all. Mastery of both theoretical knowledge and surgical skill is necessary to minimise the potential complications of craniofacial interventions, such as life-threatening blood loss, damage to the orbit or brain, cerebrospinal fluid leak, meningitis or death.¹

The rapid expansion of surgical techniques and a growing understanding of disease causation and management require that surgeons stay abreast of the latest developments in the field.² But how to retain and extend this knowledge and skill base once fellowship training has ceased?

Peer-reviewed scientific journals are an important part of continuing medical education. Surgical journals cover basic science, epidemiology, surgical techniques and patient outcomes. They promote critical thinking and allow readers to better themselves as scientists and surgeons.³ Interestingly, the general format of scientific journals has not changed significantly since the first journal was published in 1665, a testament to the usefulness and educative power of the genre.⁴

A Cochrane review published in 2009⁵ found that attending courses and conferences improves professional practice and patient outcomes.
Educational meetings were found to be most effective when they combined a mixture of didactic and interactive formats, and when subjects considered to be ‘serious’ were addressed. Professional bodies the world over recognise the essential part played by courses and conferences in continuing medical education. In fact, attendance at scientific meetings is an essential requirements of the Royal Australasian College of Surgeons (RACS) continuing professional development program.

Maintaining and extending surgeons’ skills requires theory and practise and the craniofacial sessions at the RACS Annual Scientific Congress 2018 (ASC) sought to update and increase the skill of delegates from all over Australasia. The three-day congress of symposia and presentations was complemented by a pre-conference cadaver workshop in cleft and craniofacial operative techniques. The workshop was led by Jeff Fearon (USA), John Phillips (Canada), Robert Mann (USA), Brian Sommerlad (UK) and Christopher Forrest (Canada). The presence of prominent international speakers was made possible by industry sponsorship.

Previous studies have documented the importance of cadaveric dissection in the learning of clinically relevant anatomy. Dissection workshops allow the a combination of surgical demonstration with guided operative procedural performance. This enables the workshop participants to develop a ‘hands-on’ appreciation of the anatomy, instrumentation and manoeuvres required for the various surgical procedures. Unlike ‘live surgery’ demonstrations that have moved in and out of favour at surgical meetings over the past two decades, cadaveric surgery allows trainees to attempt new or unfamiliar techniques in a safe environment and in the absence of the clinical consequences of errors.

The cadaver lab was an outstanding success. Spaces were provided for ten dissectors and an equal number of observers, all supervised and assisted by a faculty of local and international experts. The workshop was carefully planned to enable as many distinct procedures as possible to be performed on the cephalic specimen—an essentially a ‘bottom up’ series beginning with external approaches to the mandible and proceeding to genioplasty, sagittal split osteotomies, buccal flaps, palatal anatomy and repair, le fort I exposure, orbital floor approaches, bicoronal exposure and, finally, le fort III osteotomy and down fracture.

Procedures were demonstrated with the assistance of projected images. These displays allowed faculty experts to showcase their techniques in an intimate environment, to delegates and each other. One of the unexpected highlights of the cadaver lab was the discovery of a specimen with an unoperated submucous cleft palate. This enabled two senior international cleft surgeons, Robert Mann and Brian Sommerlad, to demonstrate their repair techniques on a cadaveric specimen with a cleft deformity—a first for both. The incidence of submucous cleft palate in the general population is believed to be 0.02 to 0.08%. The cadaver lab fostered a strong camaraderie among attendees, making the subsequent clinical meeting all the more collegial.

The craniofacial sessions at the ASC were a multidisciplinary endeavour, in keeping with the subspecialty. The first day was dedicated to cleft lip and palate surgery, with a keynote address on speech therapy for cleft disorders. The second and third days focused on other craniofacial anomalies such as craniosynostosis (with separate sessions on syndromic and non-syndromic varieties), hemifacial microsomia and Treacher Collins syndrome. Attendees were treated to extended 30-minute keynote addresses by international faculty members, allowing deeper exploration of subject areas. The presence of so many international speakers at both the congress and the cadaver lab meant that diverse viewpoints, techniques and concepts were presented. One of the best-attended sessions was a combined symposium with neurosurgeons on raised intracranial pressure in craniosynostosis. In addition to the attending neurosurgeons and plastic surgeons, important contributions were made by guest paediatric ophthalmologists and a neuroradiologist.

Traditional educative methods in surgery—scientific journals, courses and conferences—are increasingly being challenged by so-called...
“disruptive” technologies such as blogs and podcasts. However, the cadaveric displays of operative technique and the frank exchange of ideas and concepts afforded by scientific meetings remain as invaluable educational experiences for surgeons. In the field of craniofacial surgery, it often seems that every clinical unit performs a different operation, at different times and for different reasons. By coming together to share knowledge, critically evaluate results and creatively think of future directions, we not only improve ourselves as surgeons, we advance our surgical field as a science.

Craniofacial conferences, like the surgery itself, can only exist in a multidisciplinary setting. Neurosurgeons, anaesthetists, ophthalmologists, orthodontists and radiologists are just some of the multidisciplinary team members present during surgery integral to any craniofacial service. Plastic surgeons involved in craniofacial cases use the full spectrum of their plastic and reconstructive armamentarium—grafts, free flaps, hand surgery, delicate tissue handling, attention to aesthetics and functional reconstruction. Scientific meetings promote vital exchanges of ideas between experts in both the surgical and non-surgical components of craniofacial care. Having concurrent, and occasionally combined, sessions in plastic surgery, neurosurgery and craniofacial surgery allows all subspecialties to learn with and from each other.

Scientific meetings like the RACS congress are therefore important for cross-pollination of knowledge between all participating subspecialties. Although increasing subspecialisation leads to focused improvements in care and treatment, it can also mean a potential lack of awareness of developments in related surgical fields. As plastic surgeons we frequently bring our expertise to cases in collaboration with almost every other surgical subspecialty. For this reason, it is paramount that plastic surgery continues to be represented at multidisciplinary meetings such as the ASC. The more our specialty fragments and specialises, the more important it is that we take time to step back and appreciate what else is going on in the wider surgical world. In surgery, as in life, a broader perspective improves our focus.

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References