

## Osteopoikilosis-A Case Report

**Dr. Vimixa Patel**<sup>1</sup>, PhD scholar, **Dr. Jignesh Chauhan**<sup>2</sup>, MS(Ayu), **Dr. Patel Shail**<sup>3</sup>, DNB Ortho, **Dr. Tejal A Patalia**<sup>4</sup>, DMRD, **Prof. A. B. Thakar**<sup>5</sup>, PhD (Ayu)

<sup>1</sup>Panchakarma Department, I.P.G.T. & R.A. GAU, Jamnagar, <sup>2</sup>Rachana Sharira, Government Ayurved college Junagadh, <sup>3</sup>Department of Orthopedic surgery, M. P. Shah medical college, Jamnagar, <sup>4</sup>Radiology Department, <sup>5</sup>Panchakarma Department, I.P.G.T. & R.A., GAU, Jamnagar, Gujarat.

**Abstract:** Osteopoikilosis (OPK) is a very rare autosomal dominant bone disorder with characteristic radiological features by numerous hyperostotic areas that tend to localize in periarticular osseous regions. Prevalence has been estimated 1/50,000. Diagnosis is usually done according to radiographs in which Diagnostic lesions of osteopoikilosis are typically diffuse, round or oval, symmetrically shaped sclerotic bone areas. It should be differentiated from osteoblastic metastasis, tuberous sclerosis and mastocytosis due to the similarity of radiological images. A 19-year-old female patient complains of polyarthralgia which started since 1 year and involving large and small joints. She reported the presence of pain mostly located at both hip joints and both shoulders. On radiologic examination, numerous, symmetric, well defined, sclerotic lesions were identified on pelvis, shoulder clavicle, spine, bilateral wrist joint and knee joint. These spots were located on spongy bony tissue, and in the inner bone cortex located bilaterally in the epiphysis and metaphysis. We concluded the diagnosis of OPK. OPK may be an isolated finding or associated with other pathologies, e.g. skin manifestations, rheumatic and / or skeletal disorders and osteoblastic metastasis. In this disease condition patient was suffering from multiple joints pain, swelling in joints, morning stiffness, fatigue and loss of appetite etc. which are similar features to *Amavata*. Hence, Patient was treated as an *Amavata*.

**Keywords:** Osteopoikilosis, *Amavata*

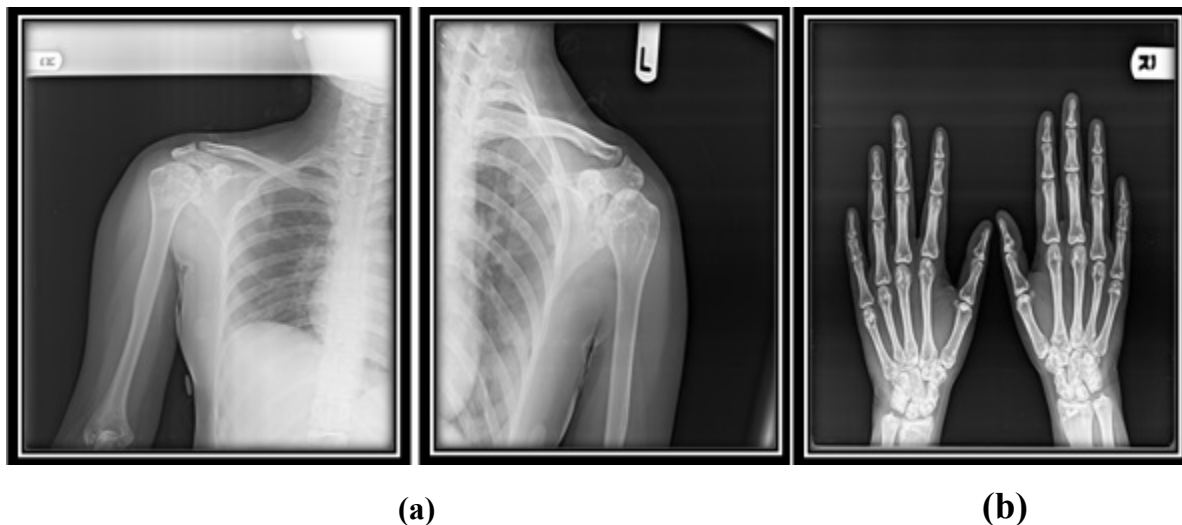
### INTRODUCTION

Osteopoikilosis (OPK) is an autosomal dominant sclerosing bone dysplasia that results in focal deposits of thickened lamellar bone in the spongiosa<sup>1</sup>. OPK is a rare bone disease whose prevalence is estimated at 1 per 50,000. It occurs at any age and in both genders, they are more common in men than in women<sup>2</sup>. Osteopoikilosis is histological defined as bone islands that form dense core structure and are not associated with bone marrow in trabecular or cancellous bone. These lesions are more prominent in long bones and the metaphyseal and epiphyseal pelvis; they are also common in phalanges and in spongy tissues of the tarsal and carpal bones<sup>3</sup>. In familial or congenital Osteopoikilosis, the affected family members suffer

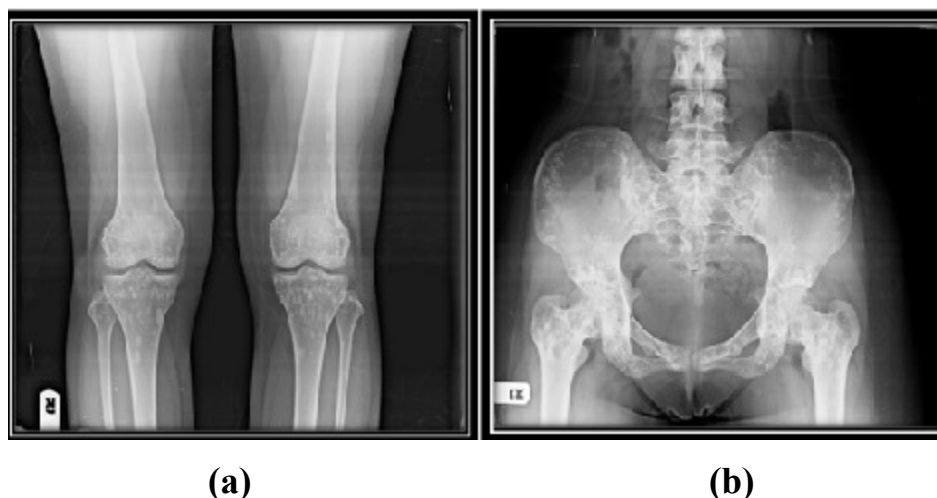
from moderate to intermittent pain in hands and feet, with the onset of the symptoms ranging from 15 to 26 years of age and rare before 3 years of age. Multiple joints pain, swelling in joints, morning stiffness, fatigue and loss of appetite etc. are features of *Amavata*. So, Patient was treated as an *Amavata*.

#### CASE REPORT:

A 19-year-old female patient having complains of polyarthralgia which was started before 1 year and involving large and small joints. The clinical features of osteopoikilosis are nonspecific; she reported the presence of pain mostly located at small multiple joints, both hip joints and both shoulders with morning stiffness, fatigue and loss of appetite. On radiologic examination, numerous, symmetric, well defined, sclerotic lesions were identified on (fig. 1a) shoulder clavicle, (fig. 1b) B/L wrist joint, (fig. 2a) knee joint, (fig. 2b) pelvis, and spine. These spots were located on spongy bony tissue, and in the inner bone cortex located bilaterally in the epiphyses and metaphyses. We concluded the diagnosis of OPK.



**Fig. 1:** round and oval sclerotic/ calcific density foci mainly seen in peri articular region. (a) scapula on both sides. (b) Bilateral wrist joint, carpal bone and distal radio ulna also show similar lesion.



**Fig. 2:** multiple round and oval calcific lesions (a) seen in both knee peri-articular long axis distribution. (b) Bilateral hip bone, upper part of femur and sacral bone and central skeleton region.

After hospitalization and her clinical examination, the patient was put on oral *Ayurvedic* treatment along with some selected *Panchakarma* procedures as given below.

**Table: 1 Management**

No	Procedure	Drug	Dose		Route of Administer & Anupana	Duration
			Day	Morning		
1	<i>Deepana - Pachana</i>	<i>SunthiChurna</i>	2gms TDS / day		orally with luke warm water	15 days
2	<i>Snehapana</i>	<i>Go – Ghrita</i>	1 <sup>st</sup> day	30 ml	orally in morning with 5gms & luke warm water	5 days
			2 <sup>nd</sup> day	60 ml		
			3 <sup>rd</sup> day	90 ml		
			4 <sup>th</sup> day	120 ml		
			5 <sup>th</sup> day	150 ml		
3	<i>Abhyanga &amp; Svedana</i>	<i>BruhataSaindhava ditaila</i>	As per required		<i>Bahya</i>	4 days
4	<i>MruduVirechana Karma</i>	<i>ErandTaila</i>	70ml in morning		orally with <i>Go Dugdha</i>	On 4 <sup>th</sup> day, after <i>Abhyanga &amp; Svedana Karma</i>
5	<i>Sansarjana Krama</i>	<i>Peyadi Krama</i>	16 Vega observed after Virechana Karma		Orally	5 days
6	<i>Basti Karma</i>	<b>Kshara Basti 320 ml</b> <i>Chincha</i> - 100gm <i>Guda</i> – 100 gm <i>Satpushpa Churna</i> -10 gm	<b>Pathyadi Basti - 320ml</b> <i>Kwath</i> - 240ml <i>Madhu</i> – 30ml <i>Taila</i> – 30ml		Rectal	3 days- <i>Kshara Basti</i> and on 4 <sup>th</sup> day <i>Anuvasa</i>

		Go- <i>Mutra</i> - 100 ml <i>Saindhava</i> – 10 gm	Saindhava- 5 gms kalka- 15gms		<i>nBasti</i> for 16 days given Alternate <i>KalaBasti</i> <i>i</i>
		<i>BruhataSaindhavaditailaAnuvasna</i> (after Lunch)	120ml 1 2 3 4 5 6 7 8 K K K A K K K A 9 1 1 1 1 1 1 1 0 1 2 3 4 5 6 K K K A K K K A K- <i>Kshara Basti</i> A- <i>Anuvasana Basti</i>	Rectal	
7		<i>Kaishora Guggulu</i>	4 tabs / thrice / day after food	orally with Luke warm water	16 days started from 1 <sup>st</sup> day of <i>Basti Karma</i> till last <i>Basti</i> .
8		<i>RasnasaptakaKwatha</i>	20ml / twice / daily empty stomach	orally	16 days
9		<i>GuduchiChurna</i> -1gm <i>GokshuraChurna</i> -1gm <i>SunthiChurna</i> -1gm <i>PippaliChurna</i> -1gm	3gms / thrice / daily	orally with Luke warm water	16 days

## DISCUSSION

This *Ama* is the utmost important causative factor for various diseases which is produced in the body due to weakness of *Agni*.<sup>4</sup> This *Ama* is carried by “*Vata*” and travels throughout the body and gets accumulated in the joints, which is the seat of “*Kapha*”. As this process continuous, all the joints are gradually affected, which results in severe pain and swelling in the joints.<sup>5</sup>

As per (Tab. 1) the patient had increased appetite at the end of first 15 days of *Deepana & Pachana*, which removes excessive *Kledaka Kapha* and improved *Agni*. During

*Snehapana* pain, stiffness and swelling was reduced in small joints. Conventional medicaments were reduced in tapering dose during *Snehapana*. After *Mrudu Virechana* Tab. Diclofanec was stopped and tab. Prednisone 40mg was given once daily which was divided in two dose 40mg per day. Tab. Prednisone 20mg given once per day after 5 days of *Sansarjana Karma* which reduced and untimely stopped during *Basti Karma*. Her ESR was also decreased 90mm/hr to 20mm/hr.

*Ksharabasti* comprises of *Saindhava*, *Guda*, *Chincha*, *Shatahva* and *Gomutra*. Maximum quantity of *Gomutra* is taken, which is having *Ksharaguna*. *Kshara* has the property of *Lekhana* and *Vishoshana*, which are antagonistic to *Ama* and is very much required in the conditions like *Amavata* and also indicated in the condition of *Shoola* and *Anaha*, in *Cakradatta*. After *Virechana*, the body can respond well to the *Kshara Basti*.

*Kaishora Guggulu* is indicated as good blood purifier hence, corrects *Raktadushthi* (vitiation of blood). *Rasna Saptaka Kvatha* having anti-inflammatory activity, analgesic, anti-arthritic activity.

*Guduchi Churna* having *Rasayana*, *Sangrahi*, *Balya*, *Agnidipana*, *Tridoshshamaka*, *Jwara-bhootaghni* action. *Gokshura Churna* having properties like *Vedanasthapana*, *Vatashamaka*, *Amashayabalya*, *Agnideepaka*, *Anulomana*, *Shothahara*. *Sunthi Churna* having *Ushana Virya* and *Katu Rasa*. By virtue of these properties, the state of *Mandagni* might have improved. *Pippali* having *Dipana*, *Pachana* and *Rasayana* action.

Ayurvedic treatment has shown encouraging result with relief of the symptoms in the patient of osteopoikilosis suffering since 1 yr. and also stopped all conventional medicines during treatment. Long follow up and a greater number of patients are required to reach up to any conclusion but in this case is very rare and it can be stated this treatment is a hope for the patients of osteopoikilosis resistant with conventional medicaments.

## CONFLICT OF INTREST

The authors declare no potential conflict of interest.

## References:

---

<sup>1</sup>Boulet C, Madani H, Lenchik L, et al. Sclerosing bone dysplasias: genetic, clinical and radiology update of hereditary and non-hereditary disorders. *Br J Radiol.* 2016;89(1062):20150349.

<sup>2</sup> Drouin CA, Grenon H. The association of Busckhe-Ollendorf syndrome and nail-patella syndrome. *J Am Acad Dermatol.* 2002; 46:621–625.

<sup>3</sup> Resnick D, Niwayama G. Enostosis, hyperostosis and periostitis. In: Resnick D, editor. *Diagnosis of Bone and Joint Disorders.* Philadelphia: W.B. Saunders Company; 1995;6:4404-11.

---

<sup>4</sup>Kashinatha Shastri, Pt., Chaturvedi G.N., translators. Vidyotini Hindi commentary. 14th ed. Varanasi: Chaukhamba Bharti Academy; 1987. Agnivesha, Charaka, Dridhbala, Charaka Samhita, GrahanichikitsaAdhyaya, Shloka no. 42-44; p. 460. [[Google Scholar](#)]

<sup>5</sup>Sudarshana Shastri., editor. Vidyotini Hindi commentary. 20th ed. Vol. 2. Varanasi: Chaukhamba Sanskrit Samsthana; 1992. Madhavakara, Madhava Nidana, AmvatanidanamAdhyaya, Shloka no. 1-5; p. 498. [[Google Scholar](#)]