

Improvised Agnikarma with Infrared Photocoagulator in Direct Inguinal hernia – A Single Case Report

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ABSTRACT:

Inguinal hernia is more common compared to other types of hernias. It often present with a lump over inguinal region associated with dragging type of pain. In the management conservative measures are poor and surgical intervention is the main mode of treatment. In *Ayurveda* inguinal hernia can be correlated to *Antravrddhi*. In the treatment of *Antravrddhi* *Agnikarma* is mentioned by ancient *Acharyas*. The *salaka* named *Ardhenduvaktrasalaka* is difficult to use at the *Vamkshana* as the depth of *Agnikarma* cannot be controlled. Infrared photocoagulator is an advanced equipment in which the depth of *Agnikarma* can be controlled manually. Improvised *Agnikarma* with Infrared photocoagulator was done in a patient with inguinal hernia in one sitting. Patient was assessed by cough impulse and ultrasonography. After the procedure there was considerable symptomatic relief. The size of the swelling was reduced and reduction of 0.2 cm defect size was observed.

KEY WORDS: *Antravrddhi*, Improvised *Agnikarma*, Inguinal Hernia, Infrared photocoagulator.

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INTRODUCTION:

The term “hernia” is derived from the Latin word for rupture. Hernia is the protrusion of a viscus or part of a viscus through an abnormal opening in the walls of its containing cavity. [1] Reducible, Irreducible, Obstructed, Strangulated and Inflamed are the types of hernia. Other types based on site are inguinal, femoral, umbilical and incisional hernia. An inguinal hernia can be of direct and indirect.

Aetiology of inguinal hernia includes a painful muscular effort or strain occasioned by lifting a heavy weight, or indeed any condition which raises intra-abdominal

pressure is liable to be followed by a hernia. An indirect inguinal hernia travels down the inguinal canal through the outer side of the spermatic cord & a direct inguinal hernia protrudes out directly forwards through the posterior wall of the inguinal canal. Indirect one is the commonest form in the young persons whereas a direct hernia is common in middle aged persons. [2]

The prevalence of the abdominal wall hernia is estimated to be 1.7% for all ages and 4% of those who are above 45 years of age. The inguinal hernias constitute for 75% of the abdominal hernias. [3]

In *Ayurveda Vriddhi* mentioned by *Susruta & Vagbhata* in *nidanasthana*. *Vriddhi* is described as one which increases in size. Both *Susruta* and *Vagbhata* mentioned about 7 types of *Vriddhi*. They are *vatika*, *paithika*, *kaphaja*, *raktaja*, *medoja*, *mutravrrddhi* & *antravrrddhi*.^[4-5] *Antravrrddhi* can be correlated to inguinal hernia. *Agnikarma* is mentioned in the *vamkshanastha antravrrddhi* by both *Susruta & Vagbhata*. The *salaka* named *Ardhenduvaktrasalaka* is mentioned by *Acharyas* for *Agnikarma* in *antravrrddhi*.^[6-7] The instrument named Infrared Photocoagulator is a modern equipment used widely in the treatment of haemorrhoids, tattoo removal, chronic rhinitis etc.^[8-9]

Infrared Photocoagulator is an advanced equipment where an intense beam of infrared light is created results in inflammation and fibrosis of the site. The *salaka* mentioned by *Acharyas* named *Ardhenduvaktrasalaka* is not safe for using at the *vamkshana* as its working cannot be controlled effectively. Hence we could use Infrared photocoagulator as a *dahana upakarana* for *Agnikarma* at groin region. The intention of the treatment was preventing the herniation of bowel by forming scar tissue over the site.

CASE HISTORY:

A patient of 58 years old complaints of dragging pain and swelling of right inguinal region since last 3 years. He had mild swelling over left inguinal region developed since 1 year. He had no history of diabetes mellitus and hypertension. He had a history of prostatomegaly (Grade I) and cholelithiasis. He consulted an allopathic hospital and they suggested surgery for inguinal hernia as the management. As he was not willing to do surgery, the patient came in our Outpatient department and underwent internal medications for 1 week

(Table.1). Then he got some symptomatic relief especially dragging pain reduced but the swelling did not reduced. Symptoms recurred when he engaged in lifting heavy weights. Then he attended in our OPD. At that time he was given one day sitting of improvised *Agnikarma* by Infrared Photocoagulator (Fig.1) over right and left inguinal region (Fig.3).

Patient was examined in lying and standing position. There was a spherical swelling over right and left inguinal region. Size of the swelling was 3cm * 2cm over right and 1.5 cm * 1cm over left. Cough impulse and invagination test was positive. It was a direct inguinal hernia found as reducible. Patient was diagnosed as bilateral inguinal hernia through ultrasonography (Fig.5). Diagnosis was done by clinically and by ultrasonography

THERAPEUTIC INTERVENTION:

Materials required:

Infrared Photocoagulator, Xylocaine -1ml for local anaesthesia, Sterile drapes.

Operative procedure:

Informed consent was taken prior to procedure. Infrared photocoagulator was kept on. Timer setting was placed at 1.25-1.5 sec. Local Anaesthesia with 1 ml Xylocaine was given.

Improvised *Agnikarma* was done with the probe (KL -010 Light guide 6mm *220) at superficial inguinal ring as the direct inguinal hernia protrudes out through the superficial inguinal ring in 4 spots to induce fibrosis, after reducing the contents of the hernia.

Post-operative Procedure:

A gauze pad of *kumariswarasa* was given at the site of *Agnikarma*.

Patient was advised to take rest. After the Procedure there was swelling and patient was advised to avoid coughing, straining

during defecation and lifting heavy weights.

Patient was assessed clinically after 2 weeks and at that time size of the swelling was reduced mildly. Reduction of pain and discomfort was found. Then an ultrasonography was taken 1 month after procedure (Fig.6)

Patient was advised to refrain from all physical activities affecting abdominal muscles such as lifting heavy weight and coughing, straining during defecation for 2

months. Patient didn't noticed about prostatic complaints till he underwent ultrasonography. He was given no medicine for BPH.

FOLLOW UP AND OUTCOMES:

The follow up was given after 2 months of first sitting. At that time dragging pain reduced completely and size of the swelling was reduced mildly and there was no recurrence. He develops pain when he continues standing for long time.

Table-1: Treatment and Timeline

| Date | Intervention | Remarks |
|------------|--|---|
| 23/03/2021 | Gandharvahastadi Kashayam 90 ml bd Hingutriguna taila -5 ml HS | constipation relieved swelling persists |
| 01/04/2021 | Improvised Agnikarma with infrared Photocoagulator over right inguinal region at superficial inguinal ring in 4 strokes | - |
| 16/04/2021 | Internal medications continued | swelling reduced mildly Discomfort reduced |
| 04/05/2021 | Follow up- Internal medications continued | swelling reduced |



Fig-1: Infrared photocoagulator



Fig-2: Before treatment

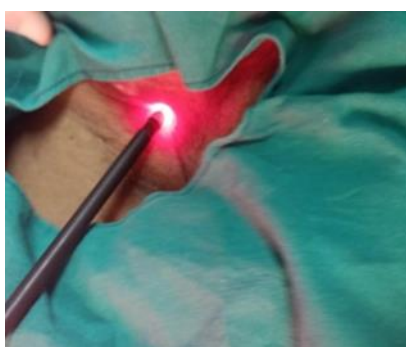


Fig-3: During treatment



Fig-4: After treatment

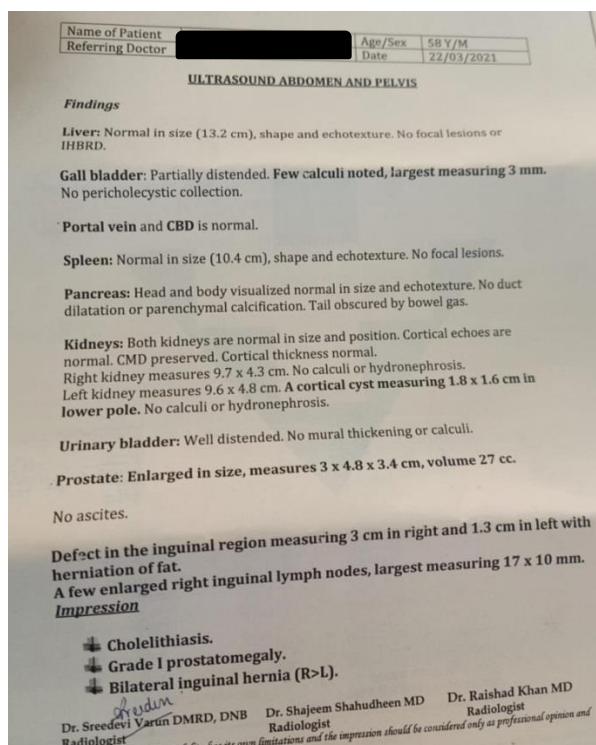


Fig-5 USG Report BT (22/03/2021)

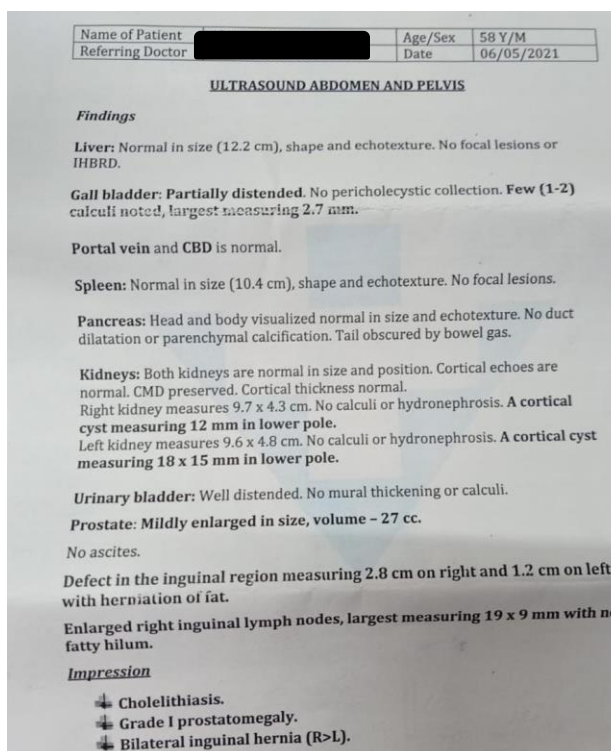


Fig-6 USG Report AT (06/05/2021)

DISCUSSION:

Susruta mentioned about four types of treatment –*Bheshaja*, *Shashtra*, *Kshara* and *Agnikarma*. *Bheshaja* includes internal medications that means *samana oushadha*. *Vatavrrddhi chikitsa* is opted for *Antravddhi* mainly includes *Samana oushadha*, *Siravedha* and *Agnikarma*. *Agnikarma* is best among *Anushastras* and disease treated by *Agnikarma* will not recur. Inguinal hernia always presenting with a swelling over inguinal region will make a discomfort mentally and physically. Improvised *Agnikarma* with infrared Photocoagulator aims to cure the patients who are not willing to do surgical management. Mesh repair is the surgical repair with maximum efficiency but many patients develop allergies as the mesh used is synthetic in nature. So improvised *Agnikarma* with Infrared Photocoagulator is an advanced treatment option in this modern era. The infrared light emitted from the probe will induce an inflammatory response at the *Agnikarma* site. Fibroblasts, collagen fibres, elastin etc proliferates and scar formation

takes place. Thus herniation of bowel is prevented. Thus infrared coagulation is an improvised technique to do *Agnikarma* in inguinal hernia. Also it will be helpful to cure hernia in patients who are not willing to do surgery with minimum complications.

CONCLUSION:

In this case study patient was patient has shown reduction in the size of the swelling and discomfort after the procedure. Ultrasonography shows reduction of 0.2 cm over right side and 0.1 cm over left side. Here is an attempt to put forward an improvised technique for *Agnikarma* in inguinal hernia. More studies should be conducted by increasing the number of sittings and in large samples.

LIMITATION OF STUDY:

The limitation of procedure is the cost of the equipment. As it is little expensive it could be difficult to kept owned by a doctor.

CONSENT OF PATIENT:

The consent has been obtained from patient at the time of registration for treatment and publication without disclosing the identity of patient as per medical ethics.

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