Acupuncture treatment for dysfunctional uterine bleeding in an adolescent

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SUMMARY
A 17-year-old girl with a history of dysfunctional uterine bleeding (DUB) and severe dysmenorrhoea was treated with different conventional hormonal therapies for 16 months without improvement. Treatment with traditional Chinese acupuncture was started while she was taking oral contraceptives. She received a total of 27 treatments in 17 weeks. Her menstrual cycle normalised after 4 weeks (10 treatments). She continued to be regular during the rest of treatments and to date, 6 months after the treatment was discontinued. This report summarises the acupuncture treatment for DUB in this adolescent girl.

BACKGROUND
Dysfunctional uterine bleeding (DUB) is common among adolescent girls. Approximately 9%-30% of reproductive-aged women have menstrual irregularities requiring medical attention. Treatment options are different medical regimens for a few months or longer. Treatment failure, non-compliance and side effects are all concerns. Metformin and combined oral contraceptives for reduction of irregular bleeding had low or moderate strength of evidence for effectiveness. Traditional Chinese acupuncture may provide benefit as an adjunctive or alternative treatment in cases where medical therapies have not been successful.

CASE PRESENTATION
A 17-year-old girl with a body mass index of 23 and menarche at age 13 presented to her primary paediatrician’s office for abnormal uterine bleeding since age 14. Her menstrual bleeding occurred 1-3 times per month, lasted 3-7 days and was painful. At age 15, she was referred to a gynaecologist for management because her irregularities worsened over time. A pelvic ultrasound, von Willebrand factor, complete blood count, platelet, anaemia profile, thyroid stimulating hormone, prothrombin time, partial thrombin time, factor 8, follicular stimulating hormone, luteinising hormone, oestradiol, 17-progesterone were all normal. Her Dehydroepiandrosterone (DHEA) sulfate was mildly elevated 411 (normal 37-307). For the following 15 months, she was treated serially with Depo-Provera injections, OrthoEvra (ethinyl estradiol and norelgestromin) patches without improvement, and Estarylla contraceptive pill (CP) was started 1 month prior to presentation without improvement.

At the time of re-presentation to her paediatrician’s office, despite being on a CP, she had four periods of bleeding in the month prior, with breaks lasting 1-4 days in between periods. She used up to 10 heavy pads per day, with frequent flooding. She reported pain of 8/10 with menstruation, large clots up to 2 cm in size, headache, dizziness and five episodes of syncope. At the time of presentation, she shared that despite good compliance with medication, she had noted no improvement in her menses and was becoming hopeless about ever improving her symptoms. She asked what else she could try to regulate her menstruation.

At this time, the author, who is the patient’s paediatrician and is also fully trained and dual licensed in traditional Chinese medicine (TCM), offered acupuncture treatment to manage her DUB with severe dysmenorrhoea. Based on TCM diagnostic criteria, the patient was diagnosed with abnormal uterine bleeding due to ‘heat and phlegm with blood stasis’. The treatment principle is to ‘clear heat, reduce phlegm’, reduce stress, ‘invigorate blood’ and ‘fill her conception (menstrual) channels’. The patient had not heard of acupuncture prior to the treatment, but after a trial of one needle, she was willing to commit to the treatment.

Figure 1 Timeline summarising the correlations among the days of acupuncture treatments, menstruations and oral contraceptives. OCP, oral contraceptive pill.
Table 1  Needle placements of each treatment session

| Office Visits | Zi  | Zhu’s | Needle | Points | Spacial | Additional points/remarks | Retention |
|---------------|-----|-------|--------|--------|---------|---------------------------|-----------|
| 1 21 11 1 2 1 | 2  | 2  | 1  | 1  | 1  | 1  | 2  | SM, K, ovary | ST29×2  | 30 |
| 2 2 1 1 1 2 1 | 2  | 2  | 1  | 1  | 1  | 1  | 2  | SM, K, ovary | ST29×2  | 35 |
| 3 2 1 1 1 2 1 | 2  | 2  | 1  | 1  | 1  | 1  | 2  | SM, K, ovary | FuKe, DuAnHong | ST29×2  | 30 |
| 4 2 1 1 2 1 2 | 2  | 2  | 1  | 1  | 1  | 1  | 2  | SM, K, ovary | FuKe, DuAnHong | ST29×2, patient appears relaxed | 30 |
| 5 2 1 1 2 2 2 | 2  | 2  | 2  | 1  | 1  | 1  | 2  | SM, pelvis, SP | FuKe, DuAnHong | Warm liquid, no spicy, fatty foods | 30 |
| 6 2 1 1 1 1 1 1 1 | 2  | 2  | 2  | 1  | 1  | 1  | 2  | SM, K, SP | FuKe, DuAnHong | 30 |
| 7 2 1 1 1 1 1 1 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | SM, K, SP | FuKe, DuAnHong | 30 |
| 8 1 1 1 1 1 1 1 1 | 2  | 2  | 2  | 1  | 1  | 1  | 2  | SM, pelvis, SP, K | FuKe, DuAnHong | K1×2 | 30 |
| 9 2 1 1 1 1 1 1 1 | 2  | 1  | 1  | 1  | 1  | 1  | 2  | SM, K, SP | FuKe, DuAnHong | 45 |
| 10 2 1 1 1 1 1 1 1 | 2  | 2  | 1  | 1  | 1  | 1  | 1  | SM, K, SP, Pit | FuKe, DuAnHong | K1×4, K7 | 35 |
| 11 2 1 1 2 2 2 2 1 1 1 1 1 1 1 2  | SM, K, SP, Pit | FuKe, DuAnHong | UB23×2, 32×2, Du4, Jiali | 35 supine, 25 prone |
| 12 2 1 1 2 1 2 2 1 1 1 1 1 1 1 1 2  | SM, K, SP, Pit | FuKe, DuAnHong | UB23×2, 32×2, Du4, GB41 | 35 supine, 25 prone |
| 13 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, SP | FuKe, DuAnHong | K7, Da Cha Xue | 45 |
| 14 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, DuAnHong | Mu Xue | 45 |
| 15 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43 | 45 |
| 16 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, SP, pelvis | FuKe, HuangChao | ST40, GB43, Mu Xue | 30 |
| 17 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP | FuKe, HuangChao | ST40, GB43, Mu Xue | 30 |
| 18 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, DuAn Hong | 30 |
| 19 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, DuAn Hong | 30 |
| 20 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 21 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 22 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 23 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 24 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 25 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 26 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 27 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 28 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 29 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |
| 30 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2  | SM, K, SP, pelvis | FuKe, HuangChao | ST40, GB43K6, UB62, SI3 | 30 |

Follow-up visit: 6 weeks after last session, no needling.

Follow-up visit: 6 months after treatment session #29. No needling. Menstruations have been regular with minimal to none dysmenorrhea.

* LI 4 and LV 3 are placed at opposite body sides.
† '1' indicates unilateral placement; '2' indicates bilateral placement.
CP, contraceptive pill; HE, head and face; K, kidney; LI, large intestine; LL, lower jiao; LU, lung channel; LV, liver channel; Pit, pituitary; SM, Shen Men; SP, spleen; ST, stomach channel; R, Ren (Conception Vessel) Channel.
TREATMENT

Acupuncture treatment point selection was based on her TCM diagnosis. Points included scalp points, ear points, extremity distal points and lower abdominal points. The plan was to treat three times per week first, reduce to two times weekly after a few weeks and gradually wean her off of treatment depending on her response. Her CP was to be continued.

Acupuncture treatment was started three times weekly on day 10 of her CP pack and day 2 of her period. Her period lasted for 6 days. On day of treatment (DOT) 13 (CP day 22 and after treatment #6), during the placebo week of CPs, she had another period which lasted 6 days with less pain and blood volume. Acupuncture treatment frequency was reduced to twice weekly, while continuing her CPs. On DOT 29 (new CP pack day 5 and after treatment #10), she had another period with a duration of 5 days with negligible pain. She did not have a period on day 21 of the second pack.

Thirty-two days after her last period, on DOT 61 (CP day 7 and after treatment session #16), her next period started and last for 5 days. Because she was not having menses corresponding to placebo weeks of her CPs, the CP was discontinued on DOT 65. Two weeks afterwards, her acupuncture treatment frequency was weaned to once per week and continued for another 5 weeks for a total of 27 sessions. She continued to have regular periods every 26–37 days without pain. Figure 1 shows the progression of her treatments, periods and CP schedule.

Table 1 summarises acupuncture points used for each session. Needling details of each point are described in box 1. Some Dong’s extraordinary points and Zhu’s scalp acupuncture points were used, and their locations and insertions are also listed in box 1.

OUTCOME AND FOLLOW-UP

After the period on DOT 29 (after 10 treatments), the patient continued to have monthly regular periods. The last day of regular weekly treatment was DOT 116, 91 days after CPs were discontinued, for a total of 27 treatments. After the last weekly treatment, over the 4-month follow-up period, she continued to have regular menstruation every 23–25 days, each period lasted 4–5 days using 4–8 not heavily soaked pads per day without dysmenorrhoea. Her DHEA-S remained high at 442. Because her periods had been regular, she stopped tracking them 4 months after treatments were discontinued.

DISCUSSION

Menstrual disorders are common complaints among adolescent girls. The most common cause is DUB from an ovulatory cycle resulting in irregular bleeding. After menarche, 50% of cycles are anovulatory in the first year. By the third year, 95% of cycles are regular in duration and not excessive in volume.

There are many causes of abnormal uterine bleeding. DUB is a diagnosis of exclusion. The workup should rule out pregnancy, von Willebrand disease, thyroid dysfunction, uterine structural abnormalities, Polycystic Ovary Syndrome (PCOS) and other systemic, hormonal and coagulation dysfunctions.

After other diagnoses have been excluded, the treatment method for DUB depends on its severity. Observation with a menstrual calendar is appropriate for mild cases, while hospitalisation with blood transfusion may be necessary for severe cases. For the vast majority of cases of moderate DUB, conventional treatment typically involves hormonal therapy and iron supplementation.

Different medical treatment regimens studied appeared to be equally effective. Conventional regimens consist of non-steroidal anti-inflammatory drugs, progestins, combined CPs, levonorgestrel Intrauterine Device (IUDs), danazol, tranexamic acid or analogues of Gonadotropin-releasing hormone (GnRH).

Two acupuncture treatments studies for delayed menstrual cycles have shown promising results as treatment for DUB. One study showed improvement of menstrual irregularities after 14 electroacupuncture treatments in PCOS patients, another study demonstrated a greater improvement (no treatment failures) by using ‘mind tranquilising and menstruation regulating’ needling technique, instead of traditional needling placement, every other day for three cycles. Acupuncture with or without medicinal herbs has been widely used for women’s menstrual disorders in China and Taiwan for at least centuries. Modern research on its mechanism and efficacy...
remains scarce. For selected patients, acupuncture can be an effective alternative treatment for women who suffer from DUB and/or dysmenorrhoea. Research of carefully controlled trials and randomised controlled trials on irregular bleeding to assess alternative and complementary medicine treatment effectiveness on menstrual heaviness and intervals are recommended.4

**Patient’s perspective**

I started the acupuncture treatment for my problem with my doctor for a good period of time and my results were amazing! Now it all has been going really great. She helped me a lot, I appreciate her a lot for helping me after the main hospital couldn’t. She could! I’m sure this treatment can help more girls with the same problem out there. Thank you doctor!

**Learning points**

- Menstrual disorders such as dysfunctional uterine bleeding and dysmenorrhoea are relatively common problems in adolescent girls, and non-pharmacological treatment options are often limited.
- This case shows that an acupuncture treatment based on a traditional Chinese medicine (TCM) diagnosis is an effective alternative to the more commonly used hormone therapy and is well tolerated with a prompt treatment response.
- Carefully controlled trials of treatments based on TCM diagnoses for irregular uterine bleeding to assess their effectiveness on bleeding heaviness and intervals are recommended.

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