

THE CEMENTING CAPACITY OF *CENTELLA ASIATICA* IN HIP BONE REPLACED CASE: A CLINICAL STUDY

K J Abraham

Kaniyanthara, Muttom PO, Haripad, Kerala, India.

*Corresponding Author: Email: kjabraam@yahoo.com

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ABSTRACT

The folk medicine shows its miraculous power some times over the other systems of medicine. The process of healing completely the bone fracture takes many months to years and may even leave the gaps within and around the fracture due to inadequate deposits due to the lack of calcium and phosphorous metals. This happens commonly during the treatment of fractures occurred in elderly people and people those who are anaemic in nature. Here the fracture occurred below the ball of femur and considerably large gap was created. The juice of *Centella asiatica* (belongs to Apiaceae or Umbelliferae family) commonly known as Kudangal in local language along with various combinations of dairy products and honey cured the gap completely. The plant is having many medicinal values in addition to its culinary use as evident from many sources. It is found rich in various amino acids like aspartic acid, glycine, glutamic acid, phenylalanine etc and in addition to them the ash of the plant contains many chlorides, sulphates, phosphates and metals like iron, calcium, magnesium, sodium etc. that may have many proven biological effects.

Keywords – *Centella asiatica*, Gap in fractures, Calcium supplements, Honey, Swarasa, Alternative Systems of Medicine.

1. INTRODUCTION

The Mother Nature is very rich with unique herbs and minerals for catering various needs of the entire humanity. It is well known that there exists no herb that has no medicinal significances but the wise man who finds the suitability of them to manage a particular ailment became very less. The alternative systems of medicine like Ayurveda, Siddha, Unani, Naturopathy etc. along with the unrecorded treasures of folk formulations are successfully practicing in our country with unique achievements. The findings of our ancestors are still very worth even in this modern world [1]. This paper aims to correlate the miraculous effect of *Centella asiatica* (Figure 1) to completely heal the gap that observed in and around the fracture. This avoids the need of cementing. *Centella asiatica*, commonly known as *Centella*, *Asiatic pennywort* or *Gotu kola*, is herbaceous, frost-tender perennial plant belongs to family Apiaceae or Umbelliferae that grows in temperate and tropical swampy area of the Indian subcontinent, Southeast Asia, and wetland regions of the Southeastern United States [2]. In north India *Centella asiatica* is considered as Brahmi and the practitioners use it their traditional formulations.

1.1 About the Incident: The sad incident happened to a person who was in his late fifties and underwent ball replacement surgery on the right femur. Usually, a hip fracture occurs in the ball portion (femur) of the hip joint and can occur in different places and many times, the socket or acetabulum can become fractured. The top of the femur and part of the pelvic bone meet to form the hip and a broken hip is usually a fracture in the upper portion of the femur, or thigh bone. A joint is a point where two or more

bones come together, and the hip is a ball-and-socket joint. The ball is the head of the femur and the socket is the curved part of the pelvic bone, called the acetabulum.



Figure 1: *Centalla asiatica* (Manduka parni)

The hip's structure allows more range of movement than any other type of joint and a broken hip is a serious condition at any age. It almost always requires surgery and the complications associated with a broken hip can be life-threatening. The person was also subjected to surgery to replace the damaged ball with new and durable artificial synthetic parts that mimic the ball. A cemented prosthesis, on the other hand, is attached to the hip with bone cement for quicker adhesion. While both options have similar success rates, they have differences in terms of recovery. The uncemented joints take longer to attach to the bone, so the recovery time is longer. The cemented versions, while quicker, are best used for older adults or for people who are not as active [3, 4]. But in this case the cementing was not done even though he was in his late fifties. They suggested a second surgery for cementing to fill the gap. The second option was the use of some calcium supplements. The person was not ready to undergo a second surgery but chose the medication. The pain was very severe to him due to the gap that prevented him from walking. During this time, he happened to get a suggestion of using the juice (swarasa) of *Centalla asiatica* (Mandhooka parnika) a common culinary plant from a traditional practitioner. The medicinal impact was very miraculous to believe and he became completely cured. Honey and the cow products like milk, butter, ghee, butter milk and curd have numerous medicinal values in traditional medicine practices for curing various ailments [5].

2. MATERIALS AND METHODS

The juices of *Centalla asiatica* were extracted by squeezing the freshly plucked green plant. Honey and various dairy products such as milk, butter, ghee, butter milk and curd were locally collected.

2.1 Experimental

Stopped completely the modern Calcium supplements and the bowl was emptied using a strong purgative before starting the treatment. The X-ray was recorded before start administrating the juice. The green juice (15mL) was administered 14 days in an empty stomach early in the morning after the sun rise. After the 14 days again, the X-Ray was recorded. After this 7.5ml juice along with 7.5ml honey was taken in empty stomach for next 14 days. After this X-Ray was taken. Then for the next 14 days the green juice 7.50mL and 7.5mL of no boiled milk was prescribed in the empty stomach. After this also the X-Ray was recorded. Similarly for the next 14 days the green juice (7.5g) and ghee (7.5g) was recommended and X-Ray was recorded. Then for the next 14 days green juice (7.5g) along with butter (7.5) was prescribed. After this the X-Ray was taken to compare the progress of the treatment. Similarly for the next 14 days the green juice (7.5g) and curd (7.5g) was recommended and X-Ray was recorded. The

entire process was repeated for a second time. This time the paste of the herb along with ghee was externally applied on the local area in addition to the juice therapy.

3. RESULTS AND DISCUSSION

On analyzing the captured X-Rays of the affected area, it can be easily observed that the gap between the metallic part and the bone surface was getting cured as the course of treatment progresses [Figure 2]. It may be due to the Calcium transporting capacity of the *Centalla asiatica* to the affected area specifically. This might be due to the formation of Calcium complex or a suitable chelation occurred as the result of the therapy using the juice of *Centalla asiatica*. It is well known that this herb is also very rich in phosphates that are also able to play many critical roles in bone tissue developments. The effect of the therapy was followed up by recording the X-Rays after a year and found impressive with satisfactorily achieved results [Figure 3].

4. CONCLUSION

This incident can also be considered as an advantage of our traditional medical knowledge. The treatment processes for healing various fractures are well explained in the classical texts. The practical knowledge of the traditional practitioners should be considered and scientifically studied. Only scientific researchers can definitely mine the knowledge from such time proven treatment method. Based on the same we can reduce the treatment costs considerably.

5. DISCLOSURE OF CONFLICT OF INTEREST

The author declares no conflict of interest.

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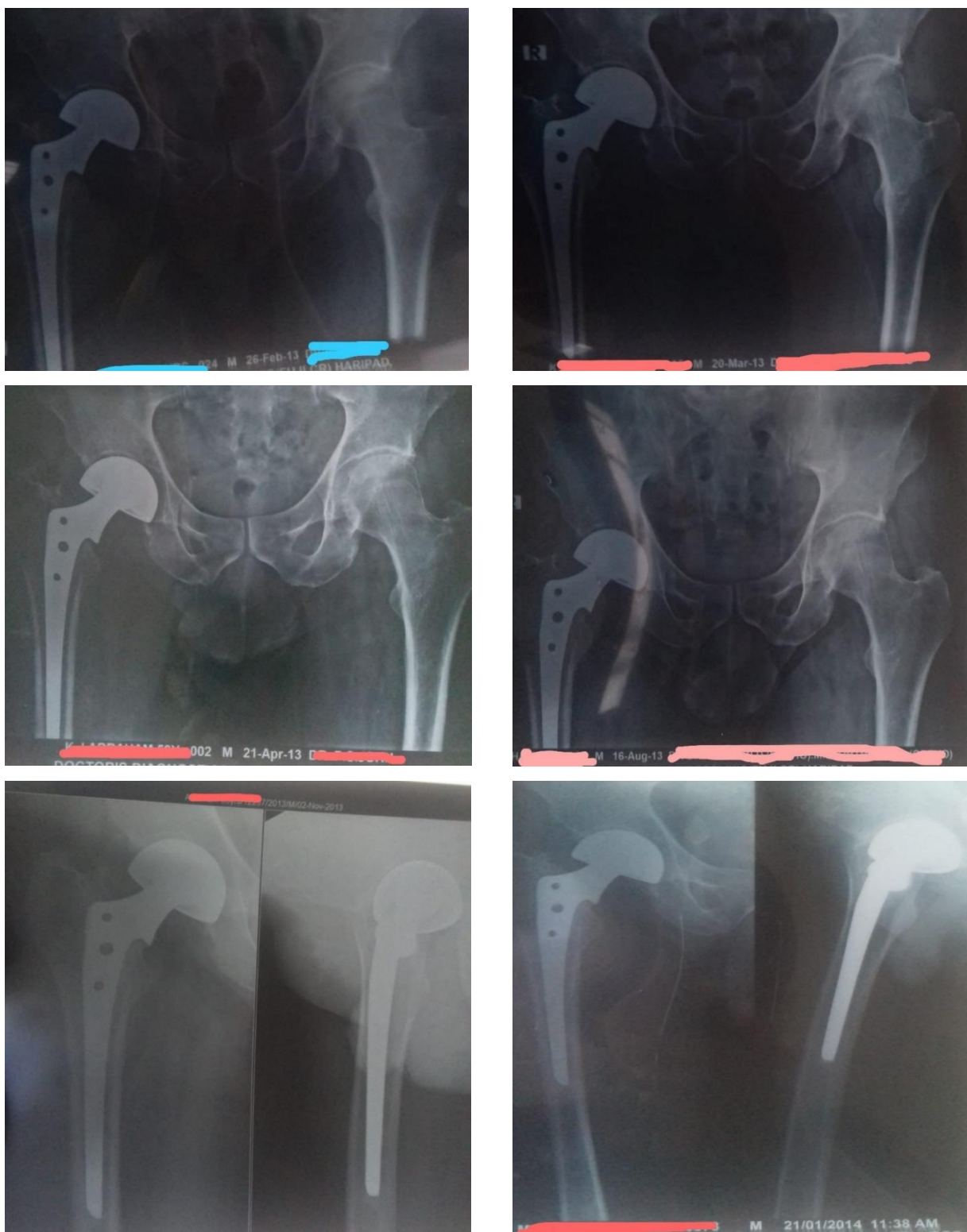


Figure 2: The X-Rays taken for observation during the various period of time during the treatment from 26 Feb 2013 to 02 Nov 2013 are given and can be compared to the 21 Jan 2014.



Figure 3: The X-Rays taken for observation on 08 February 2015 shows the cementing processes were found satisfactorily achieved.