

# Bell's palsy in Singapore: a view from the patient's perspective

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**INTRODUCTION** Bell's palsy is a well-recognised disease with robust research on its possible aetiologies and epidemiology, but scant information on patients' concerns and concepts regarding the condition is available. We aimed to evaluate the ideas, concerns and expectations of patients with Bell's palsy in Singapore.

**METHODS** A cross-sectional study was conducted at a single tertiary-care hospital in Singapore. Participants were all patients with newly diagnosed Bell's palsy referred to the otolaryngology department either from the emergency department or by general practitioners. Participants were given a self-administered questionnaire and their facial nerve palsies were graded by the consultant doctor.

**RESULTS** A total of 52 patients were recruited, of which 41 were available for analysis. 78.0% of patients were concerned that they were having a stroke upon presentation of the symptoms. Other beliefs about the cause of the disease included overwork or stress (36.6%), something that the patient had eaten (9.8%) and supernatural forces (2.4%). About 50% of patients had tried some form of complementary or alternative therapy other than the steroids/medicines prescribed by their general practitioner or emergency physician. While 39.0% of patients agreed that the Internet had helped them understand more about their condition in addition to the information provided by the physician, 9.8% of them specifically disagreed with this statement.

**CONCLUSION** We have found that patients with Bell's palsy in Singapore are not very knowledgeable about the disease. Although the Internet is a useful resource, a physician's explanation of the disease and its natural progression remains of utmost importance.

Keywords: Bell's palsy, concerns, expectations, ideas  
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## INTRODUCTION

Bell's palsy is defined as an idiopathic, acute, peripheral facial nerve palsy that may show some degree of recovery within six months.<sup>(1)</sup> It is the most common cause of facial nerve palsy, with an approximate incidence of 11–40 patients per 100,000 persons.<sup>(2,3)</sup> Its prevalence in men and women is equal, although the incidence of Bell's palsy in late-term pregnant women has been reported to be higher.<sup>(4)</sup> A majority of patients recover completely from their paresis, but up to 30% of patients may show only incomplete recovery, with associated disfigurement and potential psychological stress, as well as economic and social losses.<sup>(2)</sup>

The treatment of Bell's palsy – to minimise its associated long-term sequelae – has been the focus of much robust research. Recent meta-analyses of research databases and trials support the use of prednisolone for its treatment within 72 hours of the presentation of symptoms.<sup>(1,3,5-7)</sup> However, antivirals have not been shown to effect a significant difference in outcome.<sup>(2)</sup> Aside from preventive therapy, much resources and research have been dedicated to the treatment of incomplete recovery among patients with Bell's palsy. Treatment options include electromyographic rehabilitation, botulinum toxin, oral prosthesis and surgery.<sup>(8,9)</sup>

From the intense research and resources that have been dedicated to investigating the optimal treatment for Bell's palsy

and salvage treatment of its incomplete recovery, it is evident that the medical community recognises the implications and psychological distress associated with facial nerve palsies. For instance, a study by Sugiura et al among Japanese patients reported psychological stress in patients with various facial nerve palsies, of which over 70% had Bell's palsy.<sup>(10)</sup> Another study from China by Huang et al concluded that psychological distress in patients with Bell's palsy was significantly higher than that among control patients.<sup>(11)</sup> To the authors' knowledge, these studies are the only literature available on the psychological distress of patients with Bell's palsy. There is also a lack of research documentation on the opinions, ideas, concerns and expectations (ICEs) of patients with Bell's palsy.

Singapore is a modern metropolitan city that is home to people of different races, religions, cultures and customs, with diverse traditional beliefs and practices. In this city where Traditional Chinese Medicine (TCM) and alternative treatments are readily available, we conducted a study into the psychosocial aspects of patients with Bell's palsy in order to evaluate the ICEs in this cohort of patients.

## METHODS

A cross-sectional study was conducted at a single tertiary-care hospital in Singapore, without any external source of funding.

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**Table I. Opinions of patients with Bell's palsy.**

Statement	No. (%) of 'Yes' responses
I am having/going to have a stroke.	32 ( 78.0)
This condition is due to some supernatural causes.	1 ( 2.4)
This condition is due to overwork/work stress.	15 ( 36.6)
This condition is due to something I ate.	4 ( 9.8)
This condition is related to my underlying medical conditions.	4 ( 9.8)
I will be better after medication.	6 ( 14.6)
I will recover completely to what I was previously.	4 ( 9.8)
I will not recover completely to what I was previously.	5 ( 12.2)
This is infectious and I will pass this to my family members.	0 (0)
I know someone who has had this condition before.	5 ( 12.2)

**Table II. Use of complementary or alternative treatment by patients with Bell's palsy.**

Treatment	No. (%) of 'Yes' responses
Vitamin supplements	9 ( 22.0)
Traditional Chinese Medicine	4 ( 9.8)
Acupuncture	6 (14.6)
Bomoh	0 (0)
Health supplements	3 ( 7.3)
Traditional massage	2 ( 4.9)

**Table III. Use of Internet resources by patients with Bell's palsy.**

Statement	No. (%) of 'Yes' responses
I searched for and read about this condition on the Internet.	21 ( 51.2)
I feel that the Internet helped me know and understand more about this condition in addition to the information provided by doctors.	16 ( 39.0)
I feel that the Internet did not help me know and understand more about this condition compared to the information provided by doctors.	4 ( 9.8)

Approval for this study was obtained from the hospital's institutional review board. Participants were patients who had been referred to the Otolaryngology Department with newly diagnosed Bell's palsy either from the emergency department of the hospital or by general practitioners. After consultation with ear, nose and throat physicians, the participants were asked if they could complete a questionnaire as part of a survey to understand their concerns regarding facial nerve palsies.

A standardised questionnaire was used for all patients. The questionnaire administered to the patients included questions pertaining to: (a) demographical data, including age, gender, level of education and occupation; (b) symptomology, including time to first consultation, and other associated symptoms at

presentation such as headache, ear pain, ear pressure, ear discharge, dizziness, mastoid pain, rashes, hearing loss or tinnitus; (c) ideas and concerns, including whether the patient opined that the symptoms were infectious or associated with stress, ingested food, supernatural causes, stroke or chronic illnesses, and whether the symptoms would or would not resolve completely with medication; (d) usage of complementary or alternative medicines; and (e) usage of online resources.

The questionnaire was administered in English and utilised a simple format of tick boxes after each statement, where patients could mark if they identified with the statement posed. As consent to fill out the questionnaire was obtained from patients by the consultant doctor immediately after consultation, patients who required translation into languages other than English were easily identified. In cases where translation was required, the interpreter or language used for the questionnaire was identical to that used during consultation. Statistical analysis was performed using the Statistical Package for the Social Sciences for Windows version 18.0 (SPSS Inc, Chicago, IL, USA). Descriptive rates for the various components of the questionnaire were computed and frequency tables were generated.

## RESULTS

All the patients who were approached agreed to participate in the survey, giving a response rate of 100%. 52 patients were recruited from September 2010 to March 2011. Of these, two patients were excluded, as one had recurrent facial nerve palsy and another had no physician-documented facial nerve palsy. The responses from nine patients could not be included in the review due to incomplete questionnaires. Thus, 41 patients were available for analysis. Table I shows the opinions of our patients, as garnered from their responses to the questionnaire. Table II provides a breakdown of our findings on the usage of complementary or alternative medicine/treatments by patients with Bell's palsy. Table III indicates the usage of online resources by the cohort.

## DISCUSSION

Our findings indicate that the knowledge of Bell's palsy among local patients was varied. The most prevalent concern among patients at presentation was that of stroke. This may likely be due to the fact that the general population is more familiar with the symptoms of stroke and thus warier of developing this condition. According to Venketasubramanian et al, stroke is more prevalent than Bell's palsy in Singapore, with an age-gender standardised rate of 3.65%.<sup>(12)</sup> By comparison, the international prevalence of Bell's palsy, according to Holland and Weiner, is 0.02%.<sup>(4)</sup>

Only a minority of our patients subscribed to beliefs that facial palsies are related to supernatural forces or caused by certain ingested foods. However, this indicates that a few of our patients did harbour beliefs that are vastly different from the actual aetiology of the condition. These findings are likely rooted in the cultural beliefs of Asians, and therefore, physicians should bear in

mind the need to explain the condition thoroughly to all patients presenting with symptoms of Bell's palsy. For instance, some patients may need to be informed that they do not have to avoid any particular types of food.

Nearly one-third of the patients ( $n = 15$ ) in our study felt that the condition was caused by work-related stress. There is again no scientific evidence that work stress or fatigue is the aetiology of Bell's palsy. This finding is perhaps related to common perceptions such as overwork leading to muscle weakness, which patients had extrapolated to localised facial weakness. At the completion of consultation, only 14.6% of patients ( $n = 6$ ) were confident that they would improve with treatment and medication, as seen from the responses to the questionnaire received. 9.8% of patients ( $n = 4$ ) agreed that they would recover completely to how they were prior to the palsy, whereas 12.2% of patients felt that their recovery would be incomplete. This shows that only a minority of patients were confident of making a good or complete recovery at the time of first specialist consultation. This finding is in agreement with a report on the psychological stress of patients with acute nonsurgical facial nerve palsies by Sugiura et al, which showed that psychological stress among such patients was high during the first hospital visit and subsequently subsided with the recovery of facial function.<sup>(10)</sup> The authors thus concluded that the prognosis and pathology of the disease must be explained thoroughly to patients with Bell's palsy so as to address the psychological aspects of the condition.<sup>(10)</sup> Similarly, Huang et al, in their study of 355 patients with Bell's palsy, concluded that these patients experience a much higher degree of psychological distress than controls.<sup>(11)</sup>

Nearly 50% of patients ( $n = 20$ ) had used some form of complementary or alternative medicine/treatment, with four (9.8%) patients having tried more than one form. The large number of patients who seek such treatment reflects the anxiety and keenness of patients to try all remedies in order to hasten their recovery. In our study, four (9.8%) patients admitted to taking traditional Chinese medication. TCM oral medication has the potential to interfere with treatment or cause side effects if it contains active pharmacological additives such as steroids, which may potentiate an Addison's crisis. Other than TCM, most other modalities, such as vitamin, health supplements and even acupuncture, are essentially not harmful and do not interfere with medical treatment. Although there have been reports from China that suggest that acupuncture is beneficial for the treatment of Bell's palsy,<sup>(13)</sup> recent meta-analyses (including the latest Cochrane review)<sup>(14)</sup> concluded that the efficacy of acupuncture for the condition was inconclusive.<sup>(14,15)</sup> Similarly, a meta-analysis of 'cupping' – a TCM mode of therapy where wooden cups are applied onto a patient's skin – indicated that the trials reviewed had a high risk of bias and that the evidence was not conclusive.<sup>(16)</sup>

More than half of our patients ( $n = 21$ ) had scoured the Internet for more information regarding their condition. More than two-thirds of these patients ( $n = 16$ ) felt that resources on the Internet could help them to understand their condition better and

supplement the information provided by physicians. A minority of patients ( $n = 4$ ), however, felt otherwise. Therefore, although the Internet may be a commonly used tool that empowers patients by helping them understand more about their medical conditions and treatment, it cannot replace the doctor's tailored and essential explanation of the condition to some patients.

There are some limitations to our study. This was a pilot study that attempted to assess the patients' ICEs at their first consultation using a brief, close-ended questionnaire with limited options for answers, which the authors recognise as a definite shortcoming. Ideally, the study should have conducted exploratory discussions with one-to-one private interviews with patients, which would have proven to be a particularly resource-intensive exercise. In spite of these limitations, the results of this pilot study could help to anticipate the possible approaches and views that patients might harbour regarding Bell's palsy, as well as optimally explore their ICEs in-depth.

In summary, this study furnished a cross-sectional insight into the ICEs of local patients with Bell's palsy during their first specialist consultation. Local patients are likely to embrace a variety of beliefs regarding the aetiology of Bell's palsy. Only a minority of patients were confident of a complete recovery following medication during their first consultations. Nearly half of the cohort sought complementary or alternative medicine/treatment, and another half sought more information on the Internet. We conclude that patients with Bell's palsy in Singapore are not very knowledgeable about the disease. More effort should be made to raise awareness of and educate the population on Bell's palsy. The Internet is a ubiquitous and useful resource for patients, but does not replace the physician's role in educating patients and clarifying their doubts and concerns regarding the disease and its natural progression.

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## SMA EVENTS MARCH - MAY 2013

DATE	EVENT	VENUE	CME POINTS	WHO SHOULD ATTEND?	CONTACT
<b>CME Activities</b>					
5 March Tuesday	Mastering Shared Decision Making	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
9 March Saturday	SMA Lecture 2013 <span style="border: 1px solid red; padding: 2px; color: red; font-weight: bold;">LIMITED SEATS!</span>	Grand Copthorne Waterfront Hotel Singapore	TBC	Healthcare and Legal Professionals	Denise Tan 6223 1264 denisetan@sma.org.sg
10 March Sunday	BCLS/CPR + AED Courses	Singapore Heart Foundation	2	Doctors and Clinic Staff	Lin Shirong 6223 1264 cpr@sma.org.sg
10 March Sunday	Mastering Your Risks	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
14 March Thursday	Mastering Professional Interactions	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
16 March Saturday	Death Certification Workshop <span style="border: 1px solid red; padding: 2px; color: red; font-weight: bold;">LIMITED SEATS!</span>	Raffles Town Club	TBC	Doctors and Healthcare Professionals	Denise Tan 6223 1264 denisetan@sma.org.sg
23 March Saturday	SMA Seminar: Tax Obligations of a Medical Practice	Oasia Hotel Singapore	TBC	Doctors and Healthcare Professionals	Denise Tan 6223 1264 denisetan@sma.org.sg
24 March Sunday	BCLS/CPR + AED Courses	Singapore Heart Foundation	2	Doctors and Clinic Staff	Lin Shirong 6223 1264 cpr@sma.org.sg
26 March Tuesday	Mastering Shared Decision Making	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
3 April Wednesday	Mastering Adverse Outcomes	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
6 April Saturday	Mastering Shared Decision Making	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
7 April Sunday	BCLS/CPR + AED Courses	Singapore Heart Foundation	2	Doctors and Clinic Staff	Lin Shirong 6223 1264 cpr@sma.org.sg
9 April Tuesday	Mastering Difficult Interactions with Patients	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
11 April Thursday	Mastering Adverse Outcomes	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
13 April Saturday	Mastering Your Risks	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
16 April Tuesday	Mastering Difficult Interactions with Patients	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
17 April Wednesday	Mastering Adverse Outcomes	Sheraton Towers Singapore	2	Family Medicine and All Specialties	Margaret Chan 6223 1264 margaret@sma.org.sg
20 April Saturday	MPS-SMA Medical Expert Training Course	Shangri-La Hotel Singapore	TBC	Doctors and Healthcare Professionals	Denise Tan 6223 1264 denisetan@sma.org.sg