



The Effects of Wet Cupping in the Management of Neonatal Jaundice: A Case Series Observation

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Dear Editor-in-Chief

Neonatal jaundice is a common condition needs medical attention in newborn babies. This medical problem affects about 60% of term and 80% of preterm newborns in the first week of life (1). Extreme elevation of unconjugated bilirubin can lead to kernicterus or neurodevelopmental impairment such as visual and hearing loss (2). Phototherapy is a safe and effective treatment but this method forces the clinician to separate the newborns from mother. In addition, its effects are limited and there are some complications such as water loss, hypocalcemia and allergic diseases (3).

Physicians of Persian medicine, used a method of wet cupping, using scarification safety technique, for management of moderate or severe neonatal jaundice (4). Only few studies were published about its effect in neonatal outcome (5). In this retrospective observational case series study, we evaluated the effectiveness and safety of wet cupping therapy for treating neonatal jaundice.

We retrospectively studied data on out-patient infants with neonatal jaundice who underwent medical wet cupping therapy in the Asra Clinic of Traditional Medicine, Tehran between May 2016 and Sep 2017. Reviewed data were age, sex, history of previous treatments and serum bilirubin before and after wet cupping based on patient records.

Neonatal jaundice diagnosed by a pediatrics or experienced general practitioner and characterized by amount of unconjugated serum bilirubin.

The participant needed to be term and meet the diagnostic criteria for neonatal jaundice, and written informed consent should have been given by parents before intervention. All of infants were evaluated to have no anemia and other systemic diseases, surgical history or indication of blood exchange for sever hyperbilirubinemia by an experienced practitioner. A physical exam also was performed to evaluate if the infants had any other medical problems that would hinder or contradict treatment. All procedures were performed by one practitioner.

Wet cupping was performed in 5 steps process including sterilization, cupping, scarification, cupping, and sterilization (6). A small disposable cup was placed back of infants between scapula bones by experienced practitioner after sterilize the selected points with alcohol. In the next process practitioner created a mild suction in place for about 1 min. Then they were removed the cup and using a small sharp lancet needle to create superficial lacerations on skin. Afterward a second cupping was performed to draw out a small quantity of blood about 2-3 ml. Finally, infants get a wound



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dressing with honey or antibiotic ointment to prevent infection. Hand washing and having the appropriate protective equipment (gloves, mask, protective eyewear, and gown) was essential during wet cupping procedure.

A total of 32 infants with neonate jaundice and wet cupping therapy were analyzed. The mean age of infants was 10.4 ± 11.3 days, with a range of 2- 45 days. There were 20 (68.8%) girls and 12 (37.5%) boys. A prior history of hospitalized were seen in 2 (6.2%) infants and phototherapy in 22 (68.8%) infants. Two pairs of participants were twins. The serum bilirubin decrease after wet cupping therapy in all of participants from 13.7 ± 3.1 (range: 7-20) to 8.68 ± 2.4 (range: 4- 12) that the mean of difference was 5.03 ± 2.96 . The mean total serum bilirubin of participants before wet cupping therapy was 13.7 ± 3.1 (range: 7-20) and the mean serum bilirubin after wet cupping therapy was 8.67 ± 2.4 (range: 4-12). The difference was statistically significant ($P < 0.001$). Wet cupping procedure was well tolerated by infants. There were no relevant adverse events.

The amount of bilirubin reduction by gender in male neonates was 4.36 ± 2.83 and in female was 5.42 ± 3.05 which had no significant difference ($P=0.33$). According to the results, the effect of intervention in neonates with bilirubin high levels before intervention, was more than other neonates ($r=0.678$) ($P<0.001$).

These data provided information about decrease of unconjugated bilirubin in affected infants after intervention. Wet cupping therapy can generally be described as a technique that uses in several medical conditions. The most important evidence for therapeutic benefit of cupping therapy is relief pain (7). Cupping therapy is effective to management of Iron overloud, dyspnea, and acne (6). The specific mechanism of wet cupping has not been identified. However, some hypothesis has been proposed. Based on one theory, wet cupping filters both hydrophilic and hydrophobic material through high-pressure filtration (8).

Our study had some limitations. First, data was gathered retrospectively thus some essential data was unclear. Second, follow up of patients for serum bilirubin after procedure has no stable protocol. In conclusion, the observations in this case series study point to wet cupping may be an effective method for reducing hyperbilirubinemia in neonatal jaundice. Further studies and trials need to establish this results.

Conflict of interest

The authors declare that there is no conflict of interest.

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