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Short communication

McLaughlin's legacy in the current treatment of facial palsy

A. Poker [a], E. Pescarini [b,c,*], C. Nduka [b], R.Y. Kannan [b]

[a] *Flinders University Medical School, Adelaide, Australia*
[b] *Facial Palsy Unit, Queen Victoria Hospital, East Grinstead, UK*
[c] *Clinic of Plastic and Reconstructive Surgery, Padova University-Hospital, Italy*

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Abstract

Charles Redmond McLaughlin was a pioneer in both facial palsy surgery and in facial plastic surgery (East Grinstead, 1946-1969). Thanks to his work, the personalised treatment of facial palsy was begun.

Keywords: facial palsy; temporalis myoplasty; smile restoration; pioneer surgery; facial surgery history

Charles Redmond McLaughlin was a plastic surgeon at the Queen Victoria Hospital in East Grinstead from 1946 to 1969. He had begun his medical education at Cambridge and continued it in Edinburgh. By the start of WWII, McLaughlin had worked in Ely, and then in the Caribbean as an RAF surgeon with an interest in reconstructive surgery. Concurrently, Sir Archibald McIndoe was introducing pioneering surgical techniques at the Queen Victoria in the treatment of severely burned and deformed RAF servicemen, "The Guinea Pig Club". After the end of the war, McLaughlin joined the Queen Victoria as a registrar before being appointed as a consultant plastic surgeon.[1]

McLaughlin's pioneering approach was to personalise the treatment for each patient with facial palsy, depending on the priority of each separate case, as facial paralysis is a devastating and debilitating condition. It also causes difficulty with communication, and can lead to isolation and mental health issues, which is something that he recognised early on.

He published works on both static and dynamic support for the face after paralysis, and advocated for the use of autologous grafts of the fascia lata when creating static slings, rather than wire or silk, (a preferred option at the time).[2] He also published research on muscular transplants for dynamic facial slings, such as antegrade temporalis myoplasty, which is the forerunner of the current Labbe technique. He correctly deduced that the transfer of the temporalis and masseter muscles were more suited to the young and healthy, who have the ability to retrain these masticatory muscles for use in facial expression.

The guiding principles laid down by McLaughlin in the post-war years remain unchanged. Clinicians today still prioritise the treatment of facial palsy in order of importance, as follows: (i) eye protection, (ii) preservation and restoration of oral function, (iii) relief of symptoms such as synkinesis and pain, and (iv) symmetry of the smile to enable facial expression as a means of communication. Along the lines of McIndoe and the Guinea Pig Club, there is still an emphasis on psychological support and personalised treatment for each patient.

Today, the gold standard for the treatment of facial reanimation is a multidisciplinary approach, which includes work with physiotherapists, psychologists, nurses, and specialist surgeons. Early intervention with facial physiotherapy, Botox, pain management, and psychological support can prevent longer-term synkinesis, pain, and depression.[3]

* Corresponding author at: Clinic of Plastic and Reconstructive Surgery, Padova University-Hospital, Italy.
E-mail addresses: poke0003@flinders.edu.au (A. Poker), elena.pescarini@gmail.com (E. Pescarini).

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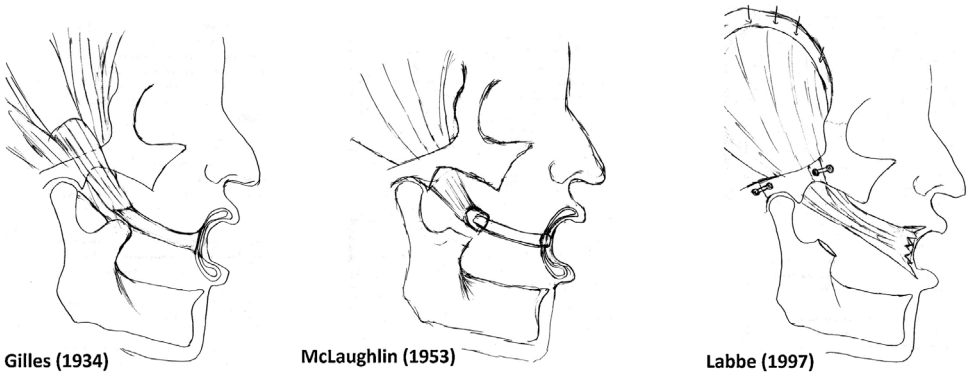

Fig. 1. The evolution of the temporalis myoplasty from retrograde (Gilles) to antegrade (McLaughlin) to antegrade with muscular advancement (Labbe).

For patients with flaccid facial paralysis caused by nerve damage, management should be acute to ensure success (and may involve nerve repair or grafting, or both, direct neurotisation, and the transfer of facial muscle flaps). Acute ocular management is primarily managed with tarsorraphies, done either as a temporising measure in resolution of the paralysis, or as a permanent option in permanent facial palsy. McLaughlin pioneered the eponymous lateral tarsorrhaphy.[4]

Gilles, in 1934, first described the use of the retrograde temporalis myoplasty for reanimation of the smile, but while it was effective, it was not physiological.[5] The McLaughlin antegrade temporalis myoplasty, in which the temporalis is detached from its insertion and anchored to the oral commissure, was a more physiological and refined approach.[6] It has only recently been improved upon by Labbe et al, whose technique negates the need for a fascia lata graft[7] (Fig. 1). While the introduction of microsurgery in the 1960s introduced many other options (such as free muscle and nerve transfers), the temporalis myoplasty remains the workhorse procedure in most specialist centres.

Not only was McLaughlin interested in facial paralysis, but he also studied a wide number of other topics in plastic surgery. He published 42 scientific papers in the area of plastic and reconstructive surgery, and published four books, including "Plastic surgery: an introduction for nurses" in 1950;[8] which is an essential read for those on the cusp of a career in plastic surgery. This shows how diverse and well-rounded a surgeon he was, and how he could use his knowledge and experience to cater for those who suffered from facial paralysis.

Interestingly, early in his medical training, McLaughlin published the paper "The Tragic Beethoven" in the Journal of Music & Letters in 1934, which showed him to be a philosopher at heart.[9] He retired from the Queen Victoria in 1969, and pursued his non-medical interests at his home in Mayfield, Sussex, before passing away on the 29th of June, 1979. In recognition of his contribution to the treatment of facial palsy, the hospital instituted the McLaughlin Facial Palsy Fellowship programme in 2018.

Conflict of interest

We have no conflicts of interest.

Ethics statement/confirmation of patients' permission

Not applicable.

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