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CLINICAL PAPER

An investigation into how acupuncture is used by physiotherapists to treat overactive bladder in women

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Abstract

Overactive bladder (OAB) is a common problem, but many interventions are often poorly tolerated and unhelpful for some sufferers. Despite there being no supporting guidance, acupuncture is being incorporated into treatments for OAB in some National Health Service trusts. The aim of this study was to investigate: (1) how physiotherapists working within the field of urogynaecology are using acupuncture to treat this patient group; and (2) the outcomes that they are reporting. Nine physiotherapists volunteered to partake in semistructured interviews that were recorded, transcribed, coded and thematically analysed. Acupuncture appeared to be a treatment that gave positive effects for some patients with OAB; however, it was used infrequently and not as a first-line intervention. Lack of guidance, time and confidence were cited as the reasons for this. Point selection generally followed biomedical reasoning principles. Physiotherapists generally appreciated having another intervention option that had no significant side effects, in contrast with many currently available treatments.

Keywords: acupuncture, clinical reasoning, overactive bladder, physiotherapy, women's health.

Introduction

Overactive bladder (OAB) is defined as "urinary urgency, usually accompanied by frequency and nocturia, with or without urinary incontinence, in the absence of urinary tract infection or other obvious pathology" (Haylen *et al.* 2010, p. 7). It has been estimated that this condition affects 14.7% of women in the UK, and involves direct and indirect costs of €14 043 per sufferer over her lifetime (Irwin *et al.* 2011).

The National Institute for Health and Care Excellence (NICE) guidelines (NICE 2013) recommend that diagnoses should be based on history taking. Further investigations, such as cystometry, should only be performed after the commencement of conservative treatment, and only if detrusor overactivity is suspected. The treatment approach suggested by NICE (2013) initially consists of conservative management; for example, a reduction in caffeine intake, weight loss, fluid modification and bladder retraining.

Drugs for OAB should only be prescribed if a 6-week bladder retraining programme is unsuccessful. However, patients' persistence with medication can be poor, often because of its side-effects and inconsistent outcome benefits (Wagg *et al.* 2012). Should this fail, botulinum toxin A injections, percutaneous tibial nerve stimulation (PTNS), augmentation cystoplasty or urinary diversion may be offered following a multidisciplinary team (MDT) discussion. Although it has been alleged that there is insufficient evidence to support PTNS treatment, it can be offered following failed conservative management should surgical intervention or botulinum toxin A injections be rejected by the patient.

Urodynamic investigation should be performed to confirm the diagnosis of OAB prior to any surgical procedure (NICE 2013). However, this is a costly and a potentially distressing examination with variable outcomes that can generate

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false-positive results in 10–45% of asymptomatic individuals (Steers 2002; Brubaker 2013; Yeung *et al.* 2014).

Although it is not fully understood, the pathophysiology of OAB can be divided into neurogenic, myogenic and idiopathic categories (Steers 2002). Patients with OABs exhibit increased electrical activity in the smooth muscle of the bladder wall (Wein & Rackley 2006). Specific conditions such as outlet obstruction, inflammation and spinal cord injury have been correlated with OAB. Circumstantial evidence suggests that those who suffer from anxiety, depression and attention deficit disorder are more susceptible to the condition, possibly as a result of alterations in their serotonin levels (Steers 2002).

Traditional Chinese medicine (TCM) holds that the process of urination is under the control of the Urinary Bladder, but is also influenced by: the Kidney, through its provision of Qi; the Spleen, which transforms and transports fluids; the Lungs, which encourage the downward spread of Qi; and the Small Intestine, through its ability to separate clear and unclear fluids (Clavey 2003).

Urgency of urination, the primary symptom of OAB, is generally present in only three patterns within TCM:

(1) Damp-Heat within the Urinary Bladder, where urination will also be painful, darker and possibly difficult because of Damp obstructing the flow of the fluids in the Lower Jiao;
(2) Damp-Cold in the Urinary Bladder, where the urine will be pale, and the hypogastric region will feel heavy because of obstruction of the water passages; and
(3) the pattern of Spleen Qi sinking, combined with Spleen Qi deficiency, which results in symptoms such as loose stool and nausea, often accompanied by prolapse of the abdominal organs as a result of the Spleen's control over the upward movement of Qi (Maciocia 2004; Albertson 2009).

With the Kidney providing Qi to the bladder and exerting control over the lower orifices, frequency and incontinence are often linked with its dysfunction (Albertson 2009).

Studies have demonstrated that protocol-guided acupuncture interventions can be effective treatments for OAB (Emmons & Otto 2005; Aydoğmuş *et al.* 2014; Yuan *et al.* 2015). However, the quality of these trials does not appear to be sufficient to allow for their inclusion in the NICE guidelines. Some of the limitations of these studies are similar to those of many others involving acupuncture, and include small sample sizes and poorly formulated methodologies. Various trials in this area use sham or placebo acupuncture, meaning that non-acupuncture points or points not apparently related to the presenting condition may be needled, or non-penetrating needles may be used. There are multiple issues with all these sham or placebo treatments being employed for the control group since each will exert their own potentially therapeutic effect (Langevin *et al.* 2011).

Acupuncture is being utilized to treat OAB within many National Health Service (NHS) trusts, despite a lack of NICE recommendations and protocol guidance. However, the capacity in which it is being used, how it is being clinically reasoned and how it is incorporated within the biomedical model are all unclear.

Aims

The aims of the present study were to:

- develop an understanding of how OAB and its current treatments are viewed within different women's health physiotherapy clinics;
- determine the clinical reasoning pathway used by physiotherapists to decide when and how to implement acupuncture as a treatment for OAB;
- identify the clinical reasoning strategies behind the use of acupuncture for OAB; and
- understand the perceptions and experiences of physiotherapists using acupuncture for OAB.

By achieving these aims, the present authors will seek to identify whether acupuncture is a clinically relevant, evidence-based intervention for OAB, and subsequently, areas that need to be addressed for it to be more effectively and widely utilized.

Objectives

The objectives of the present study were to:

(1) explore the literature to develop a thorough knowledge of the TCM principles of bladder conditions;
(2) identify a sample from an appropriate population of physiotherapists working within the NHS urogynaecological setting;
(3) gather information from the sample to gain an understanding of how acupuncture is used to treat OAB by this group of physiotherapists, through analysis of semi-structured interviews;

(4) analyse the information using thematic analysis, and compare the results to the TCM understanding of urinary symptoms, drawing conclusions from the findings; and subsequently,
(5) identify recommendations and/or areas for future research regarding the use of acupuncture for the treatment of OAB within the NHS.

Participants and methods

Ethical consideration

Ethical approval for the present study was lodged with the University of Westminster, London, UK, prior to the commencement of recruitment.

Sample method

Purposeful sampling involves the selection of subjects for a study who are especially knowledgeable about the subject area (Cresswell & Plano Clark 2011). With availability, willingness to participate and accessibility being important key factors, this sampling method was utilized (Bernard 2002). The selection of participants was carried out in a way that addressed the needs of the study (Morse 1991). Schatzman & Strauss (1973) highlighted the benefits of purposeful sampling when there are time constraints, a key factor in the present research.

Since the first author (J.M.) had previously worked within the NHS as a physiotherapist in a urogynaecological setting, the knowledge that she had allowed for the appropriate use of this type of sampling. Therefore, physiotherapists who were in similar roles were sampled despite there potentially being other health professionals within the NHS who use acupuncture for OAB. Because of this knowledge, question formation was subsequently easier and more focused, enabling the selection of subjects for research who provided rich information in the required field, enabling an in-depth study (Patton 2002).

Sample size

Volunteer sampling was used because potential informants were not known to the first author (J.M.) (Morse 1991). Morse (2000) highlighted that many factors require consideration when identifying a sample size, such as the scope of the study, nature of the topic, quality of the data and study design. Numerous papers give wide boundaries for optimum sample size; however, owing to the specialist and specific topic of the present study, a small sample was considered adequate (Baker & Edwards 2012). Ten interviews were considered initially; however, it was felt that data saturation was reached at nine, and no further sessions were completed.

Inclusion criteria

The sample consisted of chartered physiotherapists working within the NHS in the UK who used acupuncture to treat women with bladder conditions.

Recruitment

Recruitment was achieved via a request for volunteers posted on the Chartered Society of Physiotherapy's interactive online forum (www.csp.org.uk/icsp). Interested parties e-mailed the first author (J.M.), and were subsequently sent an information sheet and a consent form, which was completed prior to the participation in the study.

Interview structure

Interview questions were developed and piloted with an experienced colleague in the field of women's health. The questions were formulated to address the aims of the study, and the pilot ensured that these were comprehensible and could be interpreted correctly. Agee (2009) suggested that one of the difficulties faced by novice researchers who are probing phenomena, perceptions and understanding is that they need to ensure that their questions are relevant to their field of study. The pilot helped to refine and add to some of the main question prompts in an attempt to ensure this.

Semi-structured interviews were carried out by the first author (J.M.), either at the interviewee's place of work or via the FaceTime videotelephony app (Apple Inc., Cupertino, CA, USA), depending on the location and preference of interviewee. Because of the small sample size, this interview structure was chosen since it is an effective and convenient way to achieve the fullest responses and gain high-quality data (Qu & Dumay 2011). The interviews were recorded, and no notes were made during the session in order to minimize distractions and interference (Pope & Mays 2006). The recordings were transcribed verbatim using a word processer (Microsoft Word, Microsoft Corporation, Redmond, WA, USA). The transcripts included all spoken communication, but omitted non-verbal interactions, such as laughter and pauses.

Analysis

The transcripts were initially read by both the first author (J.M.) and her research supervisor (J.W.) in order to develop broad themes focused on addressing the aims. To reduce biases, the latter (J.W.) corroborated every stage of the analysis (Onwuegbuzie & Leech 2007). Each theme was assigned a colour code, and depending on its emergent theme, each line of text was subsequently highlighted with the appropriate colour. Analysis of each theme resulted in the formation of subthemes, which allowed patterns to emerge (Aronson 1995). These subthemes were tabulated with all relevant recorded data.

Results

Thematic analysis

Five broad themes were identified from the interviews.

Current biomedical structure and the biomedical treatment of overactive bladder

The physiotherapists working in this field all appeared to specialize in women's health, which includes areas such as gynaecology, urogynaecology, bowel services and obstetrics. They would generally work in teams with other physiotherapists, and have varying levels of contact with other medical professionals, such as general practitioners (GPs), and additional specialist women's health professionals, such as nurses and consultants, who are part of the MDT.

The referral pathway differed between trusts, but patients would generally either be referred by their GPs or consultants, or self-refer. The route taken often influenced the treatment intervention made prior to the patient seeing the physiotherapist.

Generally, the physiotherapist's first line of intervention for OAB would initially be comprised of bladder retraining strategies, such as fluid management, bladder diary analysis, deferment or distraction techniques, and pelvic floor muscle exercises (PFMEs).

Anticholinergic medication was the main form of biomedical management used to compliment physiotherapy. There appeared to be no strict rule as to whether this was used prior to or after physiotherapy intervention, and it was often dependant on whether patients had been directly referred by a GP, or whether he or she had attempted an intervention prior to referring them on to specialist services.

Other interventions that were reported significantly less commonly included botulinum toxin A injections, sacral stimulation and PTNS treatment.

Most of the participants believed that conservative management by a health professional with specialist knowledge should occur early on, prior to any medication or intervention:

> "I think they get put on medication very early and are not treated conservatively as their first line. [. . .] So generally, people [who] come to the clinic have been over-medicalized and over-investigated."

Overall, the participants views of medication for the treatment of OAB were mixed. The main opinions appeared to be that it can be helpful for some people, but many patients are unable to tolerate the side effects or have poor clinical outcomes. When symptoms do improve, the effects are not always reported as being long-lasting, and symptoms often recur over time:

> "I don't like anticholinergic medication, [and] I don't think patients do [either]."

Medical management, particularly within primary care, was viewed as often being poorly managed. Some participants highlighted the fact that there did not always appear to be consistency with regard to the medications selected, and that drugs were offered too quickly before any education or conservative management was initiated.

Botulinum toxin A injections and sacral nerve stimulation were mentioned less frequently, but these approaches were generally regarded as very invasive treatments that could potentially result in serious complications.

Overactive bladder

When asked to explain what OAB is, the participants' answers ranged from concise, textbook-style definitions, to more visual explanations that included descriptions of habits that were often associated with urgency. Some interviewees mentioned urgency as being stimulated by actions such as putting the key into the front door, or described sufferers as "toilet hoppers".

Only one participant did not use the term OAB, but understood its meaning. She would normally describe the individual component symptoms with which the patient presented.

All the physiotherapists interviewed reported that OAB was a large part of their caseloads,

and it appeared to affect between 20% and 70% of their patients.

The condition was sometimes referred to as a symptom in isolation, but other symptoms, precipitating factors or predispositions were often associated with OAB or its onset:

> "It's not often that you get someone with that [i.e. OAB] only."

Overactive bladder was regarded as a common occurrence after some invasive procedures, especially gynaecological surgery. The participants believed that there appeared to be some indications that, like childbirth, menopause may influence the onset of OAB. They also believed that stress urinary incontinence (SUI) could be a factor that either predated or occurred alongside OAB.

All the interviewees said that there was no specific age range at which OAB was particularly prevalent. In fact, one participant had looked back through her notes to audit the ages of patients who had presented with the condition:

> "I did a retrospective look at all the people I had [examined] over a 12-month period, and apart from the really young teenage type and extreme age 80–90-year-olds, I had the same number of patients from each age group."

Almost all the participants described anxiety as being a common characteristic of patients suffering from OAB. However, they often wondered whether this anxiety predisposed individuals to OAB or *vice versa*. Two interviewees compared this with a chicken-and-egg situation. The descriptions of patient lifestyles often involved elements of overactivity, with sufferers being described as having "hectic lifestyles", "whizzing around" and being "a bit out of control".

Acupuncture intervention

Many of the participants only used acupuncture to treat OAB. This was because there was more evidence to support its use compared to other conditions, although this was still limited:

> "We haven't been using it for stress incontinence problems as there is very limited evidence."

It was also felt that other bladder conditions such as SUI tended to get improve with PFMEs. However, because OAB would not always respond to physiotherapy and conservative management, acupuncture was investigated as an option:

> "[U]rgency does tend to be that bit more resistant – SUI is a bit more black-and-white. [. . .] With urgency, once you have done all your lifestyle changes, then your pelvic floor stuff, there is still a problem."

The participants appeared to view acupuncture as an alternative treatment that could be offered in an area in which there is limited choice. The benefits are that it is a minimally invasive treatment that has no significant side effects. It was also described as cost-effective and relatively simple in comparison to other treatments available:

> "Acupuncture has given us another avenue that we can offer to patients with far fewer side effects."

The only other condition mentioned for which acupuncture was said to be used within the urogynaecological field was painful bladder, and again, this was because it was supported by evidence.

Acupuncture for OAB never appeared to be a first-line treatment. Most participants would initially use conservative measures such as bladder retraining and PFMEs. If these were unsuccessful, then there were differences in the next line of intervention. It was variable whether the interviewees would offer acupuncture or medication as the follow-up treatment. Acupuncture was often used if medication was refused or not tolerated, and patients were sometimes given the option choosing which one of the two interventions they would prefer. Reasons given for why acupuncture was not used initially included that it was not recommended in guidelines (e.g. NICE 2013), and that it was time-consuming. Some participants implied that they did not feel entirely confident about using needles because they only had limited experience of the technique. Acupuncture appeared to be used more frequently if local guidelines incorporated its use in MDT recommendations.

The feedback from patients who had received acupuncture for OAB was generally described as very positive. Some interviewees had carried out audits using validated outcome measures (e.g. the International Consultation on Incontinence Questionnaire – Overactive Bladder), and they reported that approximately 70–80% of patients demonstrated general improvements in their symptoms:

> "A lot of ladies that are getting up three or four times per night are saying, 'Oh my

> goodness, I managed to sleep through all this week, only getting up once.' It's really positive and I've been getting that a lot."

> "I haven't used it a lot, but the ones I have used it on have improved well."

The only other significant barrier that was highlighted was compliance with acupuncture appointments. The participants would often book patients in for between six and eight sessions, but not everyone could attend as regularly as required by the physiotherapist:

> "[S]ome can't commit – we run eight sessions, once per week, for 8 weeks, and some just can't get up to you."

Clinical reasoning

Participants would often report that they used the available evidence to support their use of acupuncture for OAB. However, most also highlighted the fact that the evidence was limited and of poor quality. Most interviewees described the evidence that they used as being research papers, such as randomized controlled trials (RCTs) and systematic reviews, and articles from professional biomedical journals:

> "The studies out there have shown quite positive results [for OAB] – OK, they are very small sample sizes, and some are questionable with sham [. . .] acupuncture techniques. . . ."

Two participants highlighted that acupuncture for OAB was not recommended by the NICE (2013) guidelines. They also gave this as a reason for why they did not use it as an initial intervention:

> "I noticed from the NICE guidelines that they say that they are not recommending complementary therapies."

When explaining their approach to point selection, most interviewees described drawing on a variety of sources, such as research studies, professional courses and journal articles. Some tended to pick acupuncture points that they felt confident about using, others referred to protocols given to them by other colleagues who performed acupuncture and still others employed points that reflected PTNS treatment. Most participants said they used the same points for each patient, but four mentioned that they would include others if additional symptoms were present, although their basis for choosing these points was unclear. There was a lot of overlap between commonly used points. Most interviewees chose Spleen (SP) 6, and Kidney (KI) 2 or KI3 were also regularly employed. Sacral points, such as Bladder (BL) 28, were also reported as being used relatively frequently:

> "I did a search, pulled some articles and we based our point selection on those."

When describing how they viewed the mechanism by which acupuncture worked, participants often mentioned the effect that acupuncture has on the autonomic nervous system. Only one highlighted how she would alter her treatment depending on the presentation of the patient's bladder symptoms, and only one other mentioned using any TCM principles as part of her clinical reasoning.

One participant said that she had to use acupuncture under the guise of PTNS in order to get it accepted at her trust:

> "We are doing a PTNS-type audit – it was a way of signposting it [i.e. acupuncture] under PTNS so that we were able to get it recognized by our consultants."

How do physiotherapists feel about using acupuncture?

Many participants implied that they felt that their knowledge about the use of acupuncture was limited, particularly in relation to the principles of TCM. This did make some interviewees uncertain about whether they should be using it:

> "I think, as a physio, when you think acupuncture, it's quite difficult as your training isn't necessarily from an Eastern approach and it's always very Westernized. But then there [are] undoubtedly some Eastern bits that creep in, and the bit I struggle with is [that] you feel like you are dabbling with something that [you] don't understand."

However, all the participants appeared to see acupuncture as a valuable treatment that they found helpful when dealing with this patient group.

Discussion

Women's health physiotherapists have specialist knowledge, and therefore, are involved in the care of many women who are treated for bladder conditions within the NHS. Overactive bladder is one of the disorders that they regularly treat.

The limited conventional therapeutic options that are available within the biomedical framework, and also the invasiveness of the procedures and side effects involved, have stimulated the use of alternative modalities. Since relatively robust evidence supports the use of acupuncture in the treatment of pain, this has been transposed to patient care for OAB.

Although the participants in the present study reported that acupuncture for OAB had produced some extremely good results, and appeared to appreciate that it had very minimal adverse effects, in contrast to medical management, none used it as a first-line treatment. In fact, they only used acupuncture if all else failed. From an outside perspective, it appears to be contradictory not to use an effective treatment that is easily accessible to these practitioners. However, the interviewees gave some insights into why this might be the case.

Guidelines

One barrier to using acupuncture appears to be the fact that it is not supported by relevant guidelines (e.g. NICE 2013), and therefore, is not unequivocally recognized within the biomedical field as a treatment for this condition. The current intervention structures described by the interviewees did appear to demonstrate considerable variations despite very few options being supported. Medication was sometimes a first-line intervention, and was even prescribed prior to conservative management. In some trusts, cystoscopy appeared to be a more important part of the diagnostic procedure than in others, and some participants had access to treatments such as botulinum toxin A and PTNS, while others did not. Despite the justification of adhering to the current guidelines, these only appeared to be loosely adhered to in many cases. Some interviewees highlighted the fact that they had to compare the similarities of acupuncture intervention to PTNS in order to justify their interventions. Although PTNS is essentially the stimulation of two acupuncture points (i.e. SP6, and KI2 or KI3), it has been justified in the literature by the use of biomedical terminology (e.g. "stimulation of the posterior tibial nerve"). The neuromechanism of PTNS remains unclear, but clinical trials have demonstrated that it can result in significant improvements (Cooperberg & Stoller 2005; Peters *et al.* 2009; Slovak *et al.* 2015). Therefore, PTNS appeared to be a more acceptable than acupuncture to the MDTs within which the physiotherapists worked.

Practitioner experience and knowledge

The participants also reported different levels of acupuncture training. Some had been on short courses that specifically focused on treating women's health dysfunctions, but none appeared to have in-depth knowledge of TCM. A number of interviewees highlighted this as the reason why they did not tend to deviate from established, protocol-based points. None indicated that they had any intention of pursuing further TCM knowledge; however, many had either taken or planned to take short courses to enhance their knowledge of the use of acupuncture for OAB.

A couple interviewees indicated that they believed that they were "dabbling" in something that was part of an entirely different framework, and their limited knowledge of the subject affected their confidence. Perhaps their identity as physiotherapists was being stretched. However, based on the results of the interviews, this is must remain speculation.

Whether enhanced knowledge of TCM, and consequent modification of clinical reasoning for point selection, would improve treatment outcomes is unknown because no research has directly compared results in this field. Many studies have demonstrated non-significant variations between the improvements achieved by true and sham acupuncture, but this could be a result of the prescriptive approaches involved and a poor understanding of sham techniques (Langevin *et al.* 2011). This issue is a continuing problem that affects many acupuncture trials and recommendations, such as alterations in outcome measures, and the way in which such interventions should be studied has been questioned (Langevin *et al.* 2011). Perhaps by moving away from RCTs with protocol-based interventions, altering methodologies and placing more value on different study designs incorporating patient-centred intervention, multicomponent treatments such as acupuncture may be included in guidance documents in future.

Time and compliance

Some interviewees mentioned that time was an issue. Some described acupuncture treatment sessions as lasting for approximately 20 min, and a minimum of three or four treatments were often needed before improvements were noted. Some trusts offered a standard course of six sessions. With the large number of patients presenting with OAB and limited service availability, perhaps offering acupuncture to them all is not feasible.

Patient compliance was also highlighted as a problem by a few of the participants. The interviews did not explore the physiotherapists' thoughts about client commitment, and it might be beneficial to investigate this area further, possibly by conducting a qualitative study of patients' experience of acupuncture treatment for OAB. It is possible that compliance was sometimes an issue because patients may not have believed that the treatment was beneficial. Furthermore, the appointment times offered may not have been convenient, and the lifestyles of the patients, which were described by the physiotherapists as "hectic", might also have been a factor.

Clinical reasoning

Neural modulation. Most of the participants chose acupuncture points on the basis of clinical reasoning, and the reputed effects of these on the nervous system. The parasympathetic innervation of the detrusor muscle, which forms the bladder wall, originates from second to fourth sacral levels. The parasympathetic supply initiates contraction of the muscle, whereas the sympathetic supply originating from the eleventh thoracic to second lumbar spinal levels promotes relaxation (Paik *et al.* 2013). In TCM, the Back-Shu point of the Bladder (BL28) is located at the level of second sacral foramen, whereas the Kidney Back-Shu point (BL23) is found at the level of the second lumbar vertebra, and therefore, both are in areas that could influence autonomic nerve control of bladder contraction. Sacral nerve stimulation, a surgical procedure in which a pacemaker-like device stimulates the S3 levels via needles, has been recognized as a treatment for refractory voiding dysfunction, urge incontinence and urgency–frequency syndrome since the late 1990s (Sutherland *et al.* 2007). Like PTNS, the mechanism of action is frequently mentioned as being unknown (Siegel *et al.* 2000; Sutherland *et al.* 2007). No participant highlighted this link outright, but some did talk about sacral nerve stimulation and, therefore, would have had knowledge of this procedure. Some highlighted its invasiveness, but it was unclear whether this represented some of the evidence that they used as part of their reasoning for employing the sacral acupuncture points. Since clinical reasoning is a process that is difficult to explain, and is often based on personal experiences and subconscious processes, what it actually contributes to these physiotherapists' approach to point selection may never be fully explained (Ajjawi & Higgs 2007).

Emotional factors. Almost every interviewee identified anxiety as one of the traits of women suffering from OAB. In fact, some participants reported that they believed that they were predominantly treating their patients' anxiety rather than their bladder condition. Traditional Chinese medicine does not have any exact equivalency with biomedicine because it is an entirely different system. Maciocia (2016) highlighted the four main disease entities that would correspond to anxiety in TCM: Jing Ji, "Fear and Palpitations"; Zheng Chong, "Panic Throbbing"; Fan Zao, "Mental Restlessness"; and Zang Zao, "Agitation". The above author went on to highlight how many of these disease states would involve fear, and pensiveness or worry, which are emotions of the Kidney and Spleen, respectively (Maciocia 2016).

If pensiveness or worry is a prevalent state, this will deplete the Spleen Qi, leading to Spleen Qi deficiency, which will impair its transformation and transportation function, and result in dampness (Yang & Li 1993). Conversely, a deficiency in Spleen Qi, which could be caused by many factors (e.g. a poor diet or bad eating habits), will result in worry becoming a prevalent emotion. This was echoed in the chicken-and-egg remarks that some of the interviewees made about anxiety and OAB.

Fear is the emotion that is linked with the kidneys. Excessive fear damages the Kidney, and in turn, poor Kidney Qi makes a person more fearful. The Urinary Bladder's ability to hold urine depends on Kidney Qi, and if it is deficient, this may result in frequent or uncontrolled urination, i.e. incontinence (Clavey 2003). According to the *Su Wen* (Unschuld & Tessenow 2011, p. 341), "[from] fear,/then the qi of the spleen takes advantage [of this depletion]".

Essentially, if Kidney Qi is depleted as a result fear, the Spleen will subsequently overcontrol the Kidney. Using the Five Phases or Wu Xing cycle, it is apparent that, if the Spleen (an earth element) overcontrols the Kidney (a water element), then dampness may be a result. Another way of understanding this relationship between the Kidney and Spleen is that the latter's function, i.e. the transformation and transportation of fluids, is dependent on the warming action of Kidney yang on the body fluids, which turning these into a "mist" to allow them to circulate (Kaptchuk 2000).

As highlighted above, since the Kidney and Spleen control the water within the body, disruption of these organs can lead to dampness within the body. Damp is heavy and sinks to the lowest

part of the body, the lowermost organ being the Urinary Bladder (Clavey 2003). This dampness in the bladder makes urine harder to hold, and creates a heaviness in the lower cavity. Feeling an urgent need to urinate can be one of the symptoms of this condition.

The Kidney controls the opening of the lower orifices and circulation of water in the body. Kidney Qi, yang and yin deficiencies often present as frequency, nocturia and incontinence (Albertson 2009). These symptoms are reflected in the definition of OAB that is used within biomedicine.

Point selection

The link between the symptoms of OAB, and the patterns of Spleen and Kidney organ dysfunction and Damp could be why the combination of the KI2 or KI3, and SP6 acupuncture points, as used by many of the physiotherapists interviewed, appeared to have such a good effect. The primary effect of SP6 is to fortify the Spleen and remove Damp, particularly from the Lower Warmer, where the bladder is situated (Hecker & Steveling 2007). Kidney 3 tonifies the Kidney yang, yin, Jing and Qi, and KI2 clears Heat from this organ by generating yin (Cheng 2010).

With urgency being associated with Spleen Qi sinking, and also Damp Heat or Cold presentation, and the other clinical symptoms of OAB, such as incontinence, nocturia and frequency, being linked to a Kidney deficiency, these points appear to "cover all the bases". Research into PTNS highlights that one of the locations used is in the area of SP6, and this was cited by many participants as a strong justification for these points being selected. Originally described by McGuire *et al.* (1983), this technique has been reproduced many times in studies using the corresponding point behind the malleolus (KI3), and sometimes, in the arch of the foot (KI2). However, apart from mentioning that the location of the needle is at SP6, the above authors gave no explanation for why it is located there, despite the potential for stimulating the tibial nerve and many other points along its pathway.

Other reported strategies for point selection involved the participants imitating their colleagues and hospital practices, which resulted in a protocol-based approach. This type of intervention is based on treating symptoms, and not necessarily the root cause. Some of the physiotherapists who were interviewed said that they would change their approach to treatment if the initial point selection did not produce an effect, and a small number would add sacral points if there was no initial response. One or two mentioned that they might add patient-dependant points (e.g. if anxiety was present), but their reasoning strategies were unclear.

Patients often present with complex co-morbidities, and without assessing them within a TCM framework, the underlying causes of their conditions may not be addressed. This may be why some of the interviewees mentioned that they would sometimes see clients every so often to "top-up" their treatment, or why it would have no effect at all on others.

Limitations

Sampling for the present study was done purposefully, and involved both volunteering and limited recruitment methods. This means that the perspective on current service provision was only from the point of view of small number of physiotherapists who worked in a handful of NHS trusts. Two of the trusts were represented by three and two participants, respectively, which helped to establish whether the views of physiotherapists differed within the same department, but limited the total number of NHS sites discussed to six. There may be greater variability in other trusts that might conflict with the present results, and therefore, because of the limited numbers involved, generalizations cannot be made.

Recruitment was also carried out on a volunteer basis. This form of sampling means that it is not known why participants have agreed to participate (Morse 1991). Logically, it would make sense that the volunteers would consist of those who should have something positive to say, and this would severely reduce the likelihood of negative cases. Such negative cases would be important to establishing an accurate overview of how acupuncture is perceived and used within the NHS (Morse 1991).

Although the present subjects were required to have used acupuncture to treat OAB so that they had adequate knowledge to complete the interview, a random sample of all physiotherapists who have used acupuncture for OAB would allow for greater generalizability and less bias. However, the amount of information and time required would have been far in excess of the constraints affecting this study.

The present study was first of this kind conducted by the researcher (J.M.), and as such, the quality of the interviews may have been affected.

Rubin & Rubin (2012) described how experience with interviewing is important: mistakes are often made early on, and interview techniques are refined and flexibility while interviewing developed over time. The wording and structure of the questions involving prompts were developed in conjunction with a more-experienced researcher (J.W.). This was an attempt to facilitate gathering rich and relevant data in the interviews. However, the researcher (J.M.) was aware that the earliest sessions that she conducted were not as developed as the later ones.

One of the interesting issues raised in the interviews was why acupuncture was not considered as a first-line treatment more often. However, there was no direct questioning of the interviewees about why they did not use acupuncture to treat OAB, or if they did, why they did not use it more frequently. Who acupuncture would be used on, and why, were covered in reasonable detail; however, the line of questioning used did not fully embrace how the patients were selected. Some participants had only used acupuncture on a handful of people, and further investigation of why they chose those specific patients and not others could have been helpful. This might have provided greater understanding of their reasoning process, and the barriers to using acupuncture that they faced.

Because of limited time, no triangulation was carried out, which might have increased the validity of the findings (Pope & Mays 2006). Perhaps observing the physiotherapists in their clinical settings while they assessed and treated clients, interviewing the patients themselves, or even reviewing clinical case notes might have validated the interview findings further.

Conclusions

Acupuncture is being used to treat OAB by some physiotherapists in some NHS trusts, but the present study was unable to quantify this finding precisely. However, it was apparent that the participants had encountered many patients who were seeking help for the condition, and some had employed this form of treatment as an alternative option. Although acupuncture appears to produce good results, the main barrier to it being used more frequently is that it is not recognized within the NICE (2013) guidelines. Should it be validated, it could potentially represent another effective treatment for OAB in the NHS, one that has minimal adverse effects, and is potentially more cost-effective than surgery, medication and the currently available neural modulation techniques. In order to do this, the evidence produced to support acupuncture needs to be of a high enough quality to be recognized by the bodies that compile the treatment guidelines.

Although treatment protocols were generally used by the present participants, and TCM knowledge was highlighted as an issue, patient outcomes appeared to be good. Is OAB a condition that can be treated symptomatically with acupuncture using a protocol approach? This would not necessarily holistically treat the patient, which is the aim of TCM, but patients' expectations might be met if they were only presenting for OAB. Since this is such a specialized area of physiotherapy, further education could be provided for those who wish to pursue the use of acupuncture for OAB, which would improve their confidence and clinical reasoning skills.

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