



SUPRAUMBILICAL HERNIA REPAIR - A CASE STUDY

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ABSTRACT

A hernia is defined as protrusion of whole or a part of a viscus through the wall that contain. It of the abdominal hernia, the common varieties are inguinal, femoral, umbilical, incisional and epigastric, while the rare varieties are obturator, lumbar, gluteal and Spigelian [1]. The incidence of umbilical hernia in general adult population is 2%. In general, umbilical hernias are more common in women than men. A 56 years old male patient visited Parul ayurveda hospital, *Shalya tantra* OPD with reducible swelling over umbilicus and patient was having multiple drug allergic like opioids, salicylates, H2blockers, penicillin, atropine, sulpha drugs toxoids, cephalosporin, etc. IgE and histamine liberators, Acinidine etc Patient was operated with sub lay repair hernioplasty under local anaesthesia Post operatively the patient was managed with ayurvedic medicines like *Nimbadi guggulu*, *chandraprabha vati*. Post operatively patient was doing well and course in hospital was uneventful.

Keywords: Ayurveda, umbilical hernia, hernia repair, local anaesthesia, *Chandraprabha vati*, *guggulu*.

INTRODUCTION

Hernia means - 'To bud' or 'to protrude', 'off shoot' (Greek) 'rupture' (Latin). Any hernia which appears to be closely related to the

umbilicus can be called as "Umbilical hernia". It is the commonest acquired umbilical hernia. It occurs through the

defect adjacent to the umbilicus. The usual site is just above the umbilicus between the two recti, in fact lower half of the fundus of the sac is covered by the umbilicus [2]. Umbilical hernia is a rather common surgical problem. The incidence of umbilical hernia in general adult population is 2% [4]. In general, umbilical hernias are more common in women than men; Pain is the most common symptom for which patient visits hospital. Many hernias in the umbilical region occur above or below the umbilicus through a weak place at the Linea alba, rather than directly through the umbilicus itself. An umbilical hernia tends to be associated with high morbidity and mortality because of the higher risk of incarceration and strangulation that require an emergency repair. Recurrence may develop even in cases where a prosthetic mesh is used. Recurrent umbilical hernias often tend to enlarge faster than primary ones and may behave as incisional hernias. In Ayurveda, Hernia may be correlated with *antra vriddhi* as explain by sushruta Samhita Vriddhi Roga Adhyay in which causes of *Antravridhi* are *vega dharana or vega udeerana, vishamashana* etc, and it is said under *aasadhya* category. Treatment in ayurveda for *antra vriddhi*, according to Acharya Shuruta, *Vata vriddhi chikitsa agnikarma, padangusta daha, sira vedha* at the vein located above *sankha sthana* and near to ear etc advised.

CASE REPORT

A 56yr year-old male patient came to parul ayurveda hospital with complaint of reducible swelling over umbilicus and with multiple drug allergies. He is having H/O DM, obesity. USG s/o reducible umbilical hernia with gap defect of approx. 2cm. Patient was admitted under Shalya Tantra department of Parul Ayurveda Hospital, Limda, Vadodara on 28/06/2023 with complains of diabetes, obesity, constipation, and reducible swelling over umbilicus since past 6 months.

History of Illness

As per the statement of the patient he was apparently healthy before 6 months. He gradually noticed swelling over umbilical region. Swelling comes out while coughing, straining for motion, lifting heavy weight since last few months there was gradual increase in size of swelling. Patient was newly diagnosed with diabetes with HbA1c 8.10mg/dl and obesity with weight 110kg and BMI 33.9kg/m². For further management patient admitted to Parul ayurveda hospital.

History of Past Illness

k/c/o DM on medication tab Metformin 500mg 0-1-1 after food
pt was having multiple drug allergies specially opioids, salicylates, H2blockers, penicillin, atropine, sulpham drugs, toxoids, cephalosporin, etc Ig E and histamine liberators.

Clinical finding

On Examination: BP- 130/80mmhg, PR- 80bpm, R.R 20cpm, T- Afebrile, spo2- 96% @RA

General examination

Height: 180cm

Weight: 110kg

BMI: 33.9kg/m²

Built: Obese

No evidence of pallor/ icterus/cyanosis/clubbing/

Lymphadenopathy

Systemic Examination

CNS: Conscious, well oriented

CVS: S1 S2 heard, no added sounds,

RS: AEBE clear

P/A: visible swelling over umbilicus – reducible. No any scar or marks. Soft and Non-distended. mild tenderness around umbilical region. Coughing impulse + P/R examination: no significant anomaly noted.

Investigations (08/06/2023)

- HIV: Negative
- HBsAg: Negative
- HCV: Negative

HB	RBC	Platelet	FBS	HbA1c	RBS	S. Creatinine	Blood urea	Sgot
13.2g/dl	4.33mill/cmm	218000/cmm	140mg/dl	8.10%	197mg/dl	0.8mg/dl	26mg/dl	20u/l

USG Abdomen & Pelvis: 13/06/2023

- Grade 1 fatty liver
- There is herniation of omental fat through 2cm size gap defect in midline in anterior supraumbilical hernia.

Initial Treatment Protocol

- *Mamejava ghanavati* 2-2-2 after food with warm water
- *Darvyadi yoga* 5gm bd after food after food with warm water
- *Triphala guggulu* 2-2-2 after food with warm water
- *Chandraprabhavati* 2-2-2 before food with warm water

- Tab *Eranda brisht haritaki* 0-0-4 HS after food with warm water

***Pathyapathya* (Gairola et al., 2015) [9]**

- Cereals *Yava* can be fed the best, most varied meal dishes, such as barley (*Hordeum vulgare* - Barley). *Appopa*, bread, *Mantha*, *Odana*, and other such items are available. *Roti* is a type of bread. Wheat may be given as well (*Godooma*). Rice: *Purana shali* (ancient rice) is suggested. Diabetics should consider Ayurveda as one of the grains to consume.
- Pulses *Mudga* (*Vignaradiata* Greengram), *Chanaka* (*Cicer arietinum* Linn. – Bengal gram),

- Painting & draping done.
- local anaesthesia with inj. lignocaine 2% and bupivacaine 0.5% with distilled water in 1:1:1 ratio, 10ml each given at peri umbilical region.
- An infraumbilical incision of 3cm made encircling its lower half. Sharp and blunt dissection was done.
- Hernia Sac was identified
- Sac was dissected circumferentially and released off from the umbilicus and subcutaneous tissue.
- Sac was opened; contents were reduced; excess part was excised up to the umbilical ring. Defect was closed with interrupted nonabsorbable propylene sutures 2-0 Sub-layer mesh repair with polypropylene mesh as sub-layer position and then rectus sheath was closed.
- Closure done in layers
- Sterile dry dressing applied.
- Pt shifted to the recovery.

Post-operative

- Advised alternate day dressing
- Post operative orders to be follow.
- Suture removed on 12th day after surgery

Post op orders –

TPR/ BP/ INPUT-OUTPUT CHARTING/
WEIGHT CHART

Alternate day dressing with betadine

- Nimbadi guggulu 2-2-2 after food with warm water
- *Mamejava ghanavati* 2-2-2 after food with warm water
- *Darvyadi yoga* 5gm bd after food after food with warm water
- *Triphala guggulu* 2-2-2 after food with warm water
- *Chandraprabhavati* 2-2-2 before food with warm water
- *Eranda brisht haritaki* 0-0-4 HS after food with warm water
- Tab paracetamol 650mg SOS
- Abdominal binder
- Diet as advised

Complications of open hernia repair [3]

- Haemorrhage, Haematoma, Seroma, Haematocele.
- Infection

Complications of Hernia repair (Mesh repair) [4]

- Infection
- Mesh extrusion
- Foreign body reaction



Intraoperative pic 1 Figure 1 & 2

Condition at the time of discharge: haemodynamically stable. Wound healthy. Sutures removed.

On discharge medicines:

- *Mamejava ghanavati* 2-2-2 after food with warm water
- *Darvyadi yoga* 5gm bd after food after food with warm water
- *Triphala guggulu* 2-2-2 after food with warm water
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Figure 3

DISCUSSION

Naturally, umbilicus is not a clean anatomical part of the body. The umbilical skin may not be cleaned of all bacteria even with the use of modern antiseptic solutions. Therefore, the surgical site infection can be

more frequent following umbilical hernia repairs than that following inguinal hernia repairs. As this patient was allergic to multiple drugs so we have managed by potent drugs like *Nimbadi guggulu*, *Chandraprabhavati*, *Rasayan vati*, tab *EBH*,

Mamejavaghan vati, Kamadudha Rasa, Triphala guggulu.

Nimbadi guggulu in which ingredient having *tikta* (bitter), *katu* (pungent) and *kashaya* (astringent) rasa pradhanya with *laghu* (light), *ruksha* (dry) guna which causes *shoshana* (emaciation) *karma* there by reducing the epiphora. Nimba has proven *Kaphapittahara, vrana shodhaka, ropana grahi, krimighna, netrya, vishgna* properties (antimicrobial properties).

Chandraprabhavati (Ninama et al., n.d.)

[10] It is considered as Sarva Roga Pranaashini which cures all types of diseases. It is a classical polyherbal formulation, which consists of 37 ingredients of plant and mineral origin and Chandraprabha vati has *Katu, Tikta, Kashaya* and *Madhura Rasa, Ushna Virya* and *Gunas* like *Laghu, Ushna, Tikshna* and *Ruksha*. The drugs like *Trivrit, Pippalimoola, Guggulu, Yavakshara* relieve anxiety & pain. Drugs having anti-inflammatory properties are *Karpoora, Musta, Devadaru, Guggulu, Triphala, Ela, Shilajatu & Makshika Bhasma* help in reducing the pain [5]. As it contains *Loha Bhasma* and *Shilajatu* it helps in increasing the *Bala* and reduce fatigue and general debility and it is being widely used for various disorders such as anaemia, pain, indigestion, and renal calculi.

Rasayan vati (Deshpande et al., 2018) [8]

Word *Rasayana* is derived from "*Rasasya*

Ayanam Rasayanam" which means the way of obtaining a good *Rasa* is *Rasayana* [6]: as *rasayana* *Dravya* are useful in strengthening body tissues and can replenish body tissues, it plays important role in every disease. It helps in regaining the strength, stamina, vigour that is lost during fighting with the disease. It also plays very important role in avoiding recurrence of disease or its complications. Generally, *rasayana* medicines are useful along with other active management of disease as well as after active treatment is completed. Hence it is very clear that treatment of a disease cannot be considered as complete without using *rasayana*.

Tab EBH is a widely used formulation in the management of *Vatavyadhi, Sandhivat* (arthritis), *Ajeerna* (indigestion) and *Anaurexia (aruchi)* induced diseases, *Eranda* possess *Vatahara, Vrishya, Rechana* (Purgative) property [6].

Kamadudha Rasa ("Pharmaceutical Modification of Kamadhugha Rasa into A Value-Added Suspension," 2021) [11] used in the treatment of *Amalpitta*, (~hyperacidity), *Pittajvikara* (~diseases of the *Pitta Dosh*), *Jirnajwara* (chronic fever), and *Shotha* (inflammation). *Kamadudha ras* is commonly used in *pittaj vyadhi*. It consists of *dravyas* of *sudha warg* like *prawal, mukta, muktashukti, shankha, kapardik* which are *shitviryatmak* and *pittashamak* and hence reduces aggravated

pitta. It also contains *suvarna gairik* which is *raktastambhak* and *kshobhanashak*. The effect of *Kamdudha Ras* appears on digestive system, Cardiovascular system, Nervous system and Urinary system. It reduces heat in the body, balances acid production in the stomach [7].

Mamejavaghan vati the drugs *mamajjaka* mainly having *tikta, katu rasa, usna veerya* and *laghu, ruksa guna, katu vipaka* and *kaphavatahara* properties. Thus, *usna veerya* and *tikta rasa* helps to normalize the function of *Jathragni* and *dhatwagni*. That in turn helps to form the *dhatu*s in proper proportion with *samyak* qualities. *laghu, ruksa guna* helps for the *shosan* of *bahudrava shlesma* and reduction of vitiated *meda, kleda* Thus once these factors get normalized in the body, they in turn make clear the Path of *vata* which stops the depletion of vital *dhatu*s (*tissues*) and restore normal physiology have anti-diabetic activity and have the potential to reduce complication of diabetes [8].

(9) **Triphala guggulu** has been reported to contain gallic acid. Gallic acid is a widely occurring phenolic compound of plant origin. Gallic acid is selected as a bioactive

marker due to its easy availability, common presence in these fruits and as anti-obesity property. Gallic acid is maximum in *Amalaki* (*emblica officinalis*). *Medoghana* effect of *Guggulu* 10 - The major ingredient of the trial drug is *Guggulu*. *Guggulsterone* content of *Guggul* have lipid-lowering effect. *Guggulsterone* inhibit the synthesis of cholesterol in the body while also speeding up the degradation and excretion of cholesterol. Due to this, the active phytochemicals in *guggul* inhibit the farnesoid X receptor which is a bile acid receptor needed for the controlling the levels of cholesterol in the body. More specifically, *Guggulu* reduces the production of cholesterol in the liver, and *Guggulsterone* can block the oxidation of LDL. *guggulu* enhances the activities of receptors that bind LDL in the liver and, therefore, increases the rate at which LDL is broken down into simpler and safer compounds [9]. Many new ayurveda formulation emerging which is having potent antimicrobial effects like *dinesavaladyadi taila* (Saini et al., n.d.) [12] which can be used in wound management. here we used betadine ointment.

Antibiotic	• <i>Tab nimbadi guggulun 2-0-2</i>	<i>Krimighna, vrana shodhan-ropan</i>
Antacid	• <i>Kamadudha ras 2-0-2</i>	<i>Amlapittahar</i>
Diuretic + uti management	• <i>ChandraPrabha vati 2-2-2</i>	<i>Mutra- virechaniya</i>
Laxatives	• <i>EBH 0-0-4 HS</i>	<i>Vatanulomaka</i>
Multivitamin	• <i>Tab Rasayan vati 2-0-2</i>	<i>Dhatu poshaka /bhrinshaana</i>
Hypoglycaemic agent	• <i>Mamejava ghan vati &Chandra Prabha vati</i>	<i>Madhumehari</i>

CONCLUSION

This is a single case study and we found remarkable results as patient was treated successfully without any complications. Though we got Results there is further need of evidence and evaluation of such ayurvedic medicine which having potent antibacterial property which should be evaluated, conformed and multiple trials should be done for their standardization. this study has certain limitation and several strengths.

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