An Indirect Inguinal Hernia Repair after Nitya Virechana a Case Report

Dr. Neelkumar B. Patel1, Dr. Rajesh Kumar Sharma2, Dr. Hardik Desai3

1Post Graduate Scholar, Dept. of Shalya tantra, Government Akhandanad Ayurveda College, Ahmedabad, Gujarat, India
2Professor and H.O.D., Dept. of Shalya tantra, Government Akhandanad Ayurveda College, Ahmedabad, Gujarat, India
3Post Graduate Scholar, Dept. of Shalya tantra, Government Akhandanad Ayurveda College, Ahmedabad, Gujarat, India

ABSTRACT

Over time, an inguinal hernia may develop due to increased pressure on the walls of the abdominal muscles from activities such as straining, prolonged coughing, being overweight, or lifting heavy weights. Acharya Sushruta referred to inguinal hernia as Antra vridhhi. This condition may be associated with symptoms such as dragging pain and discomfort. Paresthesia may occur in some patients due to compression or irritation of the inguinal nerves by the hernia. An indirect inguinal hernia which does not extend to the scrotal sac should be managed as vata vridhhi. In describing the operative management of vata vridhhi, Acharya Sushruta recommended certain therapeutic procedures as a purvakarma of Vata vridhhi chikitsa. The patient undergone Nitya virechana karma with Eranda taila and Milk for 7 days, followed by hernioplasty on the 8th day. Tension-free mesh hernia repair has become the predominant method for treating inguinal hernias.

Keywords: Inguinal Hernia, Antra vridhhi, Vata vridhhi chikitsa, Nitya virechana karma, Hernioplasty

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INTRODUCTION

Hernia is a protrusion of a viscus or part of a viscus through an abnormal opening in the walls of its containing cavity. The external abdominal hernia is the most common form, the most frequent varieties being the inguinal hernia. An indirect inguinal hernia travels down the canal on the outer (lateral and anterior) side of the spermatic cord. A direct inguinal hernia comes out directly forwards through the posterior wall of the inguinal canal. Indirect hernias are most common in the young one, whereas direct hernias are most common in the old one. In the first decade of life, inguinal hernia is more common on the right side in the male. This is no doubt associated with the later descent of the right testis and a higher incidence of failure of closure of the Processus vaginalis. Acharya Sushruta has described regarding inguinal hernia as an Antra vridhhi in Adhyaya 12th of nidanasthana and Adhyaya 19th of chiki kisathan of sushruta samhita. When vitated Vata dosha travel downward in the Phalakoshvahini and produce giant swelling is known as Vridhhi. The aetiology of Hernia according to Ayurveda is aggravate of Vata dosha which causes displacement of intestine or its part into the groin region leading to swelling in the form of Granthi. If this condition persisted for long time then vitiated Vata pushes intestinal part downwards and Vayu moves further down and leads swelling of scrotum. He has described seven types of vridhhi, Antra vridhhi is one among them. Susruta mentioned about three types of treatment for this condition – Bheshaja, Agnikarma and siravedhana. Vattavridhhi chikitsa can be applied in primary stage of inguinal hernia which mainly includes Shamana drugs mentioned by Acharya.

CASE REPORT

A 62-years-old male patient (OPD no - 16762, IPD no - 891) got admitted under Shalya Tantra department of Government Akhandand Ayurvedic college & Hospital, Gujarat, India.
Ahmedabad on 03/07/2023 with complains of bulging mass in the inguinal region accompanied with pain and discomfort in the last 1.5 years.

**Place of study** - P.G.Department of Shalya Tantra, Government Akhandanand Ayurvedic college & hospital Bhadra, Ahmedabad, Gujarat.

**History of Illness** - As per the statement of the patient he was apparently healthy before 1.5 years. He gradually noticed swollen mass along with pain near the inguinal region. Mass comes out while coughing, walking, straining for motion, lifting heavy weight. In the last 1 month the mass has increased in size hence for further management he has approached our hospital.

**History of Past Illness** – No any H/O: DM/HTN/IHD

**Clinical Findings** - On Examination: BP - 130/80mmHg, PR - 78 bpm, R.R – 18 /min

**General Examination** - Built: Moderate, Nourishment: Moderate, Temp: Afebrile. No evidence of Pallor / Icterus / Cyanosis / Clubbing / Oedema / Koilonychia / Lymphadenopathy

**Systemic Examination** - CNS: Conscious, well oriented to time, place and person, CVS: S1 S2 heard, no added sounds, RS: B/L AE+, B/L Air entry equal and clear, P/A: Soft and Non-distended, Tenderness noted at right iliac fossa.

**On Inspection** - Location: Swelling over the right inguinal region. Discolouration / Scar marks: Absent, Scar marks: Absent on right inguinal region


**Specific examinations of inguinal hernia** - Internal ring occlusion test: Positive, Ring invagination test( After occluding the deep ring): Negative, Zieman’s test: Positive impulse on Index finger.

**Investigations** (26/06/2023) – Picture 1

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**REPORT OF BIOCHEMISTRY**

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Unit</th>
<th>Normal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Sugar (R)</td>
<td>102.5</td>
<td>mg/dL</td>
<td>(80 - 120 mg/dL)</td>
</tr>
<tr>
<td>Urine Sugar (R)</td>
<td>N/C</td>
<td>mg/dL</td>
<td>N/C</td>
</tr>
<tr>
<td>B.Urea</td>
<td>20.4</td>
<td>mg/dL</td>
<td>(17 - 45 mg/dL)</td>
</tr>
<tr>
<td>Total Bilirubin</td>
<td>0.88</td>
<td>mg/dL</td>
<td>N/C</td>
</tr>
<tr>
<td>Direct Bilirubin</td>
<td>0.10</td>
<td>mg/dL</td>
<td>N/C</td>
</tr>
<tr>
<td>Indirect Bilirubin</td>
<td>0.78</td>
<td>mg/dL</td>
<td>N/C</td>
</tr>
<tr>
<td>SGPT</td>
<td>27.9</td>
<td>U/L</td>
<td>(5 - 40 u/L)</td>
</tr>
</tbody>
</table>

**BLOOD GROUP**

- ABO Group: “O”
- Rh. Group: “POSITIVE”

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**Hemogram Report**

<table>
<thead>
<tr>
<th>TEST</th>
<th>RESULT</th>
<th>NORMAL VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin</td>
<td>12.7</td>
<td>M: 13.5 - 16.5 Gm%</td>
</tr>
<tr>
<td>Haematocrit%</td>
<td>42.5</td>
<td>F: 11.5 - 16.5 Gm%</td>
</tr>
<tr>
<td>Total R.B.C.</td>
<td>4.63</td>
<td>M: 4.4 - 5.4 x 10^6 U/mm</td>
</tr>
<tr>
<td>Total W.B.C.</td>
<td>7,700</td>
<td>M: 4000 - 10,000 x 10^6 U/mm</td>
</tr>
<tr>
<td>DIFFERENTIAL COUNT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycythemia</td>
<td>61.6</td>
<td>40 to 60%</td>
</tr>
<tr>
<td>Lymphocytosis</td>
<td>30.0</td>
<td>20 to 40%</td>
</tr>
<tr>
<td>Mononucleosis</td>
<td>10.0</td>
<td>1 to 4%</td>
</tr>
<tr>
<td>Monocytes</td>
<td>5.0</td>
<td>2 to 10%</td>
</tr>
<tr>
<td>Neutrophils</td>
<td>60.0</td>
<td>50 to 70%</td>
</tr>
<tr>
<td>Platelet count</td>
<td>2.5</td>
<td>150,000 - 450,000 x 10^9 U/mm</td>
</tr>
<tr>
<td>ESR</td>
<td>26</td>
<td>M: 1 - 15, F: 1 - 30 mm/mm</td>
</tr>
<tr>
<td>P.C.V</td>
<td>32</td>
<td>40 to 60%</td>
</tr>
<tr>
<td>M.C.V</td>
<td>88.6</td>
<td>100 x 10^9 U/mm</td>
</tr>
<tr>
<td>M.C.R.C</td>
<td>28.4</td>
<td>27 - 32 py</td>
</tr>
<tr>
<td>E.S.R</td>
<td>15.2</td>
<td>31.50 - 38.50</td>
</tr>
</tbody>
</table>

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HB % :12.7gm/dL, WBC (TC): 7700 Cells/Cumm, DC : N – 61%, L – 30%, E – 04%, M – 05%, ESR : 26mm 1st hour, HIV : Negative, HBsAg : Negative, Urine Albumin : Trace, Urine Sugar : Nil, Pus Cells : 2 – 3 RBS : 102.5 mg / dL, Urea : 30.4 mg / dL, Creatinine : 1.10 mg / dL, Platelet Count : 1.80 Lakhs / Cumm BT : 2.45 min, CT : 6.00 min, Blood Group : O positive
USG Abdomen & Pelvis: (26/06/2023) - Picture 2
Impression: Mild hepatomegaly seen. Mild enlargement of Prostate seen. Mild edematous wall of lower descending, sigmoid colon, Rectum. Right Inguinal Hernia seen with defect of approx 25mm size through which omentum, occasionally small bowel enters into sac, reducible at present.
Treatment/Operative Procedure

Pre-operative
- Consent for both surgery & anaesthesia taken
- Fitness for surgery taken from physician
- Nipple to Knee area shaved & washed with Betadine Surgical scrub 7.5% solution
- Patient was kept NBM, 6 hours prior to surgery
- Inj. T.T. 0.5cc/IM/stat & Inj. Xylocaine 0.3cc/SC/stat as test dose given
- Bowels cleared by giving enema 4 hours before surgery

Operative

Painting & draping has been done to the patient, after that skin is incised 1.25 cm above and parallel to the inguinal ligament. Superficial fascia is incised. Superficial pudendal and superficial epigastric vessels are cauterised. For retracting the skin edges, a Retractor is placed. External oblique aponeurosis is incised parallel to the line of skin incision. Incision is extended on either ends of the incision; medially it is extended toward superficial ring. Upper leaf is reflected above with artery forcep; conjoined tendon and lateral rectus sheath has been examined using peanut dissection. Lower leaf is reflected downwards to visualise and expose the inguinal ligament. Dissection done of entire inguinal ligament and exposed with its edge and iliopectineal tract. Ilioinguinal nerve is preserved. Cremasteric muscle with its fascia is opened and made medial and lateral flaps. Cord structures are dissected. Dissection is started from the fundus and extended towards the neck. Sac is opened at the fundus. Finger is passed to release any adhesions. Sac is twisted so has to prevent the content from coming back. It is transfixed using absorbable suture material vicryl 2-0 and is excised distally. After herniotomy suitable sized mesh is selected. Mesh is placed deep to the cord structures; Below it is sutured to the inguinal ligament using continuous non-absorbable polypropylene sutures; Medially it is overlapped 2 cm over the pubic tubercle, Laterally at the level of internal ring. Mesh on its lateral part is slit onto two tails; 2/3rd upper leaf and 1/3rd lower leaf. Slit is done up to the internal ring and cord with ilioinguinal nerve is passed in between the tails; upper leaf is overlapped onto the lower leaf in front below and is sutured to inguinal ligament at the level of internal ring. Laterally both leaflets are spread up to anterior superior iliac spine for 6 cm above and medially mesh is fixed to conjoint tendon using interrupted polypropylene sutures. Cord is placed on the mesh. External oblique is sutured using same absorbable suture material. Subcutaneous tissue and skin is closed.
5. Opening of Sac at the Fundus

6. Transfixation of the Sac

7. Prepare appropriate size of Mesh

8. Placement of Mesh deep to the cord

9. Placement of cord above the Mesh

10. Closing Layer by Layer
Post-operative

- Foley’s catheterisation done to ease the patient.
- NBM to be continued for another 4 hours post operatively & then relieved by giving sips of water
- Followed by soft diet.
- Inj. Monocel 1gm IV/ 12th hourly for 3 days & Inj. Tramadol 2ml/ IM sos for 3 days. Under the advice of consultant physician
- Advised alternate day dressing.
- Discharged after 48 hours of surgery.
- Sutures removed on 14th day after surgery.

RESULTS & DISCUSSION

Hernias develop when weaknesses or openings occur in the muscular walls or tissues responsible for holding organs in place. These weaknesses permit organs or tissues to protrude, resulting in a hernia. Factors such as increased intra-abdominal pressure, chronic constipation, straining, and age significantly contribute to the onset of hernias. These factors exacerbate vayu, which is according to Ayurvedic literature identifies as the primary cause of inguinal hernias. When the vitiated vata dosha localizes in the inguinal region, it leads to swelling and discomfort, eventually progressing to a dragging type of pain. Hernioplasty, performed by surgeons, involves repositioning the organ to achieve anatomical correction. Post-surgery, patients may experience discomfort due to the mesh, and some may notice numbness, tingling sensations, or sensory disturbances. Surgical complications such as infection, hematoma, and seroma may also arise, along with potential issues like mesh migration, shrinkage, or adhesion. While Ayurvedic texts offer limited elaboration on Nitya virechana, references can be found in texts like Jalodara, kushtha, Gridhrasi, and Antravridhhi. Following Nitya virechana, hernioplasty yields the outcomes of nityavirechana as a purvakarma in managing inguinal hernias, with no risk of the complications mentioned above.

CONCLUSION

Surgery is typically the recommended treatment for inguinal hernias. However, asymptomatic patients with inguinal hernias can choose to defer surgical intervention. Acharya Sushruta provided detailed explanations of the Nidana, Samprapti, and Chikitsa of inguinal hernias under the topic Antravridhdi. Ayurvedic treatments can alleviate symptoms of Antravridhdi to some extent; however, surgery remains the final option to correct anatomical disturbances. According to Acharya Sushruta, a case of inguinal hernia extending down to the scrotal sac is deemed irreparable. Nevertheless, in modern times, surgeons utilize various procedures such as herniotomy, herniorrhaphy, hernioplasty, and laparoscopic hernia repair, employing advanced instruments and techniques.

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