

PHARMACOLOGY AND THERAPEUTICS OF MURDAR SANG (LITHARGYUS): AN ANCIENT UNANI DRUG

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ABSTRACT

Murdar Sang (Litharge) is an important mineral origin drug used for centuries in Unani system of medicine for treatment of different diseases, as it is having properties like Jali /Detergent, Akkal /Corrosive, Dafaa-i-Ganj /Munbit-e-Sha 'r /Hair grower/Trichogen , Musawwid-i-Sha 'r, Mujaffif-i-Qurooh /Desiccative, Munaffis Balgham -w-Rutoobaat/ Expectorant, Na'afe shura, Ra'ade / Repellent, Qatil-i- kirm shikam /Antehelminthic/Vermicidal, Qabiz/Astringent/Styptic, Muhallil-i-warm /Anti-inflammatory etc. Murdar sang can be prepared manually with different methods and used in different forms. The present review highlights the traditional, pharmacological and therapeutic uses of Murdar sang.

KEYWORDS: Murdar Sang, Litharge,

INTRODUCTION

Murdarsang is a mineral origin drug which is used for centuries in Unani system of Medicine. It has been prepared from lead. It is mostly used as local application in the form of ointment and dusting powder for different diseases from hundreds of years.

Etymology

In Old French Murdar sang is known as Litharge. In Latin called "Lithargyus". Greek translation is "Lithargurous" which is derived from "Lithos" means "Stone" and "arguros" means "Silver". Scientific Name for Murdar Sang is plumbi oxidum.^[1]

Vernacular names

Murdar Sang is called by various names in different language. The names have been arranged below alphabetically.^[2,3]

Arabic	Murdasanj
English	Lead oxide, Massicot, Litharge, Flowers of lead
Gujrati	Bodarakakaro
Hindi	Muradsang, Murad sang
Malayalam	Mudarsinka
Persian	Aksand asrab , Murdahang
Tamil and Telgu	Mudarasingu
Urdu	Murdarsang

IUPAC Name

Its IUPAC name is “Lead (II) Oxide”.^[2]

Chemical Properties

Murdar Sang is having Molecular formula “Pbo” with Molecular mass “223.20 g/mol”. Its Density is “9.53g/cm³”and having Hardness of 2 (Mohs hardness). Melting point “888 °C” and Boiling Point “14115 °C”. Its Crystal Structure is “Tetragonal tp4”. It is a Non-Flammable mineral that is insoluble in water and soluble in HCL, Nitric acid, Ammonium chloride and concentrated Alkalis.^[2, 3, 4, 5,6]

Mahiyat (Description in unani literature)

It is found in heavy pieces (Figure 1) or in powdered form (Figure 2). It has a metallic lustre and is tasteless. Having colour light yellow mixed with red. Najamul Ghani (2011) mentioned that the best Murdarsang is soft in touch, heavy, lustrous and yellow in colour.^[7]



Figure 1: Murdar Sang as heavy pieces.



Figure 2: Powder of Murdar Sang.

Historical background

Dioscorides (Descoridos) who was a famous botanist and writer of his time had explained several types of Murdar Sang in his book. Some of them are given below^[7]

- I. Horistus: This means golden. It is red and shiny. This type is best.
- II. Arkhonitoos/ Fizi: It is of violet in colour.
- III. Floiydas: It is made from silver.
- IV. Moliniyus

Method of preparation of murdarsang

Its method of preparation is mentioned in Al-Jamae the book of Hakeem Najamul Ghani Rampoori is as follow. First of all, lead is melted then red lead (Sindur) or burnt lead (seesa) added in it. When they get the form of a uniform mixture, put them in a container and add concentrated vinegar until it gets mixed and burnt. Separate it and boil in water with barley, till barley burst out and dissolves. Separate and save the Murdar Sang.^[7]

➤ It is cleaned by using following measures:

1. Boil in vinegar or wine
2. Burn once or twice on live coal and collect the supernatant

➤ Murdar Sang is turned white by following procedure^[7]

Take Murdarsang and salt (Namoon namak) in equal weight then pour water in it and put in the sunlight. When salt gets dissolved then change the water, shake the container and leave it. Repeat the process till Murdarsang becomes white.

Ethno scientific description

Litharge is formed from the oxidation of galena ores. It is dimorphous with the orthorhombic form Massicot. It forms red greasy, soft, appearing crusts with a very high specific gravity of 9.14-9.35. For synonym of white lead or red lead the term litharge has been used.^[8]

Mizāj (temperament)

Its having hot and dry (Har Yabis) temperament but according to degree of dryness there are two groups;

1. Har Yabis of 2nd degree^[2, 4, 5, 9]
2. Har Yabis of 3rd degree^[10]

Murdarsang when treated with water is Cold (Barid) in 1st degree and Dry (Yabis) in 3rd degree.^[5, 6]

af'al (pharmacological actions)

Different uses enlisted in Unani literature are;^[2]

- ❖ Jali /Detergent
- ❖ Akkal /Corrosive
- ❖ Dafaa-i-Ganj /Munbit-e-Sha 'r /Hair grower/Trichogen
- ❖ Musawwid-i-Sha 'r / Black hair dyer
- ❖ Mujaffif-i-Qurooh /Desiccative
- ❖ Munaffis Balgham -w-Rutoobaat/ Expectorant
- ❖ Na'afe shura
- ❖ Ra'ade / Repellent/ Restraint
- ❖ Qatil-i- kirm shikam /Antehelminthic/Vermicide
- ❖ Qabiz/Astringent/Styptic
- ❖ Muhallil-i-warm /Anti-inflammatory
- ❖ Munaqqi-i-zakhm/ Wound cleaner
- ❖ Munbit-i- laham/Flesh grower

Iste'mal (therapeutic uses)

Murdar sang is used in many diseases since ancient times in different forms which are mentioned in Unani literature.^[3,4,6,9, 11, 12]

- ❖ White Murdarsang removes bad odour of axilla and sweating.
- ❖ According to Ibn Sina, it granulates the ulcer breadth wise and other use of this drug is Habis Ishaal wa-Boul hence used in children's disease Khilfa (sprue/ Malabsorption syndrome) and Quruh-al-Am'a (Crohn's disease)
- ❖ In the form of Surma prepared with vinegar is useful in Jarb, Nakhoona and Qurooh-e-chashm (Ulcers of eye).
- ❖ It is useful locally for removing slough and helps in granulation of ulcer.
- ❖ Useful for Jarb wa hikka (Scabies and Pruritus), external application is effective in burns.
- ❖ With vinegar and olive oil helpful in lice.
- ❖ Removes the marks of small pox.
- ❖ Stops (excessive) perspiration.
- ❖ Ointment or dusting powder used in different types of wounds specially putrefied and foul smelling wounds.

- ❖ Beneficial in intestinal abrasions and ulcers.
- ❖ With other medicine it used in syphilitic chancre.
- ❖ Lead plaster or Litharge plaster used to prevent bed sores, keeps dislodged parts in situ, protective to wounds and also relieves pain from inflamed parts.

Miqdar-e-khoorak (dosage)

Different doses of Murdar sang are described in books.

- Up to 1 Masha^[7]
- 125-500 mg^[3]
- In case of wound as per need^[11]

Muzir (adverse effects)

In Unani Literature many adverse effects are mentioned like Muzir for intestine and causes retention of urine, colic and Tenesmus. It stops the urine and inflates the bowels as also areas pertaining to uterus. According to Ibnebetar it whitens the tongue and also causes dyspnoea.^[12] Murdar sang is a fatal poison and internal use is prohibited by various authors.^[2, 4, 5, 6, 7, 8, 11]

Musleh (Correctives)

Sirka (Vinegar), Roghan Badam, Milk, Soup, Rice plant and its leaf are used as corrective for the adverse effect of Murdar Sang.^[2, 7, 9, 11]

Badal (subtitutes)

Safedah, Jast and Sindoor are used as the substitute of Murdar Sang.^[2, 7, 9, 11]

Murakkabat (important formulations)

Murdar sang is a constituent of many famous and effective formulations listed some are listed below.^[1, 11]

- Marham Dakhliyoon
- Marham khanazeer
- Marham Nasoor
- Marham Gulabi
- Hab-e-Surkhbadah
- Hab Qoobah

Scientific reports

A clinical study revealed the anti-inflammatory, anti-septic, healing, analgesic, resolvent effects of Murdar Sang, Safeda kashghari and Roghan-e-Gul as tampon with Anzaroot and Mom-e-Zard in chronic cervicitis.^[13]

CONCLUSION

After going through the literature we have found that *Murdar sang* has the wide range of effect specially in dermatological disorders. It can be used as detergent, corrosive, desiccative, repellent etc. Moreover, it is used as astringent, anti-helminthic, expectorant and anti-inflammatory.

Conflict of Interest

None declared.

REFERENCES

1. Www. Wikipedia. The free encyclopaedia. Etymology of Litharge.
2. Ahmad S. Iftekhhar-*ui-mufradat*. Vol.2. Kolkata: Awshadh ghar iftikhariya publication; February; 2010; 21-22, 255-256.
3. Nadkarni AK. The India Materia Medica. Bombay: Popular Parkasan, 1982; 2: 86.
4. Kabiruddin M. Maghzanul mufradat al-marruf khuwaas-al-adwiya. Delhi: Ijaz publishing house, 346-347, 540 -541.
5. Kabiruddin M. Makhzan-ul-mufradat kitab-al-Adwiya. New Delhi: Idara Kitab-us-shifa, 2007; 258: 384-392.
6. Abdulhakim M. Bustanulmufradat. Delhi: Idara kitab-al-shifa, 2002; 339: 544-545.
7. Najmulghani H. Khazain-ul-advia. New Delhi: Idara Kitab-al-shifa, 2011.
8. "Litharge" Oxford English Dictionary. Oxford University press, 1989.
9. Tarique NA. Taj-al-Mufradat. New Delhi: Idara Kitab-us-shifa; YNM.
10. Abdulhalim M. Mufradat-i-azizi. CCRU: New Delhi; 2009; 15: 90-92.
11. Usmani M A. Tanqiyh-al-mufradat. Famous offset press. Delhi, 2008; 266-267, 280-281.
12. Ibnebetar ZABU, Al-Jaeame-al-mufradat-al-advia-wal-aghzia (Urdu translation). New Delhi, 2003; 2(4): 328-332.
13. Lateef Unnisa, Md. Anzar Alam and Wasia Naveed. Clinical efficacy of Unani Formulation in the Management of Chronic Cervicitis-An Observational Clinical Study. International Journal of Medical and Health Research. 2016; March 2(3) Page No. 100-110.