Research Article

International Journal of Clinical and Medical Case Reports

Lichtenstein Repair For Inguinal Hernia Modified Hernioplastia

Rodriguez PRL[1]*

[1]Specialist of I Degree and II Degree in general surgery, Axiliary Professor, Consulting Professor and Auxiliary Researcher, Enrique Cabrera General Teaching Hospital, La Habana, Cuba

***Corresponding author**

Pedro Rolando López Rodríguez, National Hospital, Continental Street No. 152 between D´Strampes Street and Goicuría Street, Sevillano, 10 de Octubre, Havana, Cuba.
E-mail: lopezp@infomed.sld.cu

Received Date: June 26 2022
Accepted Date: June 28 2022
Published Date: July 29 2022

Abstract

Introduction: The ideal of this study is to compare the issues of Modified Desarda form no mesh and Lichtenstein form for inguinal hernia.

Styles: This is a prospective randomized controlled trial study of 1342 cases having 1394 hernias operated from January 2008 to December 2020. 690 cases were operated using Lichtenstein form and 652 using Desarda form. The demographie data(Age, coitus), hernia type and position, anesthetic, operative time, postoperative pain and complications were analysed.

Results: There were no significant differences regarding age, coitus, position, type of hernia, and pain in both the groups. The operation time was 52 twinkles in Modified Desarda group and 42 twinkles in the Lichtenstein group that's significant($p<0.05$). The rush was0.0 in Modified Desarda group and0.28 in Lichtenstein group. But, there were 9 cases of infection to the polypropylene mesh in the Lichtenstein group, 2 of this neededre-exploration. The morbidity was also significantly more in Lichtenstein group(,6) as compared to Modified Desarda group(3.8). The mean time to return to work in the Modified Desarda group was8.26 days while a mean of12.58 days was in the Lichtenstein group. The mean sanitarium stay was 29 hrs. in Modified Desarda group while it was 49 hours in the Lichtenstein group in those cases who were rehabilitated.

Conclusions: The modified Desarda form scores significantly on Lichtenstein form in utmost of all aspects, including reexplorations and morbidity. Modified Desarda form is a better option compared to Lichtenstein form.

Introduction

In 1890, Eduardo Bassini described fissure form for inguinal hernia. This was a massive vault forward and has been the base of open form for over 100 times. The surgeon enters the inguinal conduit by opening its anterior wall, the external oblique aponeurosis. The spermatic cord is deconstructed free and the presence of a side or a medium hernia is verified. The sac of a side hernia is separated from the cord, opened and any contents reduced. The sac is also stitched closed at its neck and excess sacremoved. However, also it's reversed and the transversalis fascia is fissure plicated, If there's a medium hernia. Sutures, are now placed between the conjoint tendon over and the inguinal ligament below, extending from the pubic excrescence to the deep inguinal ring. The posterior wall of the inguinal conduit is therefore strengthened.1 Over 150 variations to the Bassini operation have been described with little or no benefit except for the Should ice revision. In this operation, the transversalis fascia is opened by a central gash from deep inguinal ring to the pubic excrescence and also closed to produce a double-thick, two- concentrated posterior wall (double breasting). The external oblique is closed in analogous fashion. Expert centres have reported continuance failure rates of lower than 2 per cent after Should ice form but it's a technically demanding operation which, in general hands, gives results identical to the Bassini form. 1.

The surgeons use different ways in Cuba for inguinal hernia form like Bassini or Shouldice and its variations or different types of mesh repairs. The standard mesh isn't available at numerous places and it's precious also. Hernia treatment has come a health problem because of its social, profitable and labour counteraccusations due to its high prevalence in our population [1]. Until lately, the only parameters to be estimated were rush, complication rates etc. moment, other parameters like cost,post-surgery good and quality of life have gained significance. The demand of general surgeons is to identify operations that are simple to perform without the need for complicated analysis and with low complication and rush rates. Avoidance of use of foreign material where possible is a introductory surgical star. The authors read about the Desarda form which seems be simple in conception, avoids the use of mesh and gives the asked results. This form is grounded on the conception of furnishing a strong and physiologically dynamic posterior wall to the inguinal conduit. An undetached strip of the aponeurosis of the external oblique muscle replaces the absent aponeurotic element in the posterior wall and the

weakened conjoint muscle receives fresh strength from the external oblique muscle to keep it physiologically dynamic [2]. There are still numerous difficulties to answer. Which is the stylish fashion for form? [3] Is hernioplasty better than herniorrhaphy? Which is the stylish fashion for hernioplasty or herniorrhaphy? Does laparoscopic surgery have a better cost- effectiveness than open surgery? Is mesh necessary in all inguinal hernia repairs? The ideal of this study is to rethink the Lichtenstein mesh form and compare it with the novel and " No mesh, physiological form " described by Modified Desarda fashion.

Methods

This study was designed as a RCT (Randomized Controlled Clinical Trial) among the 1342 cases (652 cases of Modified Desarda's fashion{revision of Desarda's fashion by adding Modified Bassini's fashion(Darn with continuoussuturing withnon-absorbable polypropylenesuture)} and 690 cases of Lichtenstein procedure alone) of inguinal herniain Surgery Unit 1 & 2, Enrique Cabrera Hospital, Havana Cuba from a period of January 2008 to December 2020 with a viewto depict the short & intermediate term(05 times) issues of recently proposed Modified Desarda's fashion in discrepancy to Lichtenstein procedure. All the cases from both relations aged than 16 times with primary and intermittent inguinal hernias were included. Cases operated on exigency base were barred. The opinion of inguinal hernia and its type was made by clinical examination. Information was given to the cases as regards the anesthetic procedures. The case chose type of anaesthesia after discussion with the surgeon. The Randomization was performed using a successively numbered, sealed envelope, which was opened, in theatre and all cases having an indeed number were operated by the Lichtenstein and uneven figures by the modified Desarda fashion. The operating surgeon completed a data distance. The operating surgeon was at adviser position for all operations.

The annotator was also a surgeon of adviser position. All cases inked a written informed concurrence. blessing of the original ethical commission was given previous to the onset of the study. Modified Desarda form was performed according to the surgical fashion described byDr. Desarda and snare prosthesis form was accepted as described in the handbooks. Precautionary antibiotic was administered in the operating room before surgery(Cefazoline 1g.) in the Lichtenstein group only. All cases were discharged as soon as theirpost-surgical recovery allowed, and all cases were instructed to do daily, routine,non-strenuous work after discharge. Anon-steroidalanti-inflammatory(Diclofanac) analgesic was specified for a period of 5 days and continued if needed. The advisers followed all the cases at 8 days, 1 month, 6 months and also yearrequired. The advisers followed all the cases at 8 days, 1 month, 6 months and also yearly later. A data distance was completed by the operating surgeon including type of hernia(Nyhus bracket)[4], anaesthesia, specialized details andintra-operative complications. At discharge, farther data was added including any earlypost-operative complications. Cases were asked to complete a pain score on the first, third and fifth day after surgery using a direct analogue scale [6]. At first follow up, one month after surgery, farther data were collected including time to return to normal conditioning. The Pupil T test was used to compare the independent measures and the Mann Whitney- U test fornon-parametric data. The Chi- squared test and Fisher's exact test were used to measure the association between quality variables.

Results

There was no significant difference in relation to coitus, age, position and type of inguinal hernia in both the groups (Table 1).

Original anesthesia was used in 294 cases in Lichtenstein group and 399 cases in the Desarda group. All those 707(53.0) cases were operated on as inpatient base without hospitalization. In the remainder of 635 cases who were treated as in- cases, the mean sanitarium stay was 27 hours in Desarda group and 47 hours in the Lichtenstein group($p<0.05$) (Table 2).

Forbearance to original anesthesia was good during surgery in,1 and,3 independently (NS). The mean duration of surgery was 42 twinkles for Lichtenstein and 52 twinkles for Desarda group($p<0.05$). Analysis of pain scores from day one to day 5 showed no significant difference (Table 3).

There was no prevalence of severe pain in any of the groups after three months. The rush rate was0.0 in the Desarda group, and0.28 in the Lichtenstein group(NS). Four cases in the Lichtenstein group neededre-exploration and mesh junking for the habitual suppuration. These cases had habitual suppuration, motivated by the rejection of the mesh which caused the mesh to be removed. therefore0.5 of cases in the Lichtenstein group needed a farther surgical intervention for either rush or sepsis which was significantly advanced than the Desarda group($p<0.05$). All the cases were operated by the same surgeon and his aides (Table 4).

The seroma was the complication that most constantly passed with 21 cases in both groups(1.5). 53(7.6) cases developedpost-operative complications in the Lichtenstein group and 25(3.8) cases showed complications in the Desarda group($p<0.05$) (Table 5).

cases returned to work within 8- 15 days in the Desarda group with a mean of,4 days while,2 cases returned to work within 8- 15 days with a mean of14.5 days in the Lichtenstein group, that's significant because in the Lichtenstein group the morbidity is advanced than in the Desarda group.($p<0.05$) (Table 6).

There was no case of habitual groin pain lasting for further than 6 months in either of the groups. Follow up was complete in over 97 at 1 time, 92 at 2 times, 89 at 3 times, 83 at 4 times, 80 at 5 times, 80 at 6 times, 76 at 7 times, 73 at 8 times, 72 at 9 times and 70 at 10 times with no significant difference between the two operation groups.

Discussion

Mesh form is now extensively used in the advanced world and is frequently appertained to as the gold standard despite the relative deficit of clinical trials comparing mesh with fissure form. The cost of surgery [7] and postoperative morbidity that affects the quality of life are important considerations in inguinal hernia surgery. There's no clear scientific substantiation to show that prosthetic mesh form is superior tonon-prosthetic form in this regard [8]. There are advantages and disadvantages associated with all types of open inguinal hernia repairs. The beingnon-prosthetic form (Bassini Shouldice) is criticized for causing pressure in the towel and the prosthetic mesh form is attributed to the known complications of a foreign body. Dr. Desarda sutures a strip not separated from the external oblique aponeurosis between the muscular bow and the inguinal ligament to give a strong and physiologically dynamic posterior wall [9]. This results in a pressure-free form without the use of any foreign body. By being simple to perform, it eliminates the disadvantage of the specialized difficulty observed with the ice form should.

Different studies have tried to give an answer on which of the being operations is the stylish for the form of inguinal hernia [11]. The collaboration of EU Hernia Trialist [12] conducted a methodical review of prospective randomized studies and the analysis of the results of these different studies. He showed that the duration of surgery was shorter in hernioplasty in six studies, longer in three and equal in the remaining six. In our group, there was a significant but slight increase in the operating time with the Desarda operation. Postoperative pain after prosthetic mesh form may be lower than after ice form in case of reduced pressure [13]. Our results have shown that there are no significant differences between the two groups for pain from the first to the fifth day after surgery. We set up no significant differences in the analgesic conditions between the ways. The overall morbidity was5.4, which is analogous to the rates described in other studies [7-12][14]. The morbidity rate was advanced after Lichtenstein form(46 cases,7.1 versus5.4.0 in the modified Disarda group). There were 8 mesh infections after surgery in the Lichtenstein group. Two cases needed partial excision of the mesh and in case, it was associated with rush. The modified Desarda fashion has a lower morbidity compared to hernioplasty of Discussion

Mesh form is now extensively used in the advanced world and is frequently appertained to as the gold standard despite the relative deficit of clinical trials comparing mesh with fissure form. The cost of surgery [7] and postoperative morbidity that affects the quality of life are important considerations in inguinal hernia surgery. There's no clear scientific substantiation to show that prosthetic mesh form is superior tonon-prosthetic form in this regard [8]. There are advantages and disadvantages associated with all types of open inguinal hernia repairs. The beingnon-prosthetic form(Bassini Shouldice) is criticized for causing pressure in the towel and the prosthetic mesh form is attributed to the known complications of a foreign body.Dr. Desarda sutures a strip not separated from the external oblique aponeurosis between the muscular bow and the inguinal ligament to give a strong and physiologically dynamic posterior wall [9]. This results in a pressure-free form without the use of any foreign body. By being simple to perform, it eliminates the disadvantage of the specialized difficulty observed with the ice form should.

Jacek Szopinski, etal.[15] stated in its randomized controlled trial(RCT) that the" Disarm fashion" has the implicit to increase the number of towel- grounded styles available to treat groin hernias. The most egregious suggestions for the use of the modified Disarda fashion include the use in youthful cases, in defiled surgical fields, in the presence of fiscal restrictions, or if a case doesn't agree with the use of the mesh ". Situma, etal. [16] compared the Desarda fashion with the modified Bassini fashion in their RCT and concluded that there's no difference in the short- term outgrowth between Desarda and the form of the modified Bassini inguinal hernia with respect to the resumption of normal gait and pain patterns. Manyilirah[17] concluded in his RCT that the efficacity of the Disarda fashion with respect to the early clinical results of hernia form is analogous to that of the Lichtenstein system. still, the driver in this study showed that Desarda form takes a significantly shorter operating time[19]. thus, the authors conclude that modified Desarda form for inguinal hernia gives the same or better results compared to Lichtenstein mesh form with a shorter sanitarium stay, briskly recovery and avoidance of related specific complications. with the mesh, while reducing the cost of surgery. It's technically simpler than Shouldice form and we recommend that surgeons come familiar with this fashion [20-23].

In published studies, the lately proposed modified Disarda fashion(combined approach of the Desarda and Modified Bassini fashion) is a tougher form for the terms of circular inguinal hernia of late rush in discrepancy to the Desarda alone procedure[24-27].

Conclusion

It was demonstrated that the lately proposed Modified Disarming fashion(combined approach of the Desarda and Modified Bassini fashion) is a stronger form for inguinal hernia in terms of late rush and that the use of morass in the Lichtenstein fashion results in lesser morbidity, rejections and reexplorations can be set up, which beget discomfort to our cases and their families.

References

1. Rutkow MI. Epidemiologic, economic and sociologic aspects of her¬1. nia surgery in the United States in the 1900s. Surg. North Am. 1998; 78: 941-51.

2. López Rodríguez PR, Danta Fundora LM, León Gonzáéz OC, Satorre Rocha JA, Garcia Castillo E. Herniorrafia Mohan P. Desarda Modificada en la reparación de hernia inguinal sin prótesis. Rev Cubana Cir. 2018; 57(4):

3. Porrero JL, Bonachía O, López-Buenadicha A, Sanjuanbenito A, chez-Cabezudo C. Reparación de la hernia inguinal primaria: Lichtenstein frente a Shouldice. Estudio prospectivo y aleatorizado sobre el dolor y los costos hospitalarios. Cir Esp. 2005; 77: 5-8.

4. Aragon FJ. Nuevas técnicas protésicas para el tratamiento de 4. la hernia inguinal. Ediciones Avila. 2001; 2001: 22-3.

5. Price DD, Bush FM, Long S, Harkins SW. A comparison of pain 5. measurement characteristics of mechanical visual analogue and sim¬ple numerical rating scales. Pain. 1994; 56: 217-26.

6. PorreroJL, Sanchez-Cabezudo C, Lee P. Study of unilateral 6. post-herniorrhaphy analgesia with local anaesthetic and monitored anaesthesia care. Ambulatory Surg. 1998; 6: 211-4.

7. Costos hospitalarios. Comunicación personal. Departamento económico. Hospital Enrique Cabrera. Enero. 2015.

8. Porrero JL. El cambio de la cirugía de la hernia en la última 8. década. En: Celdran A., de la Pinta JC, editores. Fundamentos de la hernioplastia sin tensión. Madrid: Fundación Jiménez Díaz. 1999: 9-11.

9. Neogi P, Capta V, Tripathi A. A Comparative study of outcome of Lichtenstein repair and Desarda tissue repair in patients of inguinal hernia. Int Surg J. 2017; 4(8): 2693-99.

10. Simons MP, Kifignen J, Van Geldere D, Hoitsma HFW, Obertop H. Role of the Shouldice technique in inguinal hernia repair: a systematic review of controlled trials and meta-analysis. Br J Surg. 1996; 83: 734-8.

11. McGillicuddy JE. Prospective randomized comparison of the 11. Shouldice and Lichtenstein hernia repair procedures. Arch Surg. 1998; 133: 974-8.

12. EU Hernia Trialist Collaboration. Mesh compared with non-mesh 12. methods of open groin hernia repair: systematic review of randomized controlled trials. Br J Surg. 2000; 87: 854-9.

13. Kingsnorth AN, Porter Chs, Bennett DH, Walker AJ, Hyland ME, et al. Lichtenstein patch or prefix plug and patch in inguinal hernia: a prospective double-blind randomized controlled trial of short-term outcome. Surgery. 2000; 127: 276-83.

14. Gilbert AI, Felton IL. Infection on inguinal hernia repair con¬14. sidering biomaterials and antibiotics. SurgGynecol. 1993; 117: 126-30.

15. Szopinski J, Dabrowiecki S, Pierscinski S, Marek. Jackowski, Maciej Jaworski, et al. Desarda Versus Lichtenstein Technique for Primary Inguinal Hernia Treatment: 3-Year Results of a Randomized Clinical Trial. World J Surg. 2012; 36: 984-92.

16. Situma SM, Kaggwa S, Masiira NM, Mutumba SK. Com. parison of Desarda versus Modified Bassini inguinal Hernia Repair: A Randomized controlled trial. East Cent. Afr. j. surg. 2009; 14: 70-6.

17. Manyilirah W, Kijjambu S, Upoki A, Kiryabwire J. Comparison 17. of non-mesh (Desarda) and mesh (Lichtenstein) methods for inguinal hernia repair among black African patients: a short-term double-blind RCT. Hernia. 2012; 16: 133-44.

18. Yousset T, El-Alfy K, Farid M. Randomized Clinical trial of pri¬18. mary inguinal hernia. Int J Surg. 2015; 20: 28-34.

19. Dieng M, Cisse M, Seek M, Diallo FK, Tourè AD, et al. Cure 19. des hernies inguinales simples de L' adulte pastie avec L' aponèurose du grand oblique: Technique de Desarda. e-mèmoires de L'Acadèmie Nationale de Chirurgie. 2012; 11: 69-74.

20. Jianxin Z, Dong JW, Zhiyong Z. Desarda inguinal hernia repair 20. and synthetic patch (open VS TEP) hernia repair comparative study. J Chinese Her and abdominal Surg. 2013; 7: 559-63.

21. Roduìguez PLR, Herrera PG, Gonzàlez OC, Alon C. so JR, Blanco HS. A Randomized Trial Comparing Lichtenstein repair and no mesh Desarda repair for inguinal Hernia: A Study of 1382 patients. East Cent Afr J Surg. 2013.

22. Stephen JN, Bruce T. Abdominal wall, hernia and hernia and umbilicus, 22. Bailey and Love's; Short practice of surgery; 26th edn. 2013: 957-8.

23. Faruquzzaman, Kumar Mazumder S, Mozammel Hossain S (2016) 24. Dinaipur Med Col J 2016; 9: 194-201.

24. Rodrìguez PR, Fundora LM, Gonzàlez OC, Rocha JA, Castillo E, Casanova A, et al. A Randomized Trial

Comparing Modified Desarda Repair No Mesh and Lichtenstein Repair for Inguinal Hernia (A study of 1113 Patients). Journal of Surgery. 2018; 2018(07).

25. Rodrìguez PR, Gonzàlez OC, Herrera P, Castillo E, Casanova A, Fundora LM. A Randomized Trial Comparing Desarda repair no Mesh and Lichtenstein repair for inguinal hernia (A study of 2225 patients). Biomedical journal of Scientific & Technical Research. 2018; 6(4).

26. Rodríguez Y, Martin JE, Soto R, Nuñez A, Pérez R. Caracterización de los pacientes con hernia inguinal operados por la técnica de Lichtenstein. Rev Cubana Cir. 2020; 59(4): e_1022.

27. Pachauri A, Kumar A. Outcome of Desarda repair incarcerated inguinal hernia experience in University Hospital. Int Surg J. 2019; Jun: 6(6): 2084-87.