



## AYURVEDIC UNDERSTANDING AND MANAGEMENT OF CHONDROMALACIA PATELLA (GRADE III): A CASE REPORT

### Ayurveda

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### ABSTRACT

Chondromalacia patella is the softening of the hyaline cartilage of the patella with subsequent tearing, fissuring and erosion. It is also known as patellofemoral syndrome or runner's knee. The major causes of chondromalacia patella are post traumatic injuries, wear and tear, iatrogenic injections etc. In the present case the patient presents with the complaints of Anterior knee pain, swelling, crepitus, tenderness and restricted range of movement on both knees (right>left). The diagnosis was confirmed with MRI of right knee joint which revealed Chondromalacia Patella (Grade 3). It was understood in Ayurveda under the spectrum of Janu Sandhigata Vata and the dosha avastha was vatakapahadhika tridosha with snayu, kandara and asthi as the dooshyas. The primary objective of the management was to give symptomatic improvement thereby improving the quality of life of the patient and the secondary objective was to arrest the progression of the condition from grade III to grade IV. The treatment was started initially with rukshana and pachana followed by Brumhana balya and vrana ropana chikitsa. Significant reduction was observed in the parameters like pain, crepitus, tenderness and range of movement

### KEYWORDS

Brumhana, Chondromalacia Patella, Janu Sandhigata Vata, Rookshana

#### INTRODUCTION:

The word "chondro" means cartilage and "malakia" means softening. Chondromalacia patella refers to the softening of the posterior articular surface of the patella with subsequent tearing, fissuring and erosion of the hyaline cartilage. It is also known as patellofemoral syndrome or runner's knee. The major etiologies of chondromalacia patella include post traumatic injuries, microtrauma, wear and tear and iatrogenic injections. The hall mark presentation of Chondromalacia patella is anterior knee pain which aggravates while ascending or descending of stairs squatting, running kneeling etc, effusion, wasting of quadriceps muscles and retropatellar crepitus. MRI scan is the modality of choice for articular cartilage assessment.

The conservative management includes rest, activity restriction and non steroidal anti inflammatory drugs and rehabilitation with physiotherapy. Surgical management include patellar cartilage excision, shaving, drilling etc.<sup>1</sup> In *Ayurveda* Chondromalacia Patella is understood under the spectrum of *Janu Sandhigata Vata* with *shoola*, *atopa* and *shopha* as the lakshana.<sup>2</sup> The *dosha avastha* is *vatakapah pradhana tridosha* with involvement of *kandara snayu* and *asthi* as the *dooshyas*. *Vata prakopa* occurs due to the *dhatu kshaya* i.e *hyaline cartilage* and hence *brumhana chikitsa* can be judiciously administered after considering the *anubandha doshas*. Management is planned on the basis of the stage of Chondromalacia patella and the *avastha* of the *doshas*.

#### Case Report:

A 70 year old male patient with OPD Regn No 10903/22 and IPD Regn No 419/23 who is not a k/c/o DM and HTN, rubber factory worker by profession approached the OPD of Sri Jayendra Saraswathi Ayurveda College and Hospital, Chennai on 09.03.23 with the complaints of pain in both the knee joints on the anterior aspect more in the right knee than the left which aggravates while climbing up and down the stairs, walking and squatting, swelling over both knees (right>left), coarse crepitus (right>left). The patient was asymptomatic before 6 months after which he gradually started experiencing pain on the right knee joint. It was gradually associated with crepitus and swelling on the medial aspect of knee which usually aggravates after walking and prolonged standing. Since 2 months he started developing the same symptoms on his left knee also. He was unable to do his routine duties because of these complaints. MRI of right knee was advised and it revealed chronic low grade interstitial tear with mucoid degeneration of ACL, buckling of PCL, tear of posterior horn of medial meniscus, Grade II MCL injury with torn menisco femoral ligament, moderate effusion, Chondromalacia Patella Grade III, mild pre patellar and infra patellar bursitis.

#### Examination:

##### General Examination:

- BP: 120/80 mm Hg
- Pulse: 76/min
- Respiratory rate: 18/min
- Temperature: 98.4 degree F
- Appetite: Normal
- Bowel: Regular
- Micturition: Regular
- Sleep: Sound.

**Table 1 Knee Joint Examination**

Parameters	Right Knee Joint	Left Knee Joint
Pain	+++	+
Tenderness	Grade III	Grade I
Swelling	+++	+
Discolouration	Absent	Absent
Crepitus	++	+
Deformity	Absent	Absent
Temperature	Absent	Absent
ROM	Restricted	Restricted

**Table 2 Special Maneuvers**

Tests	Right Knee Joint	Left Knee Joint
Clark's test	Positive	Negative
Mc Murray Test	Positive	Positive
Anterior drawer sign	Positive	Positive
Posterior drawer sign	Positive	Negative

#### Investigations:

##### MRI Right Knee Joint -

Chronic low grade interstitial tear with mucoid degeneration of ACL, buckling of PCL, tear of posterior horn of medial meniscus, Grade II MCL injury with torn menisco femoral ligament, moderate effusion, Chondromalacia Patella Grade III, mild pre patellar and infra patellar bursitis.

- FBS: 110 mg/dl
- PPBS: 140 mg/dl
- HbA1C - 5.7%
- ESR: 06 mm/hr
- Hb: 13%

#### Diagnosis:

*Janu Sandhi Gata Vata* (B/L) - Chondromalacia Patella (Grade 3) +ACL tear+PCL tear +Medial meniscal tear - (Right Knee) and Medial Meniscal tear +ACL tear - (Left Knee)

**Table 3 Management:**

Sr.No	Date	Treatment	Observations
1	10.03.23-12.03.23	<ul style="list-style-type: none"> <li>Sarvanga Parisheka with Dashamoola Kashyam</li> <li>Janu lepa with Jadamayadi churnam with warm water</li> </ul>	<ul style="list-style-type: none"> <li>Pain on both knees reduced</li> <li>Swelling over both knees reduced</li> </ul>
2	13.03.23-15.03.23	<ul style="list-style-type: none"> <li>Sarvanga Abhyanga with Lakshadi tailam followed by Parisheka with Dashamoola Kashaya</li> <li>Janu basthi with Dhanwantaram tailam and Murivenna</li> </ul>	<ul style="list-style-type: none"> <li>Creptus started reducing.</li> <li>Pain got completely reduced on the left knee joint and mild pain was persisting on the right only while climbing up stairs.</li> </ul>
3	16.03.23-20.03.23	<ul style="list-style-type: none"> <li>Sarvanga Abhyanga was continued.</li> <li>Nadi swedam with Dashamoola Kashayam</li> </ul>	<ul style="list-style-type: none"> <li>- do-</li> </ul>
4	13.03.23-20.03.23	<ul style="list-style-type: none"> <li>Yoga basthi – Niruham – Balamoola Ksheera basthi – Balamoola ksheerapaka -200 ml</li> <li>Anuvasana basthi- Madhuyashtyadi tailam +Guggulutiktaka ghritam (each 30ml)</li> </ul>	<ul style="list-style-type: none"> <li>Significant reduction in tenderness, pain swelling and creptus over both knees.</li> <li>ROM improved on both knees</li> </ul>

**Oral Medications:**

- Dhanwantaram Kashayam – 20ml -0-20ml with 60 ml boiled and cooled water before food
- Gandha tailam – 4 drops with Kashayam
- Kaishora Guggulu – 2-0-2 with Kashayam
- Ksheerabala capsule – 1-0-1 A/F
- Zeotone capsule – 1-0-1 A/F
- Tiphala churnam – 1 tsp at bedtime with warm water

**Discharge Medications:(for 1 Month)**

- Guggulu tiktam ghritam -10ml -0-0 in empty stomach with warm water
- Dhanwantaram Kashayam – 0-0-20 ml with 60 ml boiled and cooled water before food
- Gandha tailam – 4 drops with Kashayam
- Ksheerabala capsule – 1-0-1 A/F
- Zeotone capsule – 1-0-1 A/F
- Dhanwantaram tailam + Murivenna – for Janu pichu and sthanika Abhyanga for both knees.
- Knee cap was advised for both knees after discharge.

**Outcomes Of The Treatment:****Table 4**

Parameter	BT(Right)	AT(Right)
Pain	+++	+
Swelling	+++	-
Creptus	++	+
Tenderness	Grade III	Grade I
ROM	Restricted	Free

**Table 5**

Parameter	BT(Left)	AT(Left)
Pain	+	-
Swelling	+	-
Creptus	+	-
Tenderness	Grade I	-
ROM	Restricted	Free

**DISCUSSION:**

The present case of Chondromalacia patella (right knee) was clinically and radiologically diagnosed. In *Ayurveda* it can be understood under the spectrum of *Janu Sandhi Gata Vata*. The *dosha avastha* in this case is *vata kapha pradhana tridosha* with *kandara, snayu* and *asthi* as the *dooshyas*. The classical *lakshanas* of *Janu Sandhigata Vata* like *shoola shophya* and *atopa* were observed in both the knees (right>left). Even though the *lakshanas* indicated the role of *vata* and *kapha* in the

*samprapthi*, there is indirect role for *pitta* also by considering *kandara* as one of the *dooshyas*. Tear in ACL, PCL and medial meniscus was understood as *abhyantara vrana*. The *nidana* in this case is wear and tear of the knee joint and the patient being in *vrudha avastha* has also contributed for the pathology. Since the patient is in Grade 3 of Chondromalacia patella, the pathology cannot be reversed. Hence the primary objective in the management was to relieve the symptoms and also to prevent the further progression of the condition from grade 3 to grade 4.

*Brumhana, balya* and *vranaropana* line of management was adopted in this case keeping in view of the *anubandha doshas* i.e. *pitta* and *kapha*. The treatment was started with *rookshana* in the form of *Kashaya dhara* with *Dashamoola Kashayam*. It helped in reducing the inflammation i.e. bursitis and also the effusion. The pain on both the knees got reduced after *Kashaya dhara*. Along with *Kashaya dhara sthanika rookshanam pachanam* was accomplished with *Janu Lepa* with *Jadamayadi churnam* and warm water. The *upakrama* was judiciously shifted to *Brumhana* from the 4<sup>th</sup> day after seeing the *samyak langhita lakshanas* like *vyadhi mardhavam* and *laghavam*.<sup>3</sup> *Brumhana chikitsa* was started with *Sarvanga Abhyanga* and *Dashamoola Kashaya dhara* for the first 3 days and after that *drava sweda* was shifted to *Nadi sweda*. *Sarvanga Abhyanga* was done with *Lakshadi tailam* because of its *sandhanakari* and *brumhana* property. *Janu Basthi* with *Dhanwantaram tailam* and *Murivenna* was administered. *Dhanwantaram tailam* is *brumhanam* in *pittanubandha vatika avastha* and it is indicated in *asthi hata ksheena* (Tear of ACL, PCL and Medial Meniscus) type of pathologies.<sup>4</sup> *Murivenna* was selected because of its *vrana ropana* and *shoola hara* properties. *Yoga basthi* was administered with *niruha* as *Balamoola ksheera basthi* and *Anuvasana* with *Guggulu tiktaka ghritam* and *madhuyashtyadi tailam*. *Ksheera basthi* was administered due to its properties i.e. *bala krut* and also by considering the *dhatu kshaya avastha*.<sup>5</sup> *Madhuyashtyadi tailam* was used as one of the *Sneha dravya* for *niruha* and *anuvasana* due to the *vranaropana swabhava* of *yashti madhu*.

**CONCLUSION:**

Chondromalacia patella is the softening with subsequent tearing, fissuring and erosion of the hyaline cartilage of the patella. It can be understood under the spectrum of *Janu Sandhigata Vata*. The *dosha avastha* in this case was *Vatakapha Pradhana Tridosha* with *kandara snayu* and *asthi* as the *dooshyas*. Initially *rookshana* and *pachana* line of management was administered keeping in view of the effusion followed by *Brumhana, balya* and *Vrana ropana chikitsa*. The primary objective of the treatment was to give symptomatic relief thereby improving the quality of life and the secondary objective was to arrest the progression of the condition from grade 3 to grade 4. Significant improvement in pain, swelling, creptus tenderness and range of movement were observed on both the knee joints at the end of the treatment.

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