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INVITED COMMENTARY

Location of the extracranial extent of leprous facial-nerve pathology may allow leprous facial palsy to be reanimated by free muscle transfer

This paper investigates the position of lepromatous damage to the facial nerve between the brain and the muscle end plates. The temporozygomatic branch of the facial nerve is most commonly involved, leading to lagophthalmos, exposure keratitis and blindness. Should the buccal branch be involved, however, then the ability to show facial expression will be forfeited. Facial muscles paralysed for over 18 months are unlikely to recover and will need replacement. The author confirms that there is no damage to the proximal facial nerve in the skull, certainly as far as the middle ear, and that involvement within the stylomastoid canal is subclinical. He shows in biopsies of the facial nerve prior to its bifurcation that myelinated and unmyelinated fibres are present in sufficient numbers to innervate a muscle graft. The presence of unmyelinated fibres is, nevertheless, a concern, and the suggestion is that their presence relates to probable oedema and compression within the canal, causing some axonotmesis. The latter can also be supported by the quite common development of synkinesis on the contralateral unparalysed side. Axon counting of both myelinated and unmyelinated fibres under the electron microscope would have been of interest at the point of nerve division and subsequent repair to the nerve–muscle graft.

Having argued that the facial nerve is only minimally damaged in its proximal stump, the author quite correctly proceeds to the transfer of a muscle. The argument would have been convincingly proved if the muscle graft had worked, but unfortunately only static hold is achieved after 4 years and we are consequently left uncertain. Despite every test, be it electromyography or Doppler, one cannot be sure whether the failure of activity in the muscle is due to circulatory mishap or poor axonal migration.

If the author is convinced of his argument then the muscle graft could be repeated quite satisfactorily.

A more substantial series would further improve the balance of proof, and one does wonder why more were not attempted.

Too much is made of ‘intelligent’ and ‘stupid’ muscles. Following a substantial number of various muscle transfers to achieve facial animation, there is no discernible difference in quality, and certainly it is not relevant to a spontaneous (responsive to emotion) smile.

The author is to be congratulated on taking a problem, defining its pathology and devising a treatment plan; more needs to be attempted to follow in the path he has demonstrated.

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