The Pituitary Gland - Classical Connections and Treatment

Abstract
This article aims to discuss the question, ‘Does the pituitary gland, known to modern biomedicine, have a classical Chinese medical counterpart?’ It attempts to draw together the energetic concepts found in the ancient Chinese texts with the biomedical understanding of the pituitary gland, how each informs the other and the correspondences and convergences of these two paradigms. Specific acupuncture treatment strategies for pituitary gland pathology are presented, together with case histories from the author’s clinic.

Introduction
The hormonal or endocrine system is one of intricate and delicate checks and balances, each part interwoven and interacting with the other components of the system. It is a vital part of homeostatic functioning, responding to minute changes within the body, keeping it in constant dynamic harmony. As such it offers many fascinating examples of the yinyang (陰陽) web of influences and counterinfluences at work throughout the body. The endocrine system is not a self-contained system but influences and interacts with other major bodily systems. From the purely energetic through to the physiological, the effects of the endocrine system are encountered routinely throughout clinical practice and addressing any imbalances is very often of strategic importance in treatment.

Endocrine disease is increasingly common, particularly in modern industrialised countries. In fact, some estimates suggest that more than half of the population will suffer from an endocrine disease at some point in their lives. Adrenal exhaustion, diabetes, hypoglycaemia and sub-diagnostic blood sugar imbalance, thyroid and sub-diagnostic thyroid problems, polycystic ovarian syndrome (PCOS), irregular periods and other menstrual problems, menopausal symptoms and decreasing levels of fertility are among the problems commonly encountered. Some of these endocrine diseases result from causes said to be endogenous to the endocrine system and can be addressed with specific hormonal treatment protocols. Others have a cause exogenous to the endocrine system and would need to be treated primarily with other protocols in combination with hormonal protocols.

At the centre of the endocrine system is the pituitary gland, which has direct regulating effects on other major endocrine glands. Very closely allied to the pituitary is the hypothalamus, which acts to integrate a complex set of external, neural and hormonal inputs (see Figure 1). Although normally considered to be part of the autonomic nervous system, it exerts a direct influence on the function of the pituitary by its secretion of releasing and inhibiting hormones. Together, the pituitary gland and hypothalamus can be said to organise the endocrine system.

In Japanese acupuncture there are protocols to specifically address endocrine imbalances. Such imbalances can be tackled from various major points on the hormonal web and do not necessarily need to be treated solely through the pituitary. For example, an ovarian imbalance may also be addressed through the use of the adrenal protocol. However, because the complex interconnections of the endocrine system can make it difficult to fathom the precise origin of a problem, the pituitary gland, with its pivotal role in most major hormonal axes, is often a good starting point.
Overview of the pituitary

Anatomy and physiology

The pituitary gland, known also as the hypophysis, has a diameter of approximately 14 millimetres and weighs under a gram. It is comprised of two parts, the posterior lobe (neurohypophysis) and the anterior lobe (adenohypophysis), each of which has distinct hormonal actions. It belongs to a part of the brain known as the diencephalon, which also consists of the hypothalamus, thalamus, pineal gland and optic chiasm. It lies below the hypothalamus, attached to it via a tube of neural tissue called the infundibulum, in a small hollow in the middle of the sphenoid bone called the pituitary fossa.

The sphenoid bone articulates with five of the eight bones of the skull and is central to its structure. It contributes to the formation of the posterior lateral wall of the orbital cavity, contains two of the paranasal sinuses that communicate with the nasal cavity proper and the superior orbital fissure. In addition, it forms the major part of the temple area on the side of the skull. Having this many connections with the other bones of the skull increases the chance that a displacement of the sphenoid bone will be diagnostically significant. Trauma to the orbital and nasal areas, for example, is commonplace and potentially results in slight displacement of those bones, with a consequent effect on the alignment of the sphenoid bone and therefore the function of the pituitary. In the case of the paranasal sinuses, chronic sinus infections or inflammation may again cause a shift in the alignment of the sphenoid bone, thereby affecting the pituitary function.

It is interesting to note that the pituitary, which is centrally associated with hormonal balance within the body, should be located anatomically in the centre of the skull and furthermore in a structure - the sphenoid bone - that because of its position acts as a central balancing structure for other bones of the skull.
Embryology

Embryologically, the formation of the pituitary is fascinating and provides perhaps one of the clearest examples of the coming together of yin (陰) and yang (陽) within the body. The pituitary is formed from two tissues of different embryological origin, which are separate from each other in form and function. One could be said to come from a more earthly yin aspect of the body, the other a more heavenly yang aspect. The anterior lobe is formed from the early embryonic tissue called stomodeum, which becomes the roof of the mouth and foregut. By week four of development this tissue invaginates and a small pouch migrates upwards, eventually separating entirely from the original tissue. This small parcel of tissue then joins with and encircles the posterior lobe of the pituitary, which has formed from tissue descended from the brain (in fact the hypothalamus) (see Figure 3).

The meeting of yin and yang

Through its connection to the earth (mouth and foregut) and its position being relatively ‘below’, the anterior pituitary can be seen as comparatively yin. Whereas, due to its more heavenly origins (the brain) and the fact that it is relatively ‘above’, the posterior pituitary can be seen as comparatively yang. These yin-yang aspects are born out further by the hypothalamus and posterior lobe of the pituitary, which is responsible for acting on the comparatively passive and receptive anterior lobe. Thus the embryological development of the pituitary provides a very clear example of a synthesis of yin and yang within the body. Indeed the ultimate formation of the pituitary by the coming together of these two tissues shows a rather nice semblance of the classic yinyang symbol (see Figure 3).

Classical Chinese connections to the pituitary

In the Suwen (素問, Basic Questions) chapter 1, the pituitary gland is not specifically mentioned, rather it is the results of its functions that are observed. When asked by the Yellow Emperor about why when people grow old they can no longer have children, Qibo in his reply explains the seven and eight year cycles apparent in women and men. At the ages of fourteen for women and sixteen for men he describes the arrival of tiangui (天癸), and at the ages of forty nine for women and fifty six for men, its exhaustion. He then explains that for men there is a further stage, when at the age of sixty four tiangui is used up entirely. Unschuld chooses to leave gui (癸) untranslated, although other authors have translated tiangui variously as ‘menstruation’ for women and ‘sexual energy’ or ‘sperm’ for men. Another understanding of the two characters tiangui, that potentially connects them to the pituitary and its functions, is also possible.

In the body tian (天, heaven), relates to the upper part (or something in the upper part), and therefore often refers to the head. Gui (癸) is the character used for the tenth stem, which corresponds to the yin stem of the Kidney. Therefore these characters refer to a ‘yin (of) water’ located in heaven, or a heaven’s water. A further translation of gui that resonates with this idea is that of a ‘dew drop’. This translation contains images of both heaven and earth - a pure yin essence that condenses from heaven and manifests on earth. This corresponds with the fact that

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**Figure 3. The embryonic formation of the pituitary gland**
pituitary hormones arrive from ‘heaven’ (the head) and manifest their effects on ‘earth’ (the body). This concept of tiangui being a ‘heavenly water’, rather than simply blood and essence associated with the arrival of fertility, is also expressed by Zhang Jiebin in his commentary on Suwen chapter one:

“All [earlier] authors have explained the term 天癸 as referring to [male] essence and [female] blood. But if we analyse the text, where it states: ‘In females, with two times seven the 天癸 arrives; … the monthly affair moves down periodically. In males, with two times eight, the 天癸 arrives; … the essence qi flows off,’ then in both cases 天癸 comes first and is then followed by essence and blood, respectively. There is a clear differentiation between what comes first and what comes second; each has its own meaning. How then could anyone say that 天癸 is essence and blood, or that blood and essence are 天癸！癸, now, is the water of heaven; it is the name of a [heavenly] stem.”12

Looking at its position within the order of the ten stems, gui appears in a highly significant, even pivotal position. The character for the ninth stem, ren (壬), has the meaning of pregnancy or the potential to become pregnant.13,14 It is part of the character used for the Ren Mai (任脈, Conception Vessel), and together with the radical 女 (女, nü, for woman), it also has the meaning of ‘pregnant’. The character for the first stem, jia (甲, 甲), it also has the meaning of ‘pregnant’ for woman (女, nü) and essence associated with the arrival of fertility, is also described in connection with a heavenly water, rather than simply blood and essence associated with the arrival of fertility, is also described in connection with a heavenly water, rather than simply blood and essence.

### Pituitary hormone

<table>
<thead>
<tr>
<th>Pituitary hormone</th>
<th>Main target organs and associated hormones</th>
<th>Major biomedical functions</th>
<th>Energetic correspondences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gonadotropin hormones; leuteinising hormone (LH); follicle stimulating hormone (FSH)</td>
<td>Ovaries: oestrogen and progesterone; testes: testosterone</td>
<td>Fertility and reproduction; proper growth and functioning of the sexual organs; sexual maturation at the correct time of life</td>
<td>The 7 and 8 year cycles, in particular the timely arrival of tiangui; jing; Kidney qi (in all its forms)</td>
</tr>
<tr>
<td>Growth hormone</td>
<td>Widespread on nearly every organ and tissue in the body</td>
<td>Acts on the liver, producing IGF-1 (insulin-like growth factor 1) that, in conjunction with growth hormone, allows normal growth of tissues, organs and bones, in particular the long bones; affects protein, carbohydrate and lipid metabolism</td>
<td>Jing; Kidney qi (particularly bones and marrow); yingqi; Stomach and Spleen; Liver qi</td>
</tr>
<tr>
<td>Thyroid stimulating hormone</td>
<td>Thyroid: thyroxine (T4) and tri-iodothyronine (T3)</td>
<td>Normal growth and development of the skeletal and neural systems in the foetus; normal bone growth after birth; normal tooth development; maintenance of healthy bones, teeth and the reproductive system; stimulates renal erythropoietin production; increases metabolism in a number of ways, including increasing carbohydrate absorption from the digestive tract and promoting rapid uptake of glucose by the cells; promotes lipid metabolism; enhances the effect of growth hormone, cortisol, adrenaline and noradrenaline</td>
<td>Jing; qi and blood; Kidney qi (particularly bones, marrow and teeth); yingqi; Stomach and Spleen. It is undoubtedly significant that Renying (人人) ST-9, located as it is adjacent to the thyroid, has the name of ‘Man’s Welcome’, and ‘Man’s Prognosis’; and in Japan is frequently called “welcome to be adult”</td>
</tr>
<tr>
<td>Adrenocorticotropic hormone (ACTH)</td>
<td>Adrenal cortex: cortisol; aldosterone</td>
<td>Regulates the body’s response to stress; blood sugar homeostasis; anti-inflammatory; normal levels enhance immunity; higher levels suppress immunity</td>
<td>Kidney qi; yingqi; weiqi</td>
</tr>
<tr>
<td>Prolactin</td>
<td>Breast</td>
<td>Initiation and maintenance of lactation; adolescent breast development</td>
<td>Yingqi; Stomach qi</td>
</tr>
<tr>
<td>Oxytocin</td>
<td>Smooth muscle of breast and womb</td>
<td>Contraction of smooth muscle and release of milk during breast-feeding; contraction of smooth muscle of womb before and after childbirth</td>
<td>Spleen qi; Liver qi</td>
</tr>
<tr>
<td>Arginine vasopresin (ADH)</td>
<td>Kidney</td>
<td>Increases water resorption</td>
<td>Kidney and Bladder</td>
</tr>
</tbody>
</table>
Linking the classical and biomedical

If we relate these classical concepts back to the known biomedical functions of the pituitary hormones, strong connections immediately become evident. Firstly, that the concept of tiangui and the stages of life with which it is associated - particularly the ability to have children between certain ages - are very closely analogous to the activation and decline of the reproductive functions by the gonadotropic hormones that are under the control of the pituitary. Secondly, again under the influence of the pituitary, growth hormone, thyroid stimulating hormone and the gonadotropic hormones have effects in the body that resonate strongly with the classical understanding of jing (精, essence) and the Kidney (腎, shen) and their particular connections to growth, reproduction, teeth, bones and marrow. Looking at the full spectrum of effects generated by the pituitary hormones, one can see connections not only with jing and Kidney qi (腎氣, shen qi), but also with ying qi (營氣, nutritive qi), wei qi (衛氣, defensive qi), the Spleen (脾, pi), the Liver (肝, gan) and the Bladder (膀胱, pang guang). An overview of the pituitary hormones and their energetic correspondences are summarised in Table 1.

Treatment of the pituitary

Kiiko Matsumoto Style Japanese Acupuncture has a particular protocol for directly treating the pituitary gland. It also offers a secondary protocol to address a pituitary problem resulting from structural imbalance of the sphenoid bone. In practice both these protocols may have to be combined to effect the best treatment. In addition, although treating the pituitary may be sufficient to resolve a disharmony, supplemental protocols for treating the other aspects of the hormonal web may of course be required, depending on the clinical presentation and response of the patient. A clinical decision on the appropriateness of a particular protocol is taken on the basis that the acupuncture points belonging to that protocol have a significant effect on the relevant diagnostic reflexes. It is important to note that it is not necessary to have a medically diagnosed hormonal problem for treatment of the pituitary to be considered, or indeed for it to be effective. Many patients' hormonal blood test results fall within normal medical parameters, and they may have no significant symptoms medically detectable, yet from an acupuncture perspective they still have hormonal imbalances manifesting at the energetic level, which are diagnosable and affect their health significantly.

The pituitary protocol

**Primary points**
- Houxi (後谿) SI-3
- Zanzhu (瘧竹) BL-2
- Yuyao (魚腰) M-HN-6
- Quyuan (曲垣) SI-13
- Pituitary shu (俞穴) point

**Additional points**
- Hanyan (顴脈) GB-4
- Xuanlu (懸靚) GB-5
- Xuanli (懸釐) GB-6

This treatment protocol was developed by Master Nagano20 and has intriguing connections in its selection of points. The use of Houxi SI-3 as the opening point of the Du Mai (督脈, Governing Vessel) gives a direct connection to the pituitary, located as it is in the upper dan tien (上丹田, upper cinnabar field) within the flow of the primary pathway and third branch22 of the Du Mai. Zanzhu BL-2 also lies along the Du Mai and is next to Jingming (睛明) BL-1 where the Du Mai emerges at the inner canthus of the eye.23-25 The area of the eye is significant to treat the pituitary, as it provides connections to reproduction and fertility and therefore clues as to why Master Nagano chose this point. Chapter sixty of the Sanon states that the pathway of the Ren Mai ‘enters the eyes’.26 The Lingshu (靈樞, Spiritual Pivot) chapter five refers to the eyes as ‘mingmen’ (命門, life gate). Both these references, to the Ren Mai and mingmen, hint at a connection to fertility and the continuation of life.

Further interesting connections between the eye and the hypothalamus come from the Lingshu. Chapter 21 speaks about the Yinjiao Mai (陰経脈, Yang Heel Vessel) - and Yangjiao Mai (陽経脈, Yin Heel Vessel) and their relationship to the eyes. The movement of these two channels within the brain - described as ‘yang moving into yin while yin moving outward to meet yang’27 - has resonance with the crossing of the nerves within optic chiasm. The optic chiasm lies directly adjacent to the hypothalamus from the earliest stages of embryological development and has a direct neural connection to the hypothalamus via the retinohypothalamic tract. In addition the Yin- and Yangjiao Mai are the coupled channels of the Ren and Du Mai, again alluding to a connection with fertility and the pituitary.

Yuyao (M-HN-6) is used to support the action of Zanzhu BL-2. Additionally, both points, located as they are on the frontal bone, are anatomically linked directly with the sphenoid bone and pituitary fossa via the cribiform plate of the skull.

Hanyan GB-4, Xuanlu GB-5 and Xuanli GB-6 are located along one edge of the sphenoid bone and are chosen for that reason. These three points are situated very close together and in this context can be seen as a group. The names Xuanlu and Xuanli provide further interesting images. Grasping the Wind21 translates xuan (縣) as ‘suspended’, lu (絡) as ‘skull’ and li (理) as a ‘tuft’ or ‘something minute’. Combining these images conjures up the image of the pituitary as being ‘something minute suspended within the skull’.

The use of Quyuan SI-13 on the back of the body connects us with the idea of heaven, via its astronomical
connotation. The character yuan (垣), in addition to meaning ‘wall’, in ancient China also had the meaning of one of three groups or ‘yuan’ into which the heavenly bodies were organised.\(^3\) Also, as mentioned earlier, its location on the upper border of the scapula resonates with the sphenoid bone as a horizontal balancing structure in the body.

The pituitary shu point, although unique to Japanese acupuncture, can be seen in the context of local points such as Tianzhu (天柱) BL-10, Yuzhen (玉枕) BL-9, Naokong (頸空) GB-19 and Naohu (膈) DU-17, which have connections with heaven, jade (a stone often associated with jing-essence) and the brain respectively. A further possible connection of this area to the optic chiasm and a link to the hypothalamus and pituitary can be found in Lingshu chapter 20 where it states, ‘The great yang meridian of foot passes through the back of the neck to enter the brain which exactly belongs to the root of the eyes and it is called the eye connective’.\(^3\)

**Case histories**

The first three case histories presented below have been chosen to illustrate the potential for using the pituitary protocol as a valuable method for treating clinical presentations that would not necessarily be considered as endocrine problems. The fourth case history is one that more immediately suggested that a pituitary treatment was indicated. They are presented in an abridged form in order to concentrate on the most significant factors. Naturally, treatment of the pituitary was not the only treatment given to these patients but part of the overall strategy. However, in each case it formed an essential core of the treatment. To demonstrate the approach taken the protocols and points listed below were the ones most commonly employed in treatment, rather than an exhaustive list of every point used.

**Case history 1 – Rheumatoid arthritis**

**Overview**

A woman of 37 first came to the clinic in 2006. She had previously seen a Western herbalist and made changes to her diet, cutting out wine, red meat and citrus fruits. These changes had brought a slight lessening of her symptoms. At the time of the first appointment she was taking two kinds of anti-inflammatory tablets.

**Diagnosis**

- Hara diagnosis revealed the following positive reflexes: Ovary, Immune, Adrenal, Liver, Oketsu
- Chest diagnosis revealed Danzhong (膻中) REN-17.
- Fire point diagnosis revealed all the fire points of the twelve channels were active.
- Head and neck diagnosis revealed positive reflexes at Zanhu (攒竹) BL-2, Yuyao (魚腰) M-HN-6, Tianyou (天牖) SJ-16, Sibai (四白) ST-2 and Juliao (巨髎) ST-3. In addition this patient had a very nasal voice, indicating the probability of low-grade sinus irritation.
- The joints affected by RA were also palpated and found to be extremely painful.

**Main treatment protocols and points**

- Pituitary protocol (as above).
- Oketsu protocol: Zhongfeng (中封) LIV-4,\(^1x\) and Chize (尺澤) LU-5\(^2x\).
- Sinus congestion protocol: Qiuxu (丘墟) GB-40, Neiting (內庭) ST-44; Lidui (厉兌) ST-45, Sibai (四白) ST-2 and Juliao (巨髎) ST-3.
- Immune system imbalance protocol: Master Nagano’s immune point;\(^3x\) Zhaohai (照海) KID-6 and Tianyou (天牖) SJ-16.
- Master Nagano’s metal-water\(^4x\) treatments were applied frequently.
- Home-use of the Tiger Warmer\(^5x\) on Sibai ST-2 and Juliao ST-3, and Jala Neti\(^6x\) for clearing the sinuses were also recommended.

**Discussion**

Medically it is known that it is common for RA to subside during pregnancy and flare up again postpartum. This was first observed and reported in 1938.\(^3\) Since that time a number of studies have confirmed these findings. The exact physiological mechanisms for this ‘have remained elusive, although the potential role of a number of immunological and hormonal factors has been described’.\(^3\)

The possible aetiological role of the female sex hormones in RA is also evidenced by the fact that ‘women before menopause are affected three times more than men. After the menopause the frequency of onset is similar between the sexes’.\(^3\) There is, however, another group of patients (into which this woman seemed to fit) that actually get worse during pregnancy: ‘in approximately 30 per cent of RA patients the course remains unchanged or worsens during gestation and indeed the first symptoms of RA may develop during pregnancy or shortly thereafter.’\(^3\)

This patient had always had a very regular 28-day cycle...
with no remarkable symptoms, other than some mild discomfort and minor pre-menstrual tension (PMT). She had conceived all three children very quickly and easily. However, it seemed clear from her symptomatology there was very likely to be a hormonal component to her RA. The appropriateness for the use of the pituitary protocol points were then tested and verified by the successful release of abdominal diagnostic reflexes for the ovary and adrenal glands, and also a reduction in pain at specific arthritic areas such as the wrists.

Although the patient did not report sinus problems as such, the nasal tone of her voice and positive reflexes found at ST-2 and St-3 indicated a likely long-standing low-grade irritation. As explained above, the nasal sinus has a direct connection to the sphenoid bone and therefore chronic sinus problems can adversely affect the pituitary function. Inclusion of sinus protocol proved very effective at reducing the arthritic symptoms. Treatment was additionally aimed at reducing inflammation and balancing the immune system response, and this proved helpful. It also became clear over the course of the treatments, that good functioning of her Liver played a critical role in fully processing the hormones, allowing her body, which was responding negatively to her own hormones, not to become overburdened by their prolonged presence in the system. Yuyao (M-HN-6) was particularly effective at releasing the Liver diagnostic reflex, reinforcing this connection between the pituitary and the Liver.

The patient’s response was rapid and she quickly had a marked reduction in pain and swelling. As treatment continued it became increasingly clear that the most effective root level treatments for reducing the symptoms of pain and loss of joint mobility were the pituitary protocol and the sinus treatments. As well as her own very positive reaction to treatment, in 2008 X-rays revealed that there had been no increase in the damage to her hand and the consultant said he ‘no longer see the original problem’. Her use of anti-inflammatories continued on a periodic basis. She has subsequently moved much further away but still has occasional treatment when possible.

Case History 2 – Post-partum symphysis pubis and lower back pain

Overview

N, a generally very healthy woman of 28, came to the clinic shortly after the birth of her first child complaining of pain and a feeling of weakness on the pubic bone, together with tightness and pain in the lower back and across the top of the buttocks. She had experienced a displacement of the coccyx during childbirth.

Diagnosis

- Hara diagnosis revealed the following positive reflexes: pain along the superior edge of the pubic bone and particularly in the area of Qichong (氣沖) ST-30, and pain along the inguinal ligament, particularly on the right side.
- Blood sugar reflex.
- Palpation of the back revealed pain above and below the iliac crest region bilaterally and at Yaoshu (腰俞) DU-2.

Main treatment protocols and points

- Pituitary protocol: as above
- Symphysis pubis pain: Fuliu (復溜) KID-7, Shufu (俞府) KID-27, Ququan (曲泉) LIV-8 and Jinsuo(筋縮) DU-8.
- For coccyx displacement: Jingqu (經渠) LU-8 and Yaoshu (腰俞) DU-2 and the coccyx itself – both treated directly with Tiger Warmer.

Discussion

During pregnancy a softening and lengthening of the pubic symphysis is brought about by the hormones relaxin and progesterone. Symphysis pubis pain is recognised medically but its root causes remain largely unknown, although it is mainly ascribed to the trauma of childbirth. However, studies appear inconclusive.

For this patient the initial approach of focusing on treating ligaments, bones and structure (using the visceroptosis protocol) produced insubstantial change. It was the introduction of the pituitary protocol at the third treatment that made significant changes, and within the next three treatments the pain at the symphysis pubis and the iliac crest had resolved. This would appear to be due to a correction of a hormonal imbalance that had persisted since the birth causing the ligaments to remain in an overly stretched condition. In the same way, it is probable that the pituitary treatment helped the ligaments holding the coccyx to regain their strength, although distal and direct treatment of the coccyx was also very helpful in that regard.

Case History 3 – Interstitial cystitis

Overview

N, a woman of forty, came to the clinic with very frequent and urgent urination and sharp stabbing pains in the bladder occurring throughout the day, which produced in her words ‘extreme discomfort’. She experienced frequent urination at night and had to get up between two and six times per night, often in discomfort. The problems had started two and a half years previously after a bout of cystitis coupled with severe constipation and a period of high stress. She had previously made dietary changes including reducing coffee, alcohol and spices. She had noticed that the bladder was worse during ovulation and just before and after her period. She had always had
an erratic menstrual cycle, although her period was not particularly heavy or painful. As a child she had sustained two head injuries that had left scars, and had experienced frequent tonsillitis (with a tonsillectomy at age thirteen). Her gall bladder had been removed at age thirty one. She had been diagnosed with PCOS five years previously to starting treatment and was taking metformin. She also suffered from occasional migraines and irritable bowel syndrome (IBS), particularly around her period.

Diagnosis
- Hara diagnosis revealed the following positive reflexes:
  - Bladder, Oketsu and Liver, ovary and uterus, and inguinal ligament
  - The scar on the right forehead and the three scars from the gall bladder keyhole surgery were painful. The scar in the area of Juwei REN-15 was red and raised

Main treatment protocols and points
- Pituitary: as above.
- Bladder: Xuanji (璇玑) REN-21
- Oketsu – as above.
- Liver: Shaohai (少海) HE-3, Ximen (隴門) P-4J, Lougu (蠡谷) SP-7 and Fuliu (復溜) KID-7J
- Anti-inflammatory treatment: Ligou (蠡溝) LIV-5J, Shanggu (商丘) SP-5 and metal-water treatments on the Kidney and Bladder.
- Inguinal ligament: visceroptosis protocol as above
- Gall bladder scars: metal-water treatments on Gall Bladder and Sanjiao, combined with Liver treatments as above.
- Head scar: Weizhong (委中) BL-40J, Feiyang (飛揚) BL-58 and Kunlun (昆仑) BL-60.

Discussion
With a history of PCOS and an increase in symptoms around ovulation and menstruation, it seemed logical that there was a hormonal component to the interstitial cystitis experienced by this patient. Although current medical research appears inconclusive, there are suspected links between interstitial cystitis and oestrogen, progesterone and oxytocin, plus other conditions such as IBS. There is also the direct connection between the bladder and arginine vasopressin secreted by the pituitary, as a factor for consideration regarding her frequency of urination. It also seemed that as stress was one of the original precursors for the disease, a connection to the hypothalamus and therefore the pituitary was likely. Consequently from the first treatment the pituitary protocol was employed, in conjunction with treatment of the head scar (as it was located in the pituitary region and found to be reactive on palpation). This produced a marked lessening of the pain from the interstitial cystitis within four treatments. The pituitary protocol has been used continually throughout her treatment, which has now lasted slightly over three years. N now has very little bladder pain and greatly reduced urinary frequency. Her period has regularised her bowel function is stable. It is also worth noting that the pain, redness and raised appearance of her scar at Juwei REN-15 has completely gone.

Case history 4 - Amenorrhoea
A 28 year-old woman came to the clinic with secondary amenorrhoea in November 2009. Her periods had begun at age 16 and had always been irregular - between 30 and 50 days. They were heavy and there was some degree of pain. At age 19 she had started taking the contraceptive pill for contraceptive reasons. She stopped taking the pill in January 2009, ten months before coming for treatment, and did not have a period during that time. A GP visit and hospital scan revealed polycystic ovaries. Her general health was good and there were no other remarkable symptoms. She had been recommended by her GP to go back on the contraceptive pill, which she did not want to do.

Diagnosis
- Hara diagnosis revealed the following positive reflexes:
  - Ovary - slightly positive, Adrenal - slightly positive, Oketsu - slightly positive.

Treatment
- Pituitary protocol - as above.
- Oketsu - as above.
- Adrenal protocol: Yinggu (陰墟) KID-10; Shufu (俞俯) KID-27.

Discussion
After prolonged use of the birth control pill it is common for the period not to return straightaway, and once the pill is stopped the time taken to conceive frequently increases. This is particularly true if the woman has taken the contraceptive pill for a prolonged period of time. Prolonged artificial hormone levels can cause the pituitary gland to get ‘stuck’ in a negative feedback loop and stop producing FSH and LH, thus preventing menstruation. In addition, the patient’s slightly late menarche, the irregularity of her cycle and subsequent diagnosis of polycystic ovaries all pointed to a hormonal imbalance, very probably coming from the pituitary. Hence this was the initial choice of treatment.

The pituitary protocol was therefore the mainstay of treatment and due in large part to her generally excellent health this patient responded extremely well to treatment. Within six weeks her period returned and by the third month of treatment it was regular and has remained so ever since. The patient is now expecting her first child in July this year.
Conclusion
There are clear correspondences between tiangui (天癸), as understood in the classical Chinese texts, and the modern biomedical understanding of the pituitary gland and its hormones. To the ancient Chinese scholars the timely arrival of tiangui was seen as key to the initiation and maintenance of many of the body’s most fundamental energetic cycles, whilst its exhaustion signalled their decline or cessation. In modern biomedicine, the pituitary hormones are known to far-reaching effects throughout the body and play very similar and vital roles in growth, development and reproduction. Thus we can say with a good degree of certainty that these two paradigms, although separated by more than two millennia, are two sides of the same coin.

In biomedicine the full extent of the effects of even the best-known hormones and the complexity of their interactions in the body are still not completely understood. However, as the first three case histories particularly demonstrate, these gaps in understanding should not constrain acupuncture practitioners when assessing patients. If there is a hormonal component to the case history or diagnosis, treatment of the pituitary is always worthy of consideration. In fact, successful treatment of the pituitary and its ‘heavenly water’ is often clinically indispensible and can produce a marked shift in otherwise intractable cases.

Endnotes

i An example would be the thyroid hormones that have a wide-ranging influence throughout the body including metabolic, cardiovascular, neurological, reproductive and developmental effects.

ii The words ‘energy’ and ‘energetic’ are frequently used in this article, rather than the Chinese term qi (氣). As this article aims to bring together ancient Chinese and modern Western biomedical understanding, the use of the word ‘energy’ seems the most appropriate linguistic choice in many instances. For example, ‘energetic correspondences’ in Table 1 below seems preferable to ‘correspondences of qi’ or ‘qi correspondences’. Although not an ideal translation, ‘energy’ is the most widely used and understood translation of the Chinese term qi. Currently there is no better single word in English that covers all the different connotations of the Chinese character. Like the character qi, the term ‘energy’ is used to cover a wide spectrum of meanings, from the energy carried by sub-atomic particles, to that generated at a sports event or concert, through to the energy at a children’s party or that referred to in complementary medicine. This broad range of meanings chimes well with the understanding that qi is a continuum, something both specific and non-specific.

iii An example of an endogenous cause would be irregular periods originating from ovarian cysts. An exogenous cause of irregular periods would be lifestyle factors such as stress.

iv There are many different styles of Japanese acupuncture. The style referred to throughout this article is that practised and taught by Kikko Matsumoto. It is sometimes referred to as Kikko Matsumoto Style Japanese Acupuncture (KMSJA) or simply ‘Kikko Style’. Although a Japanese style, it is very strongly rooted in classical Chinese texts, particularly those of the Han Dynasty. In order to inform and confirm the classical Chinese understanding, KMSJA also incorporates biomedical knowledge of the functioning of the body. It is for this reason that even though all disharmonies and diseases are treated based on a classical understanding of qi and the body, for clarity some protocols carry biomedical names.

v In KMSJA examples of specific hormonal protocols would include the pituitary, adrenal, blood sugar and thyroid treatment. Full details can be found in Kikko Matsumoto’s Clinical Strategies: In the Spirit of Master Nagano Volume 1 (see References).

vi The major points on the hormonal web are the classical endocrine glands: the pituitary, hypothalamus, thyroid, parathyroid, pancreas, adrenals and ovaries or testes.

vii Also called the pituitary stalk.

viii Also called the sella turca (Turkish saddle), due to its shape.

ix The balancing role of the sphenoid bone is mirrored in the clavicle bones, the scapulae (upper border) and the pelvis, due to their horizontal alignment at major articulations of the body.

x The ten heavenly stems (天干, tiangan) are the yin yang aspects of each of the five phases (五行, wuxing). The first stem is wood yang, the next is wood yin, and so forth, finishing with water yin (水, gui).

xi The pituitary shu point is an extra point located approximately one cun above Tianzhu (百会, BL-10). It is worth noting that in KMSJA there are an extra number of extra shu points on the back of the body – another such example is tianzong (天柱, SI-11) that is also known as the breast shu.

xii Master Kiyoishi Nagano was a blind Japanese acupuncturist who dedicated his life to the study and practice of acupuncture. He discovered new points, alternative indications for traditional points and developed unique and powerful treatment protocols. His work remains a major influence on Kikko style acupuncture. For further information see Kikko Matsumoto’s Clinical Strategies Vols 1 & 2 (see references).

xiii Hara (abdominal) palpation is the primary diagnostic method used in KMSJA.

xiv A Japanese term for a pattern of blood stagnation related to the Liver but with connections to the Stomach and Western medicine to the gallbladder.

xv Diagnosis of the fire point on a channel is commonly used in KMSJA to assess whether there is any inflammatory energy or process occurring within the particular channel or organ.

xvi The letter ‘J’ after a point denotes a Japanese location. Zhongfeng, LV-4J is located distal to the standard location.

xvii Chize LU-5J is located lateral to the standard location.

xviii A unique Japanese point located on the San Jiao channel around the head of the radius.

xix This involves treating the metal and water points on the channel where the fire point is found to be active.

xx A Tiger Warmer is a metal incense pen used for applying heat and direct pressure to acupuncture points. In KMSJA it is frequently recommended that the patient uses it at home as an adjunct to treatment in clinic.

xxi Yogic nasal washing. It is one that on palpation presents with a degree of pain, discomfort, referred pain, feeling of tightness, nausea or other unusual sensation for the patient, and/or the practitioner detects abnormal hardness, tightness, fullness or other significant sensations not present on a healthy hara.
xxiii This treatment is used to draw up ‘dropped’ visceral organs and so relieve pressure on the structures below them, in this case the pubic bone.

xxiv The Inner Yin point is located four patient finger/widths above Yinggu 陰谷 KID-10 along the Kidney channel.

xxv Relaxin is produced by the ovaries.

xxvi In KMSJA palpation of all scars is important to ascertain if full healing has taken place. It is not uncommon that scar tissue from either injury or surgical operation remains partially unhealed, causing a variety of sequelae depending on the location and origin of the scar. Often, the patient themselves is unaware that a scar maybe unhealed, necessitating the use of thorough palpation. The findings in this patient are typical of the presentation of an unhealed scar. A well-healed scar will not be painful when palpated and in appearance be barely distinguishable from the normal skin.

xxvii Located three patient’s finger widths below the elbow crease.

xxviii These four points in combination are a Liver function treatment and are treated on the right side of the body only. They are also known as ‘master points treatment’ and used as such.

xxix Master Nagano’s Ligou LIV-5 is located midway between the internal malleolus and Ququan LIV-8 (臨泉). It is frequently used for inflammation of the ‘membranes, particularly in the lower body.

xxx Lateral to traditional Weizhong BL-40.

This three points, called ‘I Hi Kon’, are used a combination used frequently in Japanese acupuncture for treating head injuries along the Bladder meridian. The protocol is named after the abbreviated Japanese point names.

x x x Lateral to traditional Weizhong BL-40.

References

6 Ibid.
19 Ibid.
29 Ibid.