



## Huge Umbilical Stone: A Rare Cause of Umbilical Abscess

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### Abstract:

An omphalolith is a hard, smooth, calculus of different sizes and shapes found in the umbilicus. It generally occurs in a deeply retracted umbilicus. An umbilical stone leads to secondary infection and abscess formation. They can rarely present with secondary complications like peritonitis. The treatment is non-invasive evacuation of the concretion by moistened cleansing of the umbilicus, if the patient presents at an infective phase without abscess formation. If patient presents with an abscess formation, incision and drainage with evacuation of stone is the treatment of choice. Here's a case of umbilical stone which presented as an umbilical abscess is reported to create awareness about this rare entity.

**Key words:** Abscess, Calculi, Drainage, Peritonitis, Umbilicus.

### Introduction

The umbilicus is usually free of concretion, dust, hair and sebum because of our habit of daily cleaning. If proper hygiene is not maintained it leads to the accumulation of all this in umbilical cleft. Accumulation of sebum and keratin leads to the formation of an omphalolith. An omphalolith is a hard, smooth, stone of different sizes and shapes found in the umbilicus. It can occur in any person, but mainly occurs in persons with deeply retracted umbilicus especially in an obese hairy person. It is mainly related to poor hygiene. Umbilical stone is very rare occurrence and rarely reported in literature. Here a case of huge umbilical stone presenting as an umbilical abscess is presented with review of literature. This is reported with intention of creating awareness among physicians to keep in mind about this rare entity.

### Case Report

A 30 year old male, manual labourer by profession, presented to surgery clinic with complains of pain and swelling in peri-umbilical region since 3 days. The pain was severe in intensity and throbbing in nature. This pain was non-radiating in nature, not related to meals, and not responding to analgesics. There was no alteration in bowel and bladder habits. On examination there was an ill-defined swelling measuring 4x3 cm at and around umbilical region. The skin above swelling was tense and redness was present over the swelling. The local temperature was raised and tenderness was present. Routine blood tests were within normal limits except for a raised total leukocyte count. Clinical diagnosis of an umbilical abscess was made.

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The patient was started on parental antibiotics and posted for drainage of the abscess. Under spinal anaesthesia, an incision was made at the most dependent part of the swelling. As incision was deepened along with pus a single hard calculus was visible, which was removed [Fig.1]. The stone was ivory white in colour measuring 3.2x2.5 cm in size, oval in shape and hard in consistency. The surrounding area had inflammatory granulation tissue involving only the subcutaneous tissue plane and without any deeper extent. A through debridement of the infected granulation tissue was done and the wound left open for healing. The patient was given parenteral broad spectrum antibiotics in the postoperative period and was on daily dressing. The patient was discharged on the 5<sup>th</sup> post-operative day and advised to undergo daily dressing. The wound healed completely on day 18.

## Discussion

Omphalolith is a rarely encountered benign entity. It is primarily composed of keratinaceous and sebaceous material which is collected in umbilical cleft. It grows in size over time by accumulating more keratinaceous and sebaceous material. While they are infrequently described in the medical literature, their existence has long been recognized and was described in detail by Dr. Thomas Cullen in his “The Umbilicus and Its Diseases”, published in 1916 [1].

Lack of umbilical hygiene is implicated as a primary risk factor. An umbilical cleft which is deep enough to contain a significant concretion is also a requirement, and persons with an unusually deep umbilical cleft are predisposed to this condition. Awareness of this diagnosis of umbilical stone is important due to the rarity of the condition and the need to differentiate it from other common benign and malignant conditions of the umbilicus as treatment of each entity is different. Umbilical stone



**Fig.1:** Intra-operative picture showing ivory white umbilical stone (white arrow pointing at umbilicus, black arrow pointing at stone).

has to be differentiated from other entities like keloid, dermatofibroma, cholesteatoma, malignant melanoma, umbilical endometriosis, primary umbilical malignancy, and umbilical metastasis [2,3].

Umbilical stones are generally asymptomatic and presentation is due to complications like secondary infection and abscess formation as seen in our case. They can rarely present with secondary complications like peritonitis [4]. The stones could be detected by abdominal plain X-ray, ultrasound and abdominal CT scan [5]. We never thought the diagnosis of umbilical stone as a cause of abscess in our case, hence abdominal X-ray, ultrasound and CT scan was not done in our case. Because of the rarity of this entity, it is rarely thought off by a radiologist. The treatment is non-invasive evacuation of the concretion by moistened cleansing of the umbilicus if the patient presents at an infective phase without abscess formation. If patient presents with an abscess formation, incision and drainage with evacuation of stone is the treatment of choice.

## Conclusion

Any patient presenting with umbilical abscess, common causes for umbilical abscess should be considered first. But the possibility of umbilical stone, though rare should also be considered in the differential diagnosis.

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