Implants in Ireland

Thirty years ago, the first osseointegrated dental implant was placed in a patient in Ireland by Professor David Harris. Paul O’Grady asked him about the history of implants in Ireland.

Implants were once the snake oil of dentistry. After centuries of failure resulting in rejection by the body and frequently leaving behind scarred gums and wrecked mouths, reputable dentists were dismissive of the notion of dental implants. During his own time training to be an oral surgeon at University College Hospital in London in the 1960s and early 1970s, Professor David Harris saw the disastrous effects of screws, vents and blades being used as implants. These had appeared in the late 1970s, David found himself working in Dublin with, among his patients, a pool of 10 edentulous people to whom he felt he had nothing to offer. Then word began to emerge of a Swedish system that was proving quite successful. Results of a 10-year study undertaken by the pioneer of this research, Professor Per-Ingvar Brånemark, had been published in a reputable Scandinavian journal. The world of dentistry remained, for the most part, deeply sceptical. Professor George Zarb of Toronto, however, was intrigued. He visited Sweden and then conducted studies to replicate Professor Brånemark’s work. Zarb’s independent study also had 98% success and early 1980, Professor Brånemark – the oral surgeon Ulf Leckolm and the prosthodontist Sten Jörnsten (mid – was apparent and convincing’.

However, the cost was huge. At the time the £9,000 required to purchase the machines and materials would have bought a house in Dublin. However, Professor Harris was convinced and he carried out the first implant in 1983 at the Mount Carmel Hospital. The lady in question, who had been missing her teeth for 20 years, received a lower jaw of teeth (that’s all that was possible at that time). She is still alive with functioning implants to this day. David Harris points out that the reputation of implants was so bad that when his patients went to their regular dentist or even their GP, they were often advised against proceeding, and David says he understands this. Based on all previous evidence, their advice was understandable. Two consultant prosthodontists collaborated from the start with David: Frank Houston of TCD and Gerard Buckley of UCC but, according to David, it took a period of five to six years for many dentists to accept that a reliable, scientific technique was now in place.

The Irish team developed an excellent rapport with the team in Sweden, and in 1986 Professor Brånemark accepted an invitation to speak at the Royal Academy of Medicine in Dublin. Following meetings, including with Derry Shanley, then Dean of the DDUH, Brånemark decided to make Dublin a centre to collaborate with, along with Professor Daniel van Steenberghe and his team in the University of Leuven in Belgium. The newly opened Blackrock Clinic was put at his disposal. In early 1987, Brånemark, at the invitation of Professor Harris and his colleagues, demonstrated advanced bone grafting techniques in operations on Irish patients in the Blackrock Clinic. Colleagues from over 40 countries attended the demonstration, and the patients were treated pro bono by Professor Brånemark. The following year, a major conference on implants was organised at TCD attended by nearly every major international figure in implants in the world and again addressed by Professor Brånemark. This really put Dublin on the map in the world of the science of implants. And while dental implants are now well established in Ireland and globally, early adopters in Ireland (prior to 1986) included the oral surgeons Nicholas Mahon (RIP), Spencer Woolfe, Peter Cowan and Sean Sheridan. Early adopting prosthodontists included Billy Davis, Noel O’Grady, Andrew Woolfe and Offe Grant (RIP). By 1992, several more teams began providing implant treatment to a very high standard in Ireland. In fact, since then, Ireland has produced a considerable volume of original research in the area at the three dental schools – UCC, TCD and QUB. A seminar to mark 30 years of implant dentistry in Ireland is taking place on November 7 next and is open to all interested parties.

The other major advance has been in the shortening of the delay between the placing of the implants and the fixing of the prosthetics. “In the past 10 years, with the further development of implant surfaces, the gap has been reduced and in suitable cases, the prostheses can be fitted on the same day as implants, says David. He also noted the use of CT technology, which allows planning of implant cases in virtual reality and transferring that information to the operative site. A challenge for the future, he continues, is to understand the role of peri-implantitis: its aetiology, prevention and treatment, and to understand the role of stem cells and growth factors in achieving implant success.

Developments

Since its establishment as a part of mainstream dentistry, the science of implants has continued to advance. These developments have made implants available for the upper jaw, for the partially dentate and for the single tooth. “In fact, TCD was part of the first multi-centre trial for single tooth implants with myself and Frank Houston. Other major advances have been made in bone augmentation, soft tissue grafting and guided tissue regeneration”, says David, who was appointed as a Senior Lecturer in Implant Dentistry at Trinity College Dublin in 2000.