

CASE REPORT

Hypertrophic Pyloric Stenosis in Severe Jaundiced Infantile Case Tried to be Treated with Al-Hijamah

Sabri Cansaran¹, Ayşenur Celayir², Oktav Bosnalı², Serdar Moraloğlu²,
 Abdulkadir Bozaykut³

¹Department of Pediatric Surgery, Tokat State Hospital, Tokat, Türkiye

²Department of Pediatric Surgery, University of Health Sciences, Turkey; Istanbul Zeynep Kamil Maternity and Children's Diseases Health Training and Research Center, İstanbul, Türkiye

³Department of Pediatrics, University of Health Sciences, Turkey; Istanbul Zeynep Kamil Maternity and Children's Diseases Health Training and Research Center, İstanbul, Türkiye

Abstract

Cupping therapy, in its traditional name in the Middle East as al-hijamah, is a traditional and complementary treatment method that generally uses containers placed on the skin to create negative pressure through suction, and has been used all over the world from past to present. Infantile hypertrophic pyloric stenosis is a disease in which the outlet of the stomach undergoes almost complete obstruction due to the hypertrophy of the pyloric canal. It is seen in infants in the 1 months after birth and it's the most effective treatment is surgery. This study discusses a patient with infantile hypertrophic pyloric stenosis, in whom the traditional alternative medicine method was performed due to severe jaundice, and then treated surgically.

Keywords: Al-hijamah; cupping therapy; infantile hypertrophic pyloric stenosis; traditional and complementary medicine

Cupping therapy, traditionally called “hijama cupping” in the Middle East, can be defined as a technique that uses cups placed over the skin to create negative pressure, usually by suction.

Cupping therapy has been used globally from past to present. The first information about cupping therapy is found in the Ebers Medical Papyrus from Ancient Egypt (1550 BC). Hippocrates suggested that cupping therapy can be used in gynecological complaints, pharyngitis, spinal, extremity, lung and ear diseases^[1]. Cupping is recorded as a medical treatment in the Mawangdui Silk

Texts in China (168 BC)^[2]. Cupping therapy was also used in Ancient Europe in the first centuries. Galen is the leading advocate of the method and stated that materials such as horns, glass and cups made of brass can be used during application^[1]. In the Middle East, Razi (854-925), Ibn-i Sina (Avicenna) (980-1037) and Al-Zehravi (936-1036) emphasized the benefits of cupping^[3].

There are two methods of cupping therapy; dry and wet. In the wet method, in addition to the dry method, blood is drawn from the mini-incisions made on the skin. The wet method is also divided into two subgroups, as traditional

Correspondence (İletişim): Sabri Cansaran, M.D. Tokat Devlet Hastanesi, Çocuk Cerrahisi Kliniği, Tokat, Türkiye

Phone (Telefon): +90 535 445 88 40 **E-mail (E-posta):** sabrican@hotmail.com

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wet cupping therapy and cupping. Hijama has the meanings of sucking, enlarging, taking blood and it is derived from the Arabic word "hajm"^[4]. Traditional wet cupping therapy is widely used in China, Korea, and Germany, while cupping is more common in the Middle East and North Africa^[1].

In this study, a patient with Infantile Hypertrophic Pyloric Stenosis (IHPS) who was treated with cupping, a traditional alternative medicine method, and then surgically treated for severe jaundice, is discussed.

Case Report

In the physical examination of a 55-day-old male infant who applied to the Pediatrics Outpatient Clinic with the complaint of jaundice, it was observed that his whole body turned yellow. The patient's epigastric region and projection on the back (a circular area with a diameter of about three centimeters) had superficial, 3-4 millimeter mini-incisions made with a sharp instrument (Fig. 1). Detailed anamnesis revealed that the patient had a hijama treatment in a private center due to jaundice. The patient, who was found to have indirect hyperbilirubinemia (total



Figure 1. The projection area of the patient on the epigastric region and back where hijama has been applied.

bilirubin value: 27 mg/dL) in the blood biochemical analysis, was admitted to the Pediatrics Clinic for follow-up, further examination and treatment with the prediagnoses of Crigler-Najjar Syndrome and sepsis. None of the spot urine, urine organic acid testing, metabolic screening tests, direct Coombs and liver serology tests of the patient, who was started phototherapy, resulted in describing his condition. The patient had a blood pH of 7.69, and based on the history given by the family, had an increasing vomiting for a week. On ultrasound, the pyloric single wall muscle thickness was reported as 4 mm and the canal length as 20 mm. The patient, who was consulted to the Pediatric Surgery Clinic with the prediagnosis of IHPS, had "olive sign" in the physical examination and there was non-bilious, salivary content output from the nasogastric tube. The patient was transferred to the Pediatric Surgery Intensive Care Unit due to severe metabolic alkalosis.

Intensive intravenous fluid-electrolyte replacement (150 cc/kg/24 hours) containing 0.45% sodium chloride and 5% dextrose was started in the dehydrated patient, who was followed up with the diagnosis of IHPS. Potassium chloride at a rate of 30 meq/L was added to his 24-hour fluid due to moderate hypokalemia (3.3 mmol/L), and calcium gluconate (20 cc/L) was added to prevent dilutional hypocalcemia. Simultaneous phototherapy was applied to the patient. Daily output from the nasogastric tube were replaced with intravenous saline. On the fifth day of his treatment, the patient's total bilirubin level dropped below only 15 mg/dL. The patient, whose blood gas pH was 7.42 on the seventh day, was operated with open Fredet-Ramstedt pyloromyotomy procedure (Fig. 2). The patient, whose oral nutrition was gradually increased in the postoperative period and no vomiting was observed, was discharged on the fourth postoperative day with a total bilirubin value of 1.25 mg/dL.

In the first week and first month control, no feeding problem was observed and bilirubin values were at normal levels. The patient's parents, who have undergraduate degrees, were told again that, especially jaundice with a risk of kernicterus may cause permanent brain damage in the patient, and in such a case, it is wrong to have cupping and the patient should receive emergency medical treatment first, and even if cupping is preferred, it is absolutely necessary to do it in appropriate situations and by experts in this field. Although more than five years have passed since the first month control and the patient was called for control at appropriate intervals, the fact that the patient did not apply to us further suggested that the family was not aware of the issue.

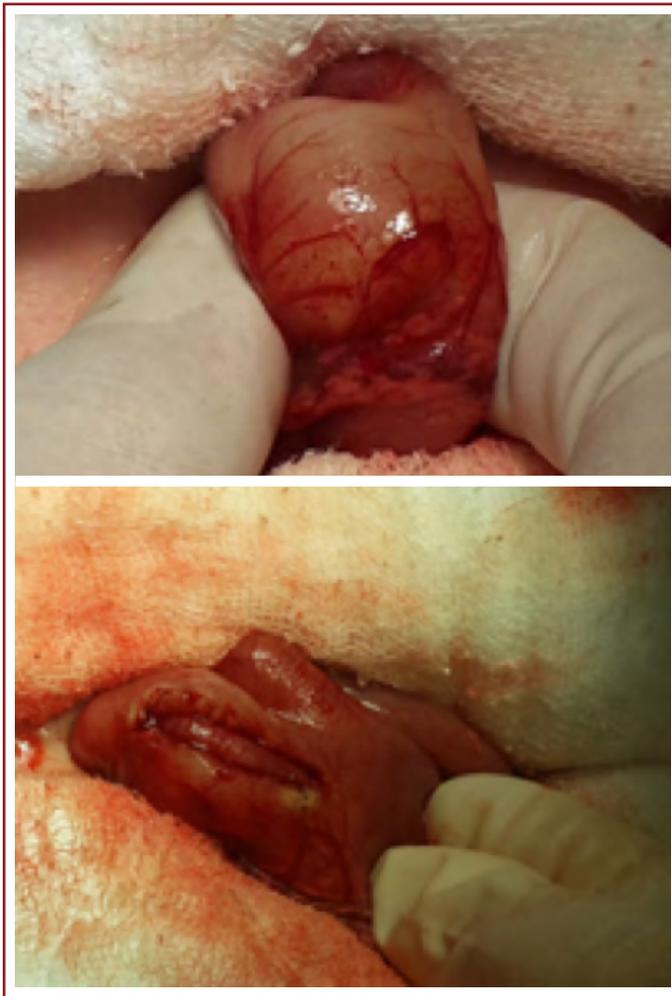


Figure 2. Hypertrophic pyloric duct and image after pyloromyotomy.

Discussion

The mechanisms explaining the effect of cupping therapy are still unclear. However, some theories have been put forward. A theory called "taibah" compares wet cupping therapy to a renal unit. While only hydrophobic molecules are excreted from the circulation at the normal filtration rate in the kidneys, in wet cupping therapy, both hydrophobic and hydrophilic substances are cleared from the blood at high filtration rate due to negative pressure. The collected filtered fluid contains prostaglandins and inflammatory mediators, as well as substances that occur due to disease and cause it. Incisions with sharp objects increase innate and adaptive immunity by stimulating inflammatory cell migration and endogenous opioid release. This leads to improved circulation, removal of toxins, restoration of neuroendocrine balance, improved oxygen supply and good tissue perfusion^[4].

Cupping therapy, which is one of the traditional and complementary medicine techniques, whose historical back-

ground dates back to BC, has recently become more popular in our country. The increase in the complication rates of cupping and similar alternative treatments performed by inexperienced people has caused the Ministry of Health to focus on this issue and regulations have been introduced for the methods to be carried out by trained people. State-supported research centers were established in this area, and hijama was included in master's and doctoral programs. "Regulation on Traditional and Complementary Medicine Practices" was published in the Legal Gazette, dated 27.10.2014 and numbered 29158, in order to determine the traditional and complementary medicine application methods for human health, to regulate the training and authorization of the people who will apply these methods and the working procedures and principles of the health institutions where these methods will be applied^[5]. As a result, centers with a certificate registered by the Ministry of Health, dealing with traditional and complementary medicine practices were established and it was aimed to train physicians or dentists who are enthusiastic about this subject. Thus, it has been ensured that traditional and complementary medicine practices are carried out by specialists.

It can be said that the handling of this situation by the state institutions has increased the social interest in traditional and complementary medicine. However, with this increasing interest, situations in which cupping therapy is contraindicated or undesirable should not be ignored. Absolute contraindication exists in patients with any organ failure, use of a pacemaker, hemophilia and cancer patients with similar blood disorder^[3]. Cupping therapy is not recommended in the geriatric and pediatric population, pregnant and women with menstrual bleeding. High serum cholesterol values also pose a risk for the development of cardiovascular disease during treatment^[1].

There are publications in the literature stating that the effect of cupping therapy is limited or that they don't recommend this treatment for some conditions. In a randomized-controlled study by Lauche et al.^[6] on fibromyalgia in 2016, the effect of cupping therapy was not found to be sufficient and its use in the treatment of the disease was not recommended. Again, in a randomized-controlled study conducted on healthy individuals in 2020, it was reported that cupping therapy has no contribution to flexibility in the hamstring muscle group and its use is unnecessary^[7]. From this point of view, the main point to be emphasized again is that it is important to use the method when necessary and when it is effective.

Infantile hypertrophic pyloric stenosis is a disease in which the gastric outlet is almost completely obstructed due to hypertrophy of the pyloric duct, which can cause projectile vomiting, and is seen in low-month-old babies (3-5 weeks-old)^[8]. It's more common in boys than girls (4/1-6/1)^[9]. Indirect hyperbilirubinemia is one of the most common disease-related clinical conditions in IHPS (2-5%) and sometimes total bilirubin levels can reach 10-20 mg/dl^[10]. The most effective and perhaps, the only treatment of the disease that is accepted by some experts, is surgery^[11].

Different methods have been described in the treatment of IHPS. Endoscopic balloon dilation (EBD), which is one of these methods, has been recommended especially in patients where general anesthesia poses a great risk and surgical approach to the pylorus is not possible^[12]. In conservative treatment using anticholinergics (atropine sulfate), nasoduodenal feeding is tried until the baby gains weight and the obstructive process is expected to regress^[13,14]. However, the main disadvantage of this method is that the treatment lasts for months. The definitive treatment of IHPS depends on the timing of surgery and the clinical condition of the infant. If the patient's fluid-electrolyte and acid-base balance and hydration status are tolerable, the operation can be planned even on the day of diagnosis^[11]. Otherwise, the surgical approach should be postponed, as in our case, in order to relieve dehydration and restore fluid-electrolyte balance^[15].

In addition to all these, it is thought-provoking that the cupping therapy is used for treatment in the patient, without waiting for the completion of the necessary diagnostic processes for the patient or perhaps not preferred by the family. It is possible that the person who applied the cupping was someone who did not have knowledge of medical issues, and they boldly applied the method in a baby with jaundice that was severe enough to affect the brain and cognitive development. Because, a physician trained in complementary medicine would never engage in such a practice without using the possibilities of modern medicine. It is not very meaningful to expect benefit from cupping for a disease whose most effective treatment is surgery. The fact that the regulation on traditional and complementary medicine has not yet been published on the days the patient applied to our clinic may have facilitated the emergence of this, or similar situations.

In conclusion, cupping therapy is an ancient traditional and complementary medicine practice. While it is preferred in cases of disease, the cases where it is contraindicated or inconvenient should definitely be evaluated. Traditional and

complementary practices should always be used in diseases that are predicted to be beneficial. Medical practices that are unscientific or not performed by experts do not benefit people who are sick, and may even harm them. The possibilities of modern medicine should not be ignored, diagnosis methods and treatment approaches should be the primary guide in the case of the disease.

Informed Consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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