Reaffirming Hahnemannian principles: A case of calcinosis cutis

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Abstract

Introduction: Calcinosis cutis [ICD-10-CM L94.2] is the condition where calcium salt deposits in the skin and subcutaneous tissue. There are five major types based on etiology: dystrophic, metastatic, iatrogenic, idiopathic, and calciphylaxis. Dystrophic calcinosis is linked to trauma, infection, or inflammation. Conventional treatment typically involves surgical excision, but this approach is ineffective for recurrent cases. This case underscores the effectiveness of individualized homoeopathic treatment in successfully curing traumatic calcinosis cutis, particularly after the patient experienced a recurrence of lesions following surgical excision.

Case summary: A 12-year-old girl previously diagnosed with calcinosis cutis presented with firm, painless nodules on her right foot since eight months, beginning after a fall two years ago. Although she had undergone surgical excision a year ago, nine lesions reappeared within three months, with the largest measuring 1.5 cm by 1.5 cm. She sought homoeopathic treatment due to the recurrence of these lesions. The causal attribution of homoeopathic intervention was assessed by MONARCH inventory. The photographs of the lesion were taken during treatment to keep track of the progress. The patient was successfully treated for these lesions with no recurrence, demonstrating the enduring effectiveness of homoeopathic principles.

Keywords: Calcinosis cutis, dystrophic calcification, homoeopathy

Introduction

Calcification is divided into five major types according to the etiology: dystrophic, metastatic, iatrogenic, idiopathic, and calciphylaxis. Calcification occurs as complications in patients with hyperparathyroidism and end-stage renal disease. Idiopathic calcification occurs when there is deposition of calcium salts without underlying tissue damage or abnormal calcium or phosphorus levels and are of three types namely, familial tumoral calcinosis, subepidermal calcified nodules, and scrotal calcinosis. Idiogenic calcification occurs in patients receiving calcium or phosphate-containing substances, such as intravenous calcium gluconate, calcium chloride, and para-aminosalicylic acid for pulmonary tuberculosis. It can also occur after using electrodes with calcium chloride paste electrodes for electroencephalography. Calciphylaxis is thought to result from impaired inhibition of calcification in the microvasculature. Factors like vitamin K deficiency, Warfarin use, and end-stage renal disease are implicated. Nonuremic calciphylaxis has been linked to alcoholic cirrhosis. Additional risk factors include hypercalcemia, hyperphosphatemia, and hyperparathyroidism.

Dystrophic calcinosis is a form of calcification that is associated with trauma, infection, inflammatory processes, cutaneous neoplasm, or connective tissue diseases. Dystrophic calcification involves the deposition of calcium salts in degenerated tissues i.e., local tissue damage, occurring despite normal calcium and phosphorus metabolism. It is proposed to be caused by the release of phosphate binding proteins by necrotic cells in response to tissue...
damage, inflammation, or hypoxia. Presentation of dystrophic calcification and calciphylaxis may create diagnostic challenges. However, calciphylaxis is characteristically quite painful [6].

Epidemiology [5]
Calcinosis cutis frequently occurs in patients with systemic sclerosis, particularly the limited form (CREST). Within ten years of disease onset, 25% to 40% of patients with limited systemic sclerosis will develop calcinosis cutis. It is observed in 30% of adults and up to 70% of children and adolescents with dermatomyositis. Additionally, in patients with systemic lupus erythematosus, periarticular calcification occurs in 33% of cases, while soft tissue calcification is seen in 17%.

Conventional Treatment [5]
Treating calcinosis cutis can be challenging, but certain measures can aid treatment and improve blood flow to the extremities, such as avoiding trauma, quitting smoking, reducing stress, and avoiding cold exposure. Small lesions may respond to warfarin, ceftriaxone, or IVIG, while surgical excision and carbon dioxide laser are also options. Larger lesions may be treated with diltiazem, bisphosphonates, probenecid, aluminum hydroxide, or surgical excision/cretage. Small, localized lesions are suited for surgical treatment, whereas generalized disease requires medical management.

However, these treatments can have serious complications: Warfarin may cause hemorrhage, ecchymosis, and hypersensitivity reactions. Ceftriaxone can lead to gastrointestinal disturbances and nephrotoxicity. IVIG side effects include cephalalgia, pyrexia, and hypertension. Surgical excision can result in hemorrhage, infection, and cicatrix formation. Carbon dioxide laser treatment may cause erythema, edema, and delayed wound healing.

Case Summary
A 12-year-old girl, previously diagnosed with calcinosis cutis, presented to the outpatient department on 6th September 2023 with multiple firm, painless swellings on the top and inner sides of her right foot since 8 months. This is the second occurrence of these nodules, with the first episode happening two years ago after a fall. Although she underwent surgical excision of the lesions a year ago, they reappeared within a few months. On examination, nine lesions were noted, with the largest measuring 1.5 cm x 1.5 cm. Overlying skin was pinchable and unremarkable. The plain radiographs and ultrasound revealed nine lesions demonstrating calcific deposits within the subcutaneous tissue, and her blood tests and metabolic panel results were within normal limits.

The patient has no history of autoimmune diseases like juvenile rheumatoid arthritis or lupus, known metabolic disorders, kidney disease, any ongoing or repeated infections, unexplained weight loss or fever, exposure to chemicals or irritants. There has been no use of medications like steroids or supplements that might affect her calcium levels.

Clinical findings
General examination
The patient’s weight was 39 kg while height was 146 cm. Her blood pressure was 114/68 mmHg. Her physical examination revealed no pallor, oedema, jaundice, cyanosis or lymphadenopathy.

Local Examination
Inspection
- Multiple smooth nodules observed on the dorsal and medial aspect of right foot.
- Nine lesions noted in total.
- Largest lesion measures 1.5 cm x 1.5 cm.
- Overlying skin appears normal without redness, ulceration, or discharge.
- No associated swelling or oedema of the foot.
- No visible restriction in the range of motion of the foot or toes.

Palpation
- Nodules are firm to touch, non-fluctuant.
- No tenderness upon palpation.
- Lesions are immobile, suggesting deep dermal or subcutaneous involvement.
- No increased local temperature noted.

Generals
The patient appeared alert but extremely restless. She enjoys company. Her memory is good. Her appetite was normal while she craves for eggs and sweets. Her thirst is normal, and she prefers cold water. Her tongue is clean. Her perspiration is generalized, non-offensive and non-staining. She has constipation, with bowel movements occurring once every two days, but has no issues with urination. Her sleep is generally sound, though she occasionally has frightful dreams. She is sensitive to heat and finds it difficult to tolerate the sun. She has not yet reached menarche.

Diagnosis
The above case was diagnosed as Traumatic Calcinosis cutis as per ICD-10-CM L94.2

Therapeutic Intervention
A detailed case-taking was done as per Hahnemannian guidelines laid out in the Organon of Medicine [7], followed by analysis and evaluation of the symptom. The following characteristic symptoms were considered for framing the totality. As the case has more generals and characteristic particulars the totality can be formed according to Kent Philosophy.

Mental Generals
Restlessness.

Physical Generals
Thirst - Cold water.
Stool - Constipation.
Desire - Egg, Sweets.
Dreams - Frightful.
Thermally - Hot.

Characteristic particulars
A/F Injury(fall)
Hard swelling in foot
While considering the characteristic symptoms mentioned earlier, Complete repertory was utilized, and systematic repertorization was conducted using the HOMPATH

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software. The resulting repertorization chart (Figure-1) delivered the following results:

<table>
<thead>
<tr>
<th>Remedy</th>
<th>Score</th>
<th>Remedy</th>
<th>Score</th>
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<tbody>
<tr>
<td>Sulphur</td>
<td>27/8</td>
<td>Phosphorus</td>
<td>23/6</td>
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<tr>
<td>Bryonia alba</td>
<td>25/7</td>
<td>Silicea</td>
<td>21/8</td>
</tr>
<tr>
<td>Pulsatilla nigricans</td>
<td>24/7</td>
<td>Calcarea fluoricum</td>
<td>22/7</td>
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<tr>
<td>China officinalis</td>
<td>24/6</td>
<td>Conium maculatum</td>
<td>21/7</td>
</tr>
<tr>
<td>Calcarea carbonicum</td>
<td>23/6</td>
<td>Natrum phosphoricum</td>
<td>20/7</td>
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</tbody>
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After using the complete repertory to narrow down the remedies, the Materia Medica was consulted for the final prescription. It indicated that Calcarea fluoricum, although ranked 8th in the chart, was the most suitable remedy. This is because it aligns with the overall symptom profile, sphere of action, nature of the pathology, and the miasmatic background.

16 doses of Calcarea fluoricum 0/1 were prescribed. Six potentized globules (Globule No. 20) were dispensed in 100 ml of distilled water. Ten drops of rectified spirit were added as a preservative. The medicine was administered orally. The patient was asked give ten downwards succussions to the medicine bottle, and then to add one tablespoon of medicine in half a cup of water, followed by stirring. From this solution, one tablespoon was to be taken on an empty stomach. This procedure was to be repeated every morning and the rest to be discarded. The patient was asked report after one month. The potency, dosage and repetition of the medicine were decided as per the principles of Homoeopathy.

Follow-Up and Outcome
Though the patient was prescribed a one-month course of medication, she returned for follow-up on January 12, 2024, after four months. Remarkably, she had returned with complete remission of nodules which had persisted for 8 months. This is confirmed by photographic documentation [Fig 2-3]. Previously, the patient had undergone surgical excision, but the nodules relapsed within 3 months. Also her bowel habits became regular with stools in normal consistency indicating an overall improvement of the patient. No recurrence was reported after homoeopathic treatment, as confirmed during a follow-up telephone call with the patient. The causal attribution of changes through the homoeopathic intervention was assessed by MONARCH Inventory [12], the total score of which was +8, suggesting the positive attribution towards the given treatment, Table 1.
Discussion
Calcification cutis is a rare benign condition characterized by the deposition of calcium in the skin and subcutaneous tissue. Based on the pathogenesis, they are classified into five types: metastatic, dystrophic, iatrogenic, idiopathic, and calciphylaxis [7]. Dystrophic calcification cutis is the most common type wherein the category of trauma falls under. Efforts should be made to form the totality of symptoms based on characteristic mental, physical, and particular symptoms of the patient. Though Calc.fluor. occupies the 8th position in the repertorization chart, the seat of action and its pathogenesis makes it the remedy of choice in this case. Calcarea fluorica's therapeutic properties have been recognized by stalwarts in the field. Dr. C. Hering noted its efficacy for treating nodes, hard bone swellings beneath tissues, and osseous growths under the skin [8]. Dr. J.H. Clarke referred to Calc. fluor. as Schussler's "bone salt," primarily being used to disperse bony growths [9]. Dr. William Boericke mentioned its effectiveness for stony hard inducations and swellings or indurated enlargements located in the skin's fascia [10]. Hahnemann explained in aphorism 16 [7] that our vital force, a spirit-like dynamis, can only be influenced by external iminical forces in a dynamic way. Therefore, a physician can eliminate these effects using dynamic powers of the serviceable medicine, through the medium of the sentient faculty of the nerves. In this context, the fall may be a trivial external trigger that caused an underlying internal malady to manifest as calcinosis cutis. Therefore, conventional treatments like surgery excision are ineffective. A cure can be achieved by addressing the totality of characteristic symptoms and giving the indicated simillimum. In aphorism 276 [7], Hahnemann also stated that in chronic cases without deterioration of vital organs, high potency is needed at the beginning of treatment because small doses are not strong enough to overpower the natural disease. In this case, LM potency proved ideal, as it was a chronic disease and the seat of the disease was the skin and subcutaneous tissue. Miasmatic evaluation for the presenting symptoms was done with the help of 'The Chronic Diseases'. Calcification cutis pertains to chalky deposits or dystrophic calcification pertains to the syphilis miasma. A remedy must address all three miasms, and Calcarea fluoricum is such a remedy. 16 doses of 1⁰ LM potency of Calcarea fluoricum was sufficient to bring about the improvement that was steady, permanent, and tangible because the doses were modified every time by succussion as mentioned in aphorism 280 [11]. The chosen dosage and potency aligned with the patient's susceptibility, allowing the vital force to effectively overpower the natural disease without requiring a second potency. Consequently, even with advances in disease and pathogenesis, the principles of Homeopathy stand the test of time.

Conclusion
Individualised homeopathic treatment can have a positive effect in the treatment of calcinosis cutis also improve the overall quality of life of the patient. However, randomised clinical trials need to be conducted to draw any strong conclusion about the efficacy of Individualised homeopathic treatment in calcinosis cutis.

Declaration for Patient Consent
The authors certify that they have obtained informed written consent for the publication of this report from the patient’s parents, and anonymity of their child was assured to the best extent possible.

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<th>Table 1: Assessment by Modified Naranjo Criteria (Monarch) Score</th>
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<td>10</td>
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<tr>
<td><strong>Total Score</strong></td>
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Conflict of Interest
Not available.

Financial Support
Not available.

References

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