



International Journal of Homoeopathic Sciences

E-ISSN: 2616-4493
P-ISSN: 2616-4485
IJHS 2019; 3(4): 77-81
Received: 09-08-2019
Accepted: 13-09-2019

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Sialolithiasis and homoeopathic management: A case report

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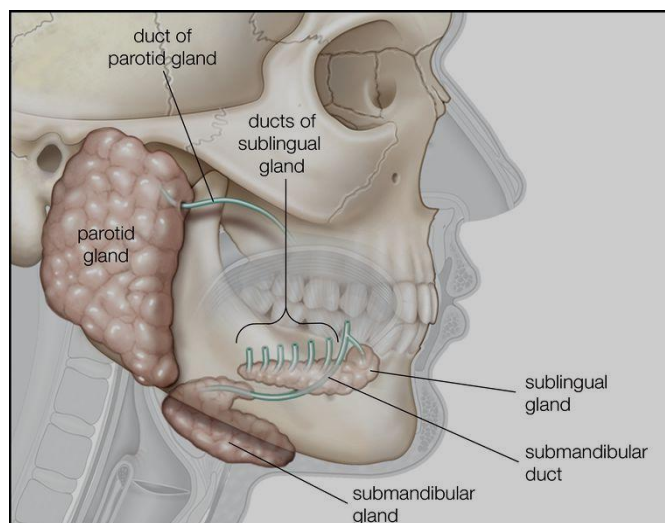
Abstract

Sialolithiasis is one of the most common problems that afflict the salivary glands and is a major cause of salivary gland dysfunction. Sialolithiasis is frequently encountered in clinical practice. Sialoliths are the main cause of obstructive submandibular sialadenitis. Sialolithiasis leads to recurrent painful swelling of the involved gland, which increases in size during meals. Sialoliths occurs commonly in the submandibular gland in 80% of the cases. Pathogenesis of sialolithiasis seems to be based on anatomical position of the salivary duct and gland. This article reports a case of submandibular gland sialolithiasis of the right side in 51-year-old female patient with symptoms of pain and swelling during mealtime. Clinical and radiographic findings are important in determining the precise location and size of the sialolith. It helps in establishing the right treatment for the individual patient. Treatment was based on individualized homoeopathy resulting in quick recovery of normalcy of the subject.

Keywords: Sialolithiasis, diagnosis, totality of symptoms, sepia officinalis

Introduction

Sialolithiasis is a relatively common disorder of the salivary glands characterized by the development of calculi. Sialolithiasis is thought to affect approximately 1% of the population based on autopsy studies. It has been estimated to represent more than 50% of major salivary gland disease and is the most common cause of acute and chronic salivary gland infections. Sialadenitis and sialolithiasis are disorders of the salivary glands that go hand in hand. Some consider sialolithiasis to be both a consequence and cause of sialadenitis (Berry 1995) ^[1]. Calculi literally refers to abnormal formation of mineral salts inside the body. 'Sial' refers to salivary gland and sialolith refers to salivary gland calculi. Tendency for salivary calculi or formation of salivary calculi is termed as sialolithiasis. Approximately 85% of sialoliths occur in submandibular gland, 10% in parotid & 5% in sublingual gland ^[2].



Source: Hayes K. Sialolithiasis symptoms, diagnosis, and treatments. Updated May 23, 2019 [Cited 20 Sep 2019]

Fig 1: Anatomy of salivary glands with their ducts.

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Such stones develop more frequently within the duct of the submandibular gland (Wharton's duct) [3]. The long tortuous upward path of the submandibular duct and thicker mucoid secretion of this gland may be responsible for its greater tendency for formation of salivary calculi, where as in parotid gland the secretion is serous and path of the duct is almost straight with a slight bend at the anterior border of masseter and moreover there is advantage of gravity. Many a times this condition is asymptomatic, especially when the calculi is small, however as the size increases it can cause varied signs & symptoms depending on the extent of the duct obstruction. At times sialolith can also be present in the substance of the gland which causes fibrosis and calcification of the entire salivary gland, [4] warranting its removal [5].

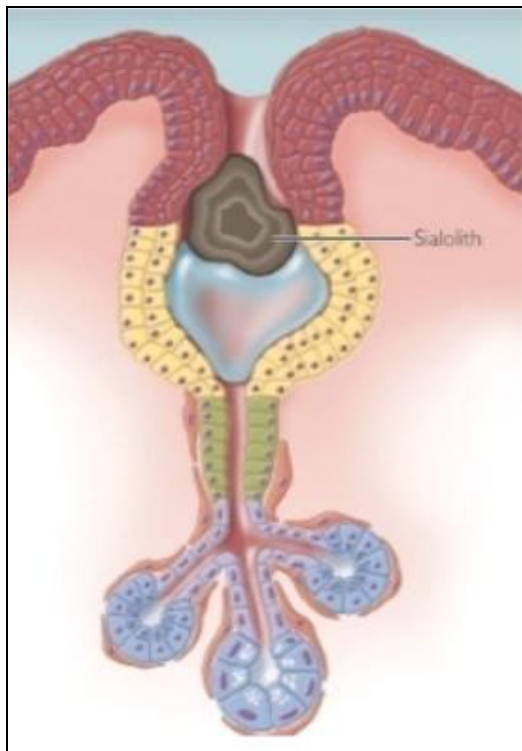


Fig 2: Sialolith obstructing salivary duct

Courtesy: Sialolithiasis @ENTClinicSydney
Updated January 16, 2014
[Cited 20 Sep 2019]

It occurs commonly in middle-aged adults with the incidence of 12 in 1000 of the adult population. It is common in males than females in the ratio of 2:1 [6]. Sialoliths occur as a result of deposition of calcium salts around an organic material such as inspissated mucous, ductal epithelial cells, salivary proteins and foreign bodies. Stasis of saliva may lead to acute and chronic infections [7]. The diagnosis of sialolith is based on patient's history and clinical examination. Painful swelling during meals is the most important symptom. Such pain may be preceded by salivary colic [3]. If the involved gland is acutely inflamed along with conservative treatment local fluid therapy, secretory stimulants and antiseptic gargle are recommended to control infection first [8]. However, radiographic modalities are helpful in localizing the sialolith and determine its size and number. Sialography is used when calculi are not witnessed on radiographs but clinically

obstruction is evident. Computed tomography is an excellent modality to localize and estimate the size of the calculi [9]. Sonography or MR sialography have replaced sialography in the evaluation of patients with sialolithiasis [10].

Conservative approach is feasible in cases of non-adherent stones of small size in anterior third of the duct. The gland can be milked and an effort put in to retrieve the calculus from orifice. Surgically the sialolith in Wharton's duct can be approached intraorally. Lithotripsy has been used to disintegrate the salivary calculi into minute pieces which can be expressed out easily but has not gained much popularity. Endoscopic retrieval is one of the recent advances in the field of sialolith retrieval but is popular and more used in tertiary institutions with regular inflow of salivary gland anomalies or units dedicated to treating exclusively salivary gland patients [10, 11]. International Classification of Diseases-10-CM Diagnosis Code for sialolithiasis is K11.5 [12].

Homoeopathic literature

In §7 of Organon of Medicine, Dr. Samuel Hahnemann has said to first remove the manifest exciting or maintaining cause (*vide* crush the vesical calculus in the footnote); the morbid symptoms which would help in framing the *totality of symptoms* the only thing the only thing the physician has to take note of in every case of disease and to remove by means of his art, in order that it shall be cured and transformed into health [13]. In Chronic Diseases we find mention of glands of the lower jaw swollen, sometimes passing over into chronic suppuration as symptoms of Psora [14]. Salivary duct calculi is referred to as a sycotic manifestation. Foetor oris is indicative of Psora-syphilo-tubercular trait [15]. *Anagallis arvensis*, [16] *Ledum palustre* [17] and *Silicea terra* [18] promote expulsion of foreign bodies from tissues. Calculi, urinary, biliary etc, formation of, in general, [19] STONES in organs, formation of, [20] Glands - Swelling, of glands [21] are few repertorial rubrics which aid in the selection of indicative medicine. Dr. Nevena Mikova has mentioned the use of *Berberis vulgaris* for its drainage effect and its capability to stimulate the evacuation of stones and *Mercurius solubilis* for its positive effect on various inflammations of the oral cavity respectively in sialolithic condition [22].

Case report

Patient information: A lady aged about 51 years visited the outpatient department of Pratap Chandra Memorial Homoeopathic Hospital & College, Kolkata on June 18, 2019 with pre-diagnosed features of sialolithiasis.

Presenting complaint: Patient presented with pain and swelling beneath the tongue for the last 10 days.

History of present complaint: Patient been suffering from pain and swelling beneath the tongue for the last 10 days. There was a burning sensation which was aggravated by taking anything cold, especially cold food and drinks, relieved by warm drinks. She complained of foul smelling from mouth. She had already visited an allopathic doctor who diagnosed the condition to be sialolithiasis and recommended for surgical intervention. She didn't want for surgery and visited our hospital to opt for homoeopathic treatment.

Past history: In the past she suffered from uterine prolapse and hysterectomy was done.

Family history: No major significant illness in family.

Physical generals: Patient's appetite was diminished with loathing of food after few mouthfuls. Her thirst was also diminished with one litre consumption in a day. She had cravings for sour and sweets. She had aversion to meat. Her bowel movement was irregular and consistency of faecal matter was hard in nature. Urine scanty with occasional burning sensation. Sleep was disturbed due to pain. She was extremely chilly.

Mental picture: Mentally she was disturbed with complete indifference to life due to sudden demise of her husband few months back.

Physical examination: The patient was well-oriented with time, place and person, fairly obese, fair complexion and well nourished. There was no pallor, cyanosis, clubbing, icterus, oedema, engorgement of the neck veins or lymphadenopathy. She was afebrile, blood pressure 130/84 mm of Hg, pulse: 78/min, regular. She weighed 74 Kg. Submandibular region was swollen and tender. There was melasma on the face.

Analysis and evaluation

1. Complete indifference to life.
2. Appetite and thirst were diminished.

3. Cravings for sour and sweets.
4. Aversion to meat.
5. Constipation.
6. Chilly patient
7. Pain and swelling in the submandibular region.
8. Burning sensation in the mouth aggravated by taking anything cold, especially cold food and drinks, relieved by warm drinks.
9. Foul smelling from mouth.
10. Melasma on the face.

Case analysis: The case presented with characteristic mental picture and physical generals. Based on the clinical picture, totality was framed and individualized homoeopathic medicine *Sepia officinalis* was prescribed. 30 centesimal potency was selected due to acuteness of the condition. Repertorization was done with repertorization software [RADAR®, version 10.0.028 (ck), Archibel 2007, Belgium] taking Kent's repertory as the case presented with characteristic mental picture and prominent physical generals.

Remedial analysis: *Sepia officinalis* (22/10), *Arsenicum album* (21/9), *Nitricum acidum* (21/9), *Sulphur* (20/9), *Causticum* (16/9). *Sepia officinalis* covered all the symptoms with highest gradation. Allen's Keynotes was consulted: acute pain in the submandibular region aggravated by taking anything cold, especially cold food and drinks, relieved by warm drinks were considered while making the prescription [18].

Table 1: Repertorial sheet

<p>The analysis contains 313 remedies and 10 symptoms.</p> <p>Clipboard 1</p> <ol style="list-style-type: none"> 1. MIND - INDIFFERENCE, apathy, etc. (146) 1 2. GENERALS - HEAT, - vital, lack of (108) 1 3. STOMACH - THIRSTLESS (87) 1 4. STOMACH - DESIRES - sour, acids, etc. (77) 1 5. STOMACH - AVERSION to - meat (88) 1 6. RECTUM - CONSTIPATION (213) 1 7. MOUTH - ODOR (breath), - offensive (113) 1 8. MOUTH - PAIN - burning, raw and smarting (121) 1 9. MOUTH - SWELLING (36) 1 10. FACE - DISCOLORATION, - brown (24) 1 	<table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td> </tr> <tr> <td>10</td><td>9</td><td>9</td><td>9</td><td>9</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td><td>7</td> </tr> <tr> <td>22</td><td>21</td><td>21</td><td>20</td><td>16</td><td>14</td><td>18</td><td>17</td><td>17</td><td>16</td><td>15</td><td>15</td><td>15</td><td>14</td><td>13</td><td>11</td><td>11</td><td>16</td><td>16</td><td>16</td><td>15</td><td>15</td><td>14</td><td>13</td><td>13</td><td>12</td><td>12</td><td>12</td> </tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	10	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	22	21	21	20	16	14	18	17	17	16	15	15	15	14	13	11	11	16	16	16	15	15	14	13	13	12	12	12
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Remedy selection and administration: *Sepia officinalis* 30 centesimal potency four doses twice daily for two days. Followed by *Placebo* for five days.

Advices: To take plenty of water, maintain oral hygiene.

Table 2: Follow up

Date	Change in symptomatology	Prescriptions
25.06.2019	Swelling same as before, but pain intensified. Stool: regularised, consistency soft. Urine burning sensation reduced by 60%. Mouth odour not much change.	<i>Sepia officinalis</i> 200 centesimal potency, one dose daily for two days. Followed by <i>Placebo</i> for 5 days.
02.07.2019	Stone expelled, no swelling, redness reduced but remained due to healing process. Urine burning sensation absent. Mouth odour reduced by 50%.	<i>Placebo</i> one dose daily for thirty days.

After analysis and follow up for two weeks the stone was expelled and the pain subsided. The patient was advised to come after one month so that constitutional treatment can be

maintained and further recurrence of stone formation can be prevented.

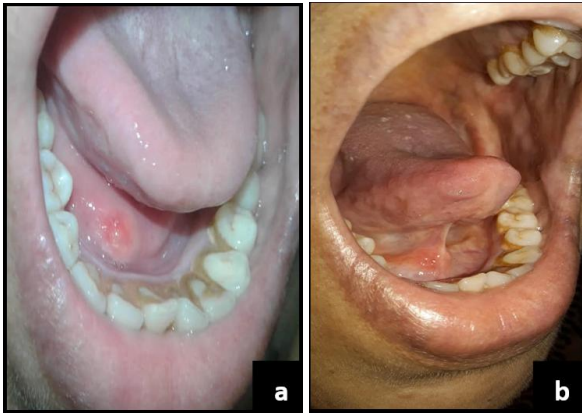


Fig 3: (a) Before treatment, (b) After treatment



Fig 4: Stone expelled after treatment

Conclusion

The case was treated with single individualized medicine based on *totality of symptoms*. Though the case was primarily referred for operative interventions, the case was managed with homoeopathic treatment along with maintaining of oral hygiene. *Sepia officinalis* showed clinical effectiveness in the treatment of sialolithiasis. However rigorous controlled clinical trials with robust methodology are warranted for better substantiation of homoeopathic management in such clinical conditions.

Author contribution

AN: literature search, manuscript preparation, manuscript editing, manuscript review.

DKP: clinical studies, data acquisition, data analysis, manuscript preparation, manuscript editing, manuscript review.

Funding and sponsorship

Nil.

Conflicts of interest

There were no conflicts of interest.

Acknowledgement

The authors acknowledge the Principal, the departmental heads and the pharmacy section of the Pratap Chandra Memorial Homoeopathic Hospital & College. The patient's consent was taken, without which the case study could not have been done.

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