INTRODUCTION

Pain is an unpleasant feeling often caused by intense or damaging stimuli, such as stubbing a toe, burning a finger and putting spirit on a cut. The International Association for Study of Pain defines pain as an unpleasant & emotional experience associated with actual or potential damage to tissue, or described in terms of such damage. Pain is said to be an important indicator of abnormal processes going inside the body. In some cases, it is a cardinal symptom, which distracts the mind of an individual & brings him towards the doctor for further evaluation and treatment. Surgery gives fastest relief from various diseases; the common reason for trying to control pain after surgery is to relieve the suffering of patients since ‘it is the basic duty of all healthcare professionals to relieve pain and it is the most important indication for the treatment of pain after surgery is humanitarian’ (Royal College of Surgeons Report on Pain after Surgery 1990). Effective pain control can attenuate the stress response to surgery, improves respiratory function, enables patients to cooperate with physiotherapy, and promotes better mobility. Reduction in postoperative complications and better mobility permit earlier discharge and produce cost savings. Early and aggressive treatment of acute pain may prevent the development of chronic postoperative pain. However, various advancements are made in the field of surgery, in developing countries like India it still needs economic and cost-effective, cheaper modalities of any treatment. For true follower of Shalayatrantra, it is a need to establish an effective ayurvedic management for pain and for wound healing. A drug that has combined effect of subsiding the pain enhances the wound healing, leading not only early discharge from hospital stay, but also for the betterment of the poor masses. Therefore, planning a cost effective, reliable, time tested and technically simple management is the need of this present era.

For the present study by keeping all the points in mind triphala guggulu and gandhak rasayan have been selected. The tablet prepared out of Triphala Guggulu & Gandhak Rasayana when taken internally Cures constipation and it acts as Vrana Shodhaka (~ cleans) & Vrana Ropaka (~ heals). Gandhak Rasayana is another drug, which relieves pain and acts as rejuvenator. In Vrana patient, pain is one of the main problems. Therefore, this drug helps in curing of the pain along with other actions.

AIMS & OBJECTIVES

To assess the clinical efficacy of Triphala Guggulu & Gandhak Rasayana in postoperative pain. To compare the results with the control group treated with prophylactic analgesics and antibiotics.

MATERIALS & METHODS

The work was carried out after obtaining approval from the Institutional Ethical committee, Shri Dharmashthala Manjunatheshwara college of Ayurveda, Kuthpady Udupi, Karnataka. The Ethical clearance number is ~ RGUHS/PG-ECA/50A/1366-2003-2004.

As a routine, before conducting any surgical procedure in SDMA hospital, Kuthpady, Udupi compulsory consent form explaining all the details about the operation, anesthesia and medicines, duly signed by patient or guardians of the patients was taken. This work is a continuation of a previous study conducted by Dr. Vinay Wali, with more number of patients and under the valuable guidance of Dr. Murlidhara Sharma, Professor, department of PG Studies in Shalyatrantra, Udupi, Karnataka, India.

Analysis

The data was coded and compiled in Microsoft excel version-2003. The Sigma Stat 3.1 Software is used. Unpaired t test is the test of significance.
Drug Contents
Triphala guggulu – As mentioned by Acharya Yogaratnakara in Vrana Slotha Chikitsa contains Haritiki, Vibhitaki, Aamalaki, pippali, Guggulu and ghrutha.  
Gandhak Rasayan – Shuddh gandhak and for bhavana - Goksheera, Chaturjata, Guduchi, Pathya, Dhaatri, Aksha, Bhrungaraja and Aardraka.

Drug Preparation
Triphala guggulu - Haretaki, Vibhetaki, Aamalaki and Pippali each one are taken in the dry form & powdered separately. Guggulu is taken in the purified form & pounded along with the above-prepared powder and made in to paste. Using little amount of ghee they are rolled into pills in the pharmacy of SDMCA, Udupi.  
Gandhak Rasayan - Purified Gandhak is taken. Three Bhavana given out of each one of Goksheera, Chaturljata and Guduchi. Similarly, eight Bhavana given out of each one of Pathya, Dhaatri, Aksha, Bhrungaraja and Aardraka. This is Gandhak rasayan and is prepared in the pharmacy of SDMCA, Udupi, Karnataka.

Clinical Study
30 patients who have undergone the elective surgery of inguinal hernia were selected from Dhanwanthari surgical section of SDM Ayurvedic hospital, Udupi and patients were randomly grouped into two groups i.e. Control & Trial.  
In Control group, Diclofenac Sodium 50 mg B.d & Gentamycin 80 mg I.V. B.d was given.  
In Trial group, Triphala Guggulu 450 mgs & Gandhak Rasayana 250 mgs, each 1 tab TID was given.

Inclusion Criteria
Inguinal Hernia (uncomplicated & elective surgeries), Patients of either sex, Age group between 20 to 80 years of age.

Exclusion Criteria
Surgeries other than inguinal hernia, Emergency surgical conditions, Recurrent hernia cases, Patients suffering from systemic diseases like DM, TB, HIV, Hepatitis, etc.

Observation Period
Observation period was of 6 days, Pain & tenderness was assessed 2 times per day, Appetite & Bowel habits were assessed daily, Feeling of well being was inquired daily, edema & Discharge was assessed at the time of dressing.

Assessment Criteria
The patient was assessed on the following parameters – Pain, Tenderness, Appetite, Bowel, Ambulation, Feeling of well being and edema.

Table 1: Statistical analysis of pain in Trial and Control group before treatment and after treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>BT - AT</th>
<th>Difference</th>
<th>SD</th>
<th>t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial</td>
<td>1.533 ± 0.150</td>
<td>0.200</td>
<td>0.581</td>
<td>1.177</td>
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<tr>
<td>Control</td>
<td>1.333 ± 0.0797</td>
<td>0.309</td>
<td>0.309</td>
<td>6.205</td>
<td>&lt;= 0.001</td>
</tr>
</tbody>
</table>

Table 2: Statistical analysis of tenderness in Trial group and Control group before treatment and after treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>BT - AT</th>
<th>Difference</th>
<th>SD</th>
<th>t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial</td>
<td>1.000 ± 0.000</td>
<td>0.367</td>
<td>0.000</td>
<td>6.205</td>
<td>&lt;= 0.001</td>
</tr>
<tr>
<td>Control</td>
<td>1.367 ± 0.0591</td>
<td>0.229</td>
<td>0.351</td>
<td>6.205</td>
<td>&lt;= 0.001</td>
</tr>
</tbody>
</table>

Figure 1 Comparison of pain between control & trial group
OBSERVATIONS & RESULTS
Among the 30 operated patients, maximum number of patients i.e. 26.67% belong to age group 51-60yr and all 100% were males. 86.67% were married. 63.33% consumes mixed diet. The 36.67% of the patients were farmers followed by 16.67% were mechanics.

Observations During Clinical Examination: 86.67% of the patients were suffering from unilateral inguinal hernia followed by 13.33% from bilateral hernia. Among the type of hernia 56.67% were having indirect inguinal hernia & 43.33% were suffering from direct inguinal hernia.

Observations During Surgery: 73.33% of the patients were operated under local anaesthesia and 26.67% under spinal anaesthesia. Maximum time taken for operating bilateral hernia was 60mins & minimum 50mins and for unilateral hernia maximum time taken to operate was 40mins & minimum 20mins. The maximum amount of bleeding in bilateral hernia was 100ml & min 80ml and in unilateral hernia it was 40ml maximum & 30 ml minimum. The average length of incision in both the groups was 7.5cms (minimum 6cm & maximum 9cm). In both the groups, maximum number of skin sutures applied in a single incision was about 6 and minimum 3 sutures. Sutupak no.1 monofilament & cotton thread were used for suturing.

Observations During Post-Operative Period: Efficacy of Triphala guggulu and Gandhak Rasayana was determined from statistical analysis of postoperative treatment.

Pain
The mean of Pain in the control group on the first day was 2.1 and mean in the trial group on first day was 2.133. On 6th day, the mean of pain in the control group was 0.567 and mean in the trial group was 0.833. The difference of mean of pain in the trial group before treatment and after treatment is 1.000 and difference of mean of pain in the control group before treatment and after treatment was 1.367. The difference of mean in both the groups was 0.376 and the P value was ≈ 0.001. The significant difference in the Tenderness score was noted on day 1st only, otherwise in remaining 2nd, 3rd, 4th, 5th, & 6th day, no significant difference was observed in Control & Trial Groups.

Intervention
Appetite: In control group, 10 patients were having good appetite and 5 had poor and in the trial group, 13 patients were having good appetite and 2 patients had poor.

Bowels: In control group 9 patients passed regular and 6 patients were constipated and in the trial group all the 15 patients passed regular bowels.

Ambulation: In control group 12 patients ambulated on the same day and 3 patients on the second day and in the trial group 13 patients ambulated on same day and 2 patients on the second day.

Feeling of Well Being: In control group 9 patients had the feeling of well being and in the trial group 13 patients had the feeling of well being.

Cost of Treatment For An Individual In Respective Groups For 6 days: Cost of treatment of an individual in Control group was about 60 Rs for 6 days. Cost of treatment of an individual in Trial group was about 12.50 Rs for 6 days.

Oedema & Discharge: In both the groups i.e. Control and trial groups none of the patients registered with either of these complaints. Medications included in Trail as well as Control group proved better in reduction of Oedema & discharge of the wound.

DISCUSSION & CONCLUSION
Inguinal hernia is one of the common surgical problems handled in day-to-day practice and an effective ayurvedic postoperative management is needed. On an average 127 patients per year, undergo herniorrhaphy in SDM Hospital Udupi, hence it is selected for study. The surgical procedure of herniorrhaphy produces on an average equal intensity of tissue injury and hence provides uniform groups of subjects for the study. Triphala Guggulu reduces kleda, paaka, putigandha, shotha along with remarkable reduction of pain in varna(wounds). Because of its madhu rasa, katu paka and ushna virya, Gandhak Rasayana helps in vranavasadana, thus helping in early wound healing and significant reduction
in the pain. Intensity of pain and observation of tenderness in both groups, the variation is not statistically significant. Combination of these drugs helps in achieving the expected analgesics effect, early wound healing without discharge, foul smell, and inflammation & hence results in early discharge of the patient from hospital. The need of analgesics and prophylactic antibiotics could be effectively reduced by using combination of Triphala Guggulu & Gandhak Rasayana (w.s.r. to inguinal hernia). No adverse effect of the treatment in Trial as well as Control group was observed in any patient. The aim of effective analgesia with no side effects and cost effective Ayurvedic medication is achieved in Postoperative pain management (w.s.r. inguinal hernia). Further studies in other surgical interventions involving more tissue injury are needed.

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REFERENCES


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