

SHILAJEET: A BRIEF REVIEW**Dr. Pooja V. Shaha^{1*} and Dr. Shashiprabha L. Gupta²**

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ABSTRACT

Rasashastra is a specialized branch of Ayurveda which mainly deals with the metals, minerals, animal origin product, toxic herbs and their use in therapeutics. The mixture of metallic and herbal products combinelly forms herbomineral formulation or *Rasaushadhi*. *Shilajeet* is one of important *Rasdravya* mentioned as a *Maharasa*. According to *Acharya Charaka* there is no disease in the world which cannot be treated by *Shilajeet*, if it administered at appropriate time and combined with suitable drugs in proper dose. *Shilajeet* is considered as a best *Rasayan*. In ayurvedic texts it's types, *Shodhana*, *Marana*, *Satvapatan* procedures have been mentioned in details. Chemical constituents of *Shilajeet* are humic substances like fulvic acid, humic acid, triterpenes, selenium and nearly 85 ionic minerals. According to

Acharyas, *Shilajeet* is used in the urinary disorders, urinary stones, diabetes, obesity and also for antiaging, rejuvenation and vitality.

KEYWORDS: Shilajeet, Maharas, Rasayan.

INTRODUCTION

Varga – *Maharasa*.

English Name – Black Bitumen/mineral pitch.

Latin Name – *Asphaltum punjabinum*.

Synonyms – *Adrijatu*, *Ashmasar*, *Girija*, *Shilajatu*, *Shaila*, *Shailodbhava*.

Shilajeet is the blackish brown exudation caused by the intense heat of sun, from rocks in the womb of which lie deposited gold and other metals. It is formed for centuries by the gradual decomposition of certain plants by the action of microorganisms. It mainly contains humus and organic plant material. *Shilajeet* is mentioned under the *Rasayana* category in *Chikitsasthana* of *Charaka Samhita*. According to *Acharya Charaka* there is no disease in the world which cannot be treated by *Shilajeet* if it administered at appropriate time and combined with suitable drugs in proper dose (*Cha. Chi.* 1-3/65).^[1] *Acharya Sushruta* has described *Shilajeet* in *Madhumeha Chikitsa*, in which purified *Shilajeet bhavit* with decoction of *Salsaradi Gana Dravyas* is advocated in *Madhumeha* (Diabetes Mellitus).^[2] *Shilajeet* is briefly described in *Rasgranthas*. *Rasaratnasamuchchaya* includes *Shilajeet* under *Maharasa*^[3], *Rasatarangini* includes under *Mishralauha*^[4] and *Ayurved Prakash* under *Upadhatu*.^[5]

Chemical constituents: It consist of 60-80% organic matter, 20-40% mineral matter and 5% of trace elements. *Shilajeet* mainly contains humic substances like fulvic acid, humic acid and humin. It has been also containing a number of components including benzoic acid, hippuric acid, fatty acid, resin & waxy materials, gums, albuminoids & vegetable matter.

Types of *Shilajeet*

- 1) *Acharya Charaka* – *Acharya Charaka* explains 4 types of *Shilajeet* based upon stones of four types of metals from which it exudes: *Swarnadrija*, *Rajatadrija*, *Tamradrija* & *Lauhadrija*.
- 2) *Acharya Sushruta* stated 6 types of *Shilajeet* based upon its origin. He added *Nagadrija* and *Vangadrija* in above listed types.
- 3) *Acharya Vagbhata* also explained 6 types of *Shilajeet*.
- 4) According to *Rasa-granthas* *Shilajeet* is of 2 types –
 - a) *Gomutragandhi Shilajeet* – i. e. the variety which possesses the odour of cow's urine. It again subdivided into two classes, viz.
 - 1) *Sasatva Gomutragandhi Shilajeet* (containing active principles)
 - 2) *Nisatva Gomutragandhi Shilajeet* (does not contain active principles)
 - b) *Karpuragandhi Shilajeet* – i. e. the variety which has the odour of camphor

Shuddha Shilajeet Pariksha (Test of purified Shilajeet)**According to ayurveda**

वन्हौ क्षिप्तं भवेद्वत्तल्लिङ्गाकारमधूमकम् । सलिले अपि अविलीनं च तच्छुद्धं हि शिलाजतु ॥

(र. र. समु. २/११४)

तृणाग्रेणाम्भसि क्षिप्तमधो गलति तन्तुवत् । गोमूत्रगन्धिमलिनं शुद्धं ज्ञेयं शिलाजतु ॥

(रसरत्नमाला)

- If properly purified *Shilajeet* is put on a charcoal ember, takes the shape of *Linga* or an elongated oval shape. This ignited *Shilajeet* is insoluble in water.
- Pure *Shilajeet* will burn without emitting any smoke.
- If pure *Shilajeet* thrown into water by means of the points of grass, it will sink in the shape of thread.
- The pure *Shilajeet* should contain the smell of cow urine.

According to modern parameters

a) Physical characteristics

Color – Blackish brown

Odor – Pungent

Taste – Bitter

Touch – Rough

Form – Crystalline

pH of 2% aq. Solution – 3.46 to 3.86

b) Elemental analysis

Calcium – 45.36%

Hydrogen – 5.92%

Nitrogen – 2.31%

Sulphur – 0.39%

c) Spectroscopic analysis

UV/Vis Spectra

FTIR (Fourier transform infrared spectroscopy)

Powder x-ray diffraction

DSC (Differential Scanning Calorimetry)

Scanning electron microscopy

Shodhana of Shilajeet (Purification of shilajeet)

In *Shodhana* process unwanted impurities are removed from the substance by various pharmaceutical methods with specific drugs which increases therapeutic efficacy of drug and minimizes the toxicity. In *Ayurvedic* classics different method for purification of *Shilajeet* are mentioned. For the purpose of increasing the strength of *Shilajeet*, it is subjected to bhavana with juices or decoction of drugs which can pacify the three *Doshas*. Dry *Shilajeet* is subjected in 2-4 times of hot water, stirred well. Solid waste particles are separated by filtration. After that it is heated upto boiling and allowed to cool down. During cooling process *Shilajeet* forms a foamy layer on the top of the vessel. It is carefully collected and the procedure is repeated till the foam is formed. Such type of *Shilajeet* is called as *Agnitapi Shilajeet*, while heating is done under direct sunlight, then it is called as *Suryatapi Shilajeet*. In above procedure, in the place of water, *Triphala Kwatha*, *Gomutra*, *Goksheera*, *Bhringraj Swarasa* can also be used.

Marana of Shilajeet (Incineration of Shilajeet)

Nowadays, *Marana of Shilajeet* is not in practice, *Shuddha Shilajeet* is used. But *Rasaratnasamuchchayakar* explain the procedure of *Shilajeet Marana*. *Shilajatu* is incinerated, if it is mixed with *Manashila*, *Gandhaka* and *Haratala* rubbed together with the juice of *Matulunga* and then subjected to *Putam* with a fire made of eight pieces of cowdung cakes.

Satvapatana of Shilajeet

Shilajeet discharges its essence, if rubbed with the *Dravana-varga* and some vegetable acid and heated in a crucible by a strong fire made of coal, which is to be blow by means of bellows. The essence, thus extracted, has the appearance of iron. It should be incinerated and applied in medicines in the same way as iron.

Properties of Shilajeet

The text like *Rasaratnasamuchhaya* believed that *Shilajeet* possess all the properties of *Ras*, *Uparas*, *Parad*, *Ratna* and *Lauha* together in itself. (RRS 2/116).

1) Colour

According to all texts colour of *Swarna Shilajeet* is red like *Japakusuma*, *Rajat shilajeet* having pale colour(*Pandu*), while as *Tamra Shilajeet* possess blue colour and *Lauhaja* type is of black colour like *Guggulu*. (*Cha chi*. 1-3/57, RT 22/65-68).

2) Rasa

Majority of texts believe that the rasa of *Swarna Shilajeet* as Madhura and Tikta. Maximum authors considered *Rajat Shilajeet* and *Tamra Shilajeet* possessing *Katu* and *Tikta Rasa* respectively while as *Lauha Shilajeet* possess *Tikta* and *Lavan Ras*. But according to *Ashtanga Hridaya* believe it to of *Katu Rasa*. *Naga Shilajeet* possesses *Tikta Rasa*. *Vanga shilajeet* is having *Katu Rasa* and *Tikta Rasa*.

3) Guna

Swarna, Rajat and *lauha shilajeet* – *Sheeta guna*

Tamra shilajeet – *Ushna guna*

Naga shilajeet – *Ushna, mridu guna*

Vanga shilajeet – *Sandhra guna*

4) Virya

All the authors considered *Swarna Shilajeet*, *Rajat Shilajeet* and *Lauha Shilajeet* to be *Sheeta Virya*. But exception in the case of *Brihatrasrajsundara*, who consideres *Rajat Shilajeet* as *Ushna Virya*. *Tamra, Naga* and *Vanga* variety of *Shilajeet* is believed to have *Sheeta Virya*.

5) Vipaka

Swarna Shilajeet, Tamra Shilajeet, Lauha Shilajeet and *Naga Shilajeet* variety to be of *Katu Vipaka* whereas *Vipaka* of *Rajat Shilajeet* is *Madhura*.

6) Karma

Swarna shilajeet – *Rasayana karma*

Rajat shilajeet – *Pandurog nashaka*

Tamra shilajeet – *Lekhana*

Lauha shilajeet – *Rasayan, vrishya*

7) Uses

According to *Charak Samhita*, there is no curable disease in the world which cannot be treated by *Shilajeet* if it administered at appropriate time and combined with suitable drugs in proper dose. *Shilajeet* is a well-known *Ayurvedic* drug having *Rasayan* properties. According to *Ayurvedic Granthas* it is useful in *Kasa, Shwas, Hikka, Hridroga, Urakshata, Agnimandya, Shoola, Amlapitta, Aamdosha, Chhardi, Gulma, Visha, Udara, Shotha, Kshaya, Jwara, Pandu, Aamvata, Arsha, Kamla, Vatarakta, Visarpa, Kushtha, Galaganda, Granthi,*

Apachi, Arbud, Medorog, Prameha, Sthaulya, Madhumeha, Unmada, Apasmara, Phiranga, Mutrakrichhra, Ashmari, Mutraghata etc.

According to modern, some preclinical research studies on *Shilajeet* indicate its great potential uses in certain diseases and shows various properties like antioxidant properties^[8-9], antidiabetic properties^[10], antiulcerogenic properties^[11], antiallergic and immunomodulatory^[12-13], anti-inflammatory^[14], analgesic properties.^[9]

8) Dosage

Acharya Charaka mentioned that the dose is depending upon disease and *Bala* of the patient. Dosage of *Shilajeet* according to *Charaka* is divide into three classification viz *Uttam, Madhyam and Avara*. In the *Uttam* type the quantity is one *Pala* for seven weeks. In *Madhyama* type $\frac{1}{2}$ *Pala* for 3 weeks and *Avara* type 1 *Karsha* for 1 week. In *Sushruta* the dose of *Shilajeet* is 100 *Pala* for gaining *Pushti, Bala, Varna*, curing *Madhumeha* and longevity upto 100 years. In *Rastarangini* dose of *Shilajeet* is from 2 to 8 *Ratti* depending upon the factor like age, strength etc.

Pathya during Shilajeet Sevan

पयांसि तक्राणि रसाः सयूषास्तोयं समूत्रा विविधाः कषायाः।

आलोडनार्थं गिरीजस्य शस्तास्ते ते प्रयोज्याः प्रसमीक्ष्य कार्यम् ॥ (च.चि.१/३/२७)

1. Dugdha
2. Takra
3. Mudga
4. Water from natural resources

Apathya during Shilajeet Sevan

शिलाजतुप्रयोगेषु विदाहीनि गुरुणि च ।

वर्जयेत् सर्वकालं तु कुलत्थान् परिवर्जयेत् ॥ (च.चि.१/३/६२)

1. Heavy exercise
2. *Kulatha*
3. *Kakmachi*
4. *Kapot mans* etc.

DISCUSSION AND CONCLUSION

Shilajeet is the humus rich blackish brown exudation having *Rasayan* properties and useful in many diseases. As we see *Shilajit* is important but rare drug its chances of adulteration possible, so for standard *Shilajeet* above *Ayurvedic* and modern tests are important. *Shilajeet* mainly contains humic substances like fulvic acid, humic acid and humin. Generally, *Shilajeet* is used in purified form though *Maran* and *Satvapatan* of *Shilajjeet* is mentioned in text, but now a day it is not in practice.

REFERENCES

1. Charak Samhita – Agnivesh, Commentary by Chakrapanidutta.
2. Sushruta Samhita – Maharshi Sushruta, commentary by Kaviraj Ambikadatta Shastri, Chaukhambha Sanskrit Sansthan, Varanasi.
3. Ashtanga Hriday – Vagbhata, commentary by Dr. Brahmanand Tripathi, Chaukhamba Sanskrit Pratishthan, Delhi.
4. Rasratnasamuchchaya – Shri Vagbhata Acharya, commentary by Acharya Siddhinandan Mishra, Chaukhambha orietalia, Varanasi.
5. Rasatarangini – Sadananda Sharma, edited by Kashinath Shastri, 11th edition, published by Motilal Banarasidas, Varanasi, 1989.
6. Ayurved Prakash – Shri Madhava Commentary, edited by Shri Goverdhan Sharma Chhangani, 1st edition, published by Dhanwantarui Ayurved Mahavidyalaya, Nagpur, 1943.
7. Ras jala nidhi – Bhudev Mookharji with English translation by author, Nababgibhakar press, Calcutta, 1929.
8. Ghosal S, Lata S, Kumar Y, Gaur B, Misra N. Interaction of shilajeet with biogenic free radicals. Indian Journal of Chemistry B., 1995; 34: 596-602.
9. Bhattacharya SK, Sen AP. Effects of Shilajeet on biogenic free radicals. Phytotherapy Research, 1995; 9(1): 56-59.
10. Bhattacharya SK. Shilajeet attenuates streptozotocin induced diabetes mellitus and decrease in pancreatic islet superoxide dismutase activity in rats. Phytotherapy research, 1995; 9(1): 41-44.
11. Ghosal S, Singh SK, Kumar Y, et al. Shilajeet – Antiulcerogenic of fulvic acids and 4-methoxy-6-carbomethoxybiphenyl isolated from shilajeet. Phytotherapy Research, 1998; 2(4): 187-191.

12. Ghosal S. Chemistry of Shilajeet, an immunomodulatory ayurvedic rasayan. *Pure and applied chemistry*, 1990; 62(7): 1285-1288.
13. Ghosal S, Lal J, Singh SK, et al. Mast cell protecting effects of shilajeet and its constituents. *Phytotherapy research*, 1989; 3(6): 249-252.
14. Acharya SB, Frotan MH, Goel RK, et al. Pharmacological actions of shilajeet. *Indian Journal of Experimental biology*, 1998; 26(10): 775-777.