

Effectiveness of a multidisciplinary facial function clinic

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Abstract

Objectives To analyse the usefulness of a multidisciplinary facial function clinic (FFC).

Design Retrospective case-note review.

Setting The FFC was established in July 2006 at the Manchester Royal Eye Hospital with attending consultants from Ophthalmology, Skull-Base Otolaryngology, Plastic Surgery, and Physiotherapy.

Participants We retrospectively reviewed the case notes for 59 consecutive patients seen at the FFC from July 2006 to February 2009.

Main outcome measures We documented demographic data, including distance travelled and average journey time.

Results The 59 patients (mean age 46 years) made a total of 106 clinical visits (mean 1.8). The mean distance travelled by a patient was 31.9 miles with an estimated journey time of 47 min, each way. At presentation the average House-Brackmann grade of facial nerve weakness was IV. Ophthalmologist's advice was needed for 58 (98.3%), otolaryngologist's for 57 (96.6%), plastic surgeon for 49 (83.0%), physiotherapist for 58 (98.3%), and 4 (6.8%) were referred for psychological counselling. In all, 47 (79.7%) of our patients needed input from all four consultants during their visit at the FFC. By combining the presence of several consultants in one clinic, we saved an average of 5.1 visits (325.4 miles; 8 h travel time) for each patient.

Conclusion We and our patients feel our multidisciplinary facial function clinic has been an effective service and has continued to work. *Eye* (2011) 25, 1360–1364; doi:10.1038/eye.2011.183; published online 29 July 2011

Keywords: facial nerve palsy; ophthalmology; multidisciplinary team; teamwork

Introduction

Dysfunction of the facial nerve has significant implications on human appearance, function, and indeed on human psychology.¹

The nerve in its extensive anatomy and physiology spans an array of systems. Management of its dysfunction therefore requires input from consultants in several specialties. Patients with facial nerve dysfunction are often plagued with multiple and frequent hospital outpatient appointments, each requiring travel and clinical visits. If surgical intervention is required, this may be at different sites. Absence of co-ordination between the different medical teams and overlapping appointments leads to cancellations and delays in patient care.

At the Central Manchester Foundation Trust, a multidisciplinary facial function clinic (FFC) was established to provide a one-stop service for such patients so that their care could be co-ordinated and they were able to consult the required specialists and undergo treatment with the minimum number of visits and delays.

This study was undertaken to see if the combined FFC proved to be effective.

Materials and methods

The multidisciplinary FFC was established in July 2006 and the attending consultants represent Ophthalmology (oculoplastic surgery), Skull-Base Otolaryngology, Plastic Surgery, and Physiotherapy. Psychotherapy input is also available if needed through referral.

For this report, we retrospectively reviewed the case notes for 59 consecutive patients that were seen at the FFC from its commencement in July 2006 to February 2009. We documented the demographic data, including the distance to the hospital from the patients' home address and the average journey time. These figures were estimated using the internet-based Google Maps service.² Basic parameters about the pathology causing the facial dysfunction and the duration of the dysfunction were also taken into account.

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Results

A consecutive 59 patients (33 women and 26 men) made a total of 106 clinical visits (mean 1.8; minimum 1; maximum 6 visits). Of these 26 were discharged during the period we have analysed (June 2006 to February 2009). The age of our patient spanned over a wide range (Table 1) with an average of 46 years.

The average distance travelled by a patient was 31.9 miles corresponding to an estimated journey time of 47 min, one-way. Of course these figures were markedly variable as we had local patients travelling as little as 2 miles (6 min) locally to one who had to come from Devonshire covering 262 miles (approximately 5 h journey time).

The aetiological spectrum of our patients represented the usual categories of idiopathic, inflammatory, neoplastic, and surgical causes of facial dysfunction. A majority of our patients had lost facial nerve function after surgery for tumour resection, vestibular schwannoma being the commonest cause (Table 2).

Most referrals were from the otolaryngology service, but patients were also referred by neurosurgeons, ophthalmologists, and plastic surgeons (Figure 1). Not all of our patients were referred to us immediately after the diagnosis was made. The mean time between diagnosis and first FFC visit was 40.1 months (minimum 1; maximum 374 months). Severity of facial nerve dysfunction was measured with the House-Brackmann scale. At presentation the average grade of facial nerve weakness was IV (minimum II; maximum VI).

During the course of their initial and follow-up visits at the FFC, all of our patients needed the advice of the ophthalmologist (Table 3). This figure was similarly high for the other specialists. Only four had to be referred for psychological counselling. Table 4 shows the ophthalmic interventions that were required by this cohort of 59 patients. As expected, all patients were instructed to instil lubrication to prevent corneal dryness, and two fifths requiring the insertion of a punctal plug to improve corneal wetting. A variety of oculoplastic procedures were employed to improve malposition of the upper and lower eyelids, as well as reduce asymmetry. More than three fourths of our patients needed input from all four consultants during their visit at the FFC (Table 5); with none requiring fewer than two consultants.

Table 6 shows that what was achieved in 106 visits in the multidisciplinary clinic, would have taken 407 separate visits had the patients come to see the consultants involved in their care individually.

Discussion

Our population did not represent the usual array of pathology causing facial weakness.³ Most of our patients

Table 1 Demographics of our patient cohort

	Mean	Minimum	Maximum
Presenting age (years)	46	4	79
Number of visits (total = 108)	1.8	1	6
Distance travelled one way (miles)	31.9	2	262
Approximate travelling-time one way (min)	47	6	300
Time since diagnosis (months)	40.1	1	374
House-Brackmann scale at presentation	IV	II	VI

Table 2 The aetiological spectrum of our patients

Aetiology	Frequency	Percentage
Bell's palsy	5	8.5
Cholesteatoma	3	5.1
Cochlear implant	2	3.4
CPA meningioma	2	3.4
Facial schwannoma	7	11.9
Glomus tumour	2	3.4
Mastoiditis	1	1.7
Medulloblastoma excision	1	1.7
Parotidectomy	1	1.7
Radical mastoidectomy	2	3.4
Ramsay –Hunt	3	5.1
Squamous cell carcinoma excision	2	3.4
Skull base fracture	1	1.7
Vestibular schwannoma	27	45.8

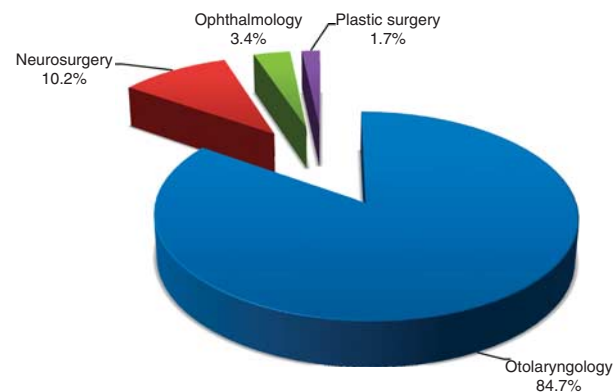


Figure 1 Sources of referral to the facial function clinic (n = 59).

Table 3 Number of patients benefiting from specialist consultant input

Specialty	Frequency	Percentage
Ophthalmology	59	100.0
Otolaryngology	57	96.6
Plastic surgery	49	83.0
Physiotherapy	58	98.3
Psychotherapy	4	6.8

Table 4 Ophthalmic intervention required by the patients attending the facial function clinic

Intervention (n = 59)	Number	Percentage
Gold weight	10	16.9
Lower-lid ectropion correction	3	5.1
Medial canthoplasty	3	5.1
Levator recession	17	28.8
Punctal plugs	24	40.7
Tarsorrhaphy	10	16.9
Botulinum toxin injections	14	23.7
Brow lift	3	5.1
Lubrication with exposure monitoring	59	100.0

Table 5 Number of consultants whose input was required by individual patients at each visit

	Frequency	Percentage
Four	47	79.7
Three	10	16.9
Two	2	3.4

Table 6 Number of visits and the number of consultants seen by each patient, if they had individual appointments instead of the facial function clinic

Number of visits	Number of consultants seen	Frequency	Total consultant-visits	Mean consultant-visits
1	2	2	4	2
	3	7	21	3
	4	24	96	4
2	3	3	18	6
	4	9	72	8
3	4	9	108	12
4	4	4	64	16
6	4	1	24	24
	Total	59	407	6.9

had post-surgical facial nerve weakness (Table 2), and the majority had already been under the care of an otolaryngologist for their initial treatment (Figure 1).

As the average House-Brackmann grade was IV, our cohort of patients had incomplete eyelid closure putting them at risk of corneal exposure. Most of these patients therefore did require input from an ophthalmologist.

Another concern from facial nerve weakness is the asymmetry of the facial appearance. Gross or residual asymmetry of the face often requires advice from a plastic surgeon.⁴⁻⁶ Physiotherapy also offers several techniques ranging from simple home exercises to electrical stimulation of the affected muscles, which can hasten the rehabilitation process (especially if employed early) and can improve the outcome significantly.^{4,7,8}

At our multidisciplinary facial function clinic, we aimed to bring together all the relevant specialists, so that they could see the patient together. Each consultant would see the patient and cover aspects of history and examination pertinent to their management. The 30 or so minutes that most patients spend at the clinic benefited them in multiple ways.

Extrapolating Table 5, we saved a total of 301 (407-106) consultant visits by setting up the FFC. This translates to an average of 5.1 fewer visits for each patient. Given that the average patient travels 31.9 miles coming to the hospital (Table 1), attending the FFC saved a mean of 325.4 miles (5.1 visits; two-way travel) or 479.4 minutes (8 h) travelling to and back from the hospital, by not having to see individual specialists on separate appointments.

A total of 19 203.8 miles reduction in travelling for the 59 patients meant 472 fewer hours on the road, which can only be good for the environment. Extrapolating this for the carers highlights the benefit even further. Although we did not analyse this, this is sure to have had a positive impact on our 'did not attend' rate.

The FFC also provided a great learning opportunity for the professionals involved to learn from each other. The patients also feel more involved as they are better able to ask more questions at the same meeting rather than having to wait weeks to see the other specialists.

The word team has been defined as 'a small group of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they are mutually accountable.'^{9,10}

The UK Department of Health defines a multidisciplinary team as a 'group of people of different health-care disciplines, which meets together at a given time (whether physically in one place, or by video or teleconferencing) to discuss a given patient and who are each able to contribute independently to the diagnostic and treatment decisions about the patient.'¹¹

Teamwork has been proposed as the best approach to delivering quality healthcare. Multiple disciplines coming together as a team have a positive effect on the quality of care, as it has been proposed to reduce errors and duplication and improve cost-effectiveness and efficiency. Also the multidisciplinary approach is more patient friendly, as it also addresses the psychosocial concerns of the patients and their carers as well as solving the medical and surgical issues.¹²⁻¹⁹

Few studies have been published addressing the outcomes of multidisciplinary health care teams. Review of the published literature finds more or less equivocal remarks on the evidence for effectiveness and utility of multidisciplinary approaches.²⁰⁻³⁰

One of the reasons why there is no direct evidence regarding the success of teamwork in healthcare is the

complex interplay of highly variable factors that inevitably become a part of such an approach. These factors include communication, defined team philosophy, commitment, autonomy, individual ability, mutual respect, and effective coordination.^{31–36}

Another reason would be the technical difficulty in conducting analyses of multidisciplinary approaches. Important factors that hinder such efforts include poor definition of team types and theoretic concepts, variability of populations, and healthcare settings support and infrastructure. Also important is the availability of specialists.^{25,37}

Such approaches have been reported to be more useful in delivery of care in the fields of rehabilitation, geriatrics, and psychiatry.²⁰

We feel our multidisciplinary facial function clinic has been an effective service. We certainly plan to continue our practise and would re-analyse our experience in a few years time.

Summary

What was known before

- Patients with facial nerve palsy require management through different medical specialties.

What this study adds

- By holding a combined outpatient service, a multidisciplinary approach, we can provide a more effective and convenient service to the patients.

Conflict of interest

The authors declare no conflict of interest.

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