

Comparison of non-mesh (Desarda) and mesh (Lichtenstein) methods for inguinal hernia repair among black African patients: a short-term double-blind RCT

Hernia

April 2012, Volume 16, Issue 2, pp 133–144

- W. Manyirah (1) Email author (manywilliam@gmail.com)
- S. Kijjambu (2)
- A. Upoki (1)
- J. Kiryabwire (2)

1. Mulago National Referral and Teaching Hospital, Mulago, Kampala, Uganda

2. Department of Surgery, School of Medicine, College of Health Sciences, Makerere University, Kampala, Uganda

Original Article

First Online:

08 October 2011

Received:

17 April 2011

Accepted:

18 September 2011

- 2 Shares
- 317 Downloads

Abstract

Purpose

This study compared the short-term outcomes of the non-mesh (Desarda) and mesh (Lichtenstein) methods of hernia repair among Black African patients, with regard to acute postoperative pain, day of return to normal gait, operative time and complications.

Methods

A total of 101 participants (51 in the Lichtenstein arm and 50 in the Desarda arm) were enrolled into this single centre double-blind randomised controlled trial. The outcome measures were evaluated at 1–2 h, 3, 7 and 14 days. The power of the study was set at 80%, CI at 95% and a two-sided $P < 0.05$ was considered statistically significant.

Results

There was no significant difference in the mean pain score (based on Visual Analogue Scale 0–10) between the study arms [3rd postoperative day (POD): 3.33 ± 1.75 for Lichtenstein and 2.73 ± 1.64 for Desarda, Effect size (CI): $0.59 (-0.088-1.272)$ and the scores on the 7th POD were 1.31 ± 1.19 for Lichtenstein and 1.31 ± 1.34 for Desarda, effect size (CI): $0.00 (-0.509-0.509)$]. No difference was observed in regard to mean day of resumption of normal gait [2.44 ± 1.62 for Lichtenstein and 2.06 ± 1.13 for Desarda, effect size (CI): $0.08 (-0.030-0.193)$]. A significant difference was recorded in regard to operative time, with the Desarda repair markedly shorter in duration [15.9 ± 3.52 min for Lichtenstein repair and 10.02 ± 2.93 min for Desarda's repair, effect size (CI): $5.92 (4.62-7.20)$, $P = 0.0001$]. Complication rates were similar in the two study arms.

Conclusions

The results of the study showed that the effectiveness of the Desarda technique with respect to influencing the early clinical outcomes of hernia repair is similar to that of the Lichtenstein method. However, the operator in this study showed that the Desarda repair requires significantly shorter operative time.

Keywords

Inguinal hernia Desarda Lichtenstein Mesh Non-mesh Short-term Outcome

References

1. Odula PO, Kakande I (2004) Groin hernia in Mulago Hospital, Kampala. East Central Afr J Surg 9(1):48–52
[Google Scholar](http://scholar.google.com/scholar_lookup?title=Groin%20hernia%20in%20Mulago%20Hospital%2C%20Kampala&author=PO.%20Odula&author=I.%20Kakande&journal=East%20Central%20Afr%20J%20Surg&volume=9&issue=1&pages=48-52&publication_year=2004) (http://scholar.google.com/scholar_lookup?title=Groin%20hernia%20in%20Mulago%20Hospital%2C%20Kampala&author=PO.%20Odula&author=I.%20Kakande&journal=East%20Central%20Afr%20J%20Surg&volume=9&issue=1&pages=48-52&publication_year=2004)
2. Ostrow B (2005) What is the most appropriate repair for groin hernias in Africa? Surgery in Africa—Monthly Review. August issue
[Google Scholar](https://scholar.google.com/scholar?q=Ostrow%20B%20%282005%29%20What%20is%20the%20most%20appropriate%20repair%20for%20groin%20hernias%20in%20Africa%3F%20Surgery%20in%20Africa%2E%80%94Monthly%20Review.%20August%20issue) (<https://scholar.google.com/scholar?q=Ostrow%20B%20%282005%29%20What%20is%20the%20most%20appropriate%20repair%20for%20groin%20hernias%20in%20Africa%3F%20Surgery%20in%20Africa%2E%80%94Monthly%20Review.%20August%20issue>)

3. Desarda MP (2006) Physiological repair of inguinal hernia: a new technique (study of 860 patients). *Hernia* 10:143–146
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=16341627)
CrossRef (<https://doi.org/10.1007/s10029-005-0039-1>)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Physiological%2orepair%20of%20inguinal%20hernia%3A%20a%20new%20otechnique%20%28study%20of%20860%20patients%29&author=MP.%20Desarda&journal=Hernia&volume=10&pages=143-146&publication_year=2006)
4. Desarda M, Ghosh A (2006) Comparative study of open mesh repair and Desarda's non-mesh repair in a district hospital in India. *East Central Afr J Surg* 11(2):28–34
Google Scholar (http://scholar.google.com/scholar_lookup?title=Comparative%20study%20of%20open%20mesh%20repair%20and%20Desarda%E2%80%99s%20non-mesh%20repair%20in%20a%20district%20hospital%20in%20India&author=M.%20Desarda&author=A.%20Ghosh&journal=East%20Central%20Afr%20J%20Surg&volume=11&issue=2&pages=28-34&publication_year=2006)
5. Desarda MP (2003) Surgical physiology of inguinal hernia repair—a study of 200 cases. *BMC Surgery* 3: 2. doi:10.1186/1471-2482-3-2 (<https://doi.org/10.1186/1471-2482-3-2>)
6. Situma SM, Kaggwa S, Masiira NM, Katumba SK (2009) Comparison of Desarda versus modified Bassini inguinal hernia repair: a randomized controlled trial. *East Central Afr J Surg* 14(2):70–76
Google Scholar (http://scholar.google.com/scholar_lookup?title=Comparison%20of%20Desarda%20versus%20modified%20Bassini%20inguinal%20hernia%20repair%3A%20a%20randomized%20controlled%20trial&author=SM.%20Situma&author=S.%20Kaggwa&author=NM.%20Masiira&author=SK.%20Katumba&journal=East%20Central%20Afr%20J%20Surg&volume=14&issue=2&pages=70-76&publication_year=2009)
7. Newcombe RG (2001) Reporting of clinical trials in the JO—the consort guidelines. *Br J Orthod* 27(1):69–70
CrossRef (<https://doi.org/10.1093/ortho/27.1.69>)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Reporting%20of%20clinical%20trials%20in%20the%20JO%E2%80%94the%20consort%20guidelines&author=RG.%20Newcombe&journal=Br%20J%20Orthod&volume=27&issue=1&pages=69-70&publication_year=2001)
8. Lau H, Lee F (2001) Determinant factors of pain after ambulatory inguinal herniorrhaphy: a multi-variate analysis. *Hernia* 5:17–20
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=11387717)
CrossRef (<https://doi.org/10.1007/BF01576159>)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Determinant%20factors%20of%20pain%20after%20ambulatory%20inguinal%20herniorrhaphy%3A%20a%20multi-variate%20analysis&author=H.%20Lau&author=F.%20Lee&journal=Hernia&volume=5&pages=17-20&publication_year=2001)
9. Kehlet H (2008) Chronic pain after groin hernia repair. *Br J Surg* 95(2):135–136

PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=18196556)
CrossRef (<https://doi.org/10.1002/bjs.6111>)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Chronic%2Opain%20after%20groin%20hernia%20repair&author=H.%20Kehlet&journal=Br%20J%20Surg&volume=95&issue=2&pages=135-136&publication_year=2008)

10. Bringman S, Wollert S, Sterberg JÖ, Smedberg S, Granlund H, Heikkinen TJ (2006) Three-year results of a randomized clinical trial of lightweight or standard polypropylene mesh in Lichtenstein repair of primary inguinal hernia. *Br J Surg* 93:1056–1059
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=16862613)
CrossRef (<https://doi.org/10.1002/bjs.5403>)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Three-year%20results%20of%20a%20randomized%20clinical%20trial%20of%20lightweight%20or%20standard%20polypropylene%20mesh%20in%20Lichtenstein%20repair%20of%20primary%20inguinal%20hernia&author=S.%20Bringman&author=S.%20Wollert&author=J%20Sterberg&author=S.%20Smedberg&author=H.%20Granlund&author=TJ.%20Heikkinen&journal=Br%20J%20Surg&volume=93&pages=1056-1059&publication_year=2006)
11. Samir SA, Sasi Yallalampalli BA, Ahmad MS, Charles FB, Albo D, Berger DH (2007) Improved outcomes with the prolene hernia system mesh compared with the time-honored Lichtenstein onlay mesh for inguinal hernia repair. *The Am J Surg* 193:697–701
CrossRef (<https://doi.org/10.1016/j.amjsurg.2006.08.087>)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Improved%20outcomes%20with%20the%20prolene%20hernia%20system%20mesh%20compared%20with%20the%20time-honored%20Lichtenstein%20onlay%20mesh%20for%20inguinal%20hernia%20repair&author=SA.%20Samir&author=BA.%20Sasi%20Yallalampalli&author=MS.%20Ahmad&author=FB.%20Charles&author=D.%20Albo&author=DH.%20Berger&journal=The%20Am%20J%20Surg&volume=193&pages=697-701&publication_year=2007)

Copyright information

© Springer-Verlag 2011

About this article

Cite this article as:

Manyilirah, W., Kijjambu, S., Upoki, A. et al. Hernia (2012) 16: 133. <https://doi.org/10.1007/s10029-011-0883-0>

- DOI (Digital Object Identifier) <https://doi.org/10.1007/s10029-011-0883-0>
- Publisher Name Springer-Verlag

- Print ISSN 1265-4906
- Online ISSN 1248-9204
- [About this journal](#)
- [Reprints and Permissions](#)



- Published in cooperation with
[European Hernia Society \(EHS\)](#)



- Published in cooperation with
[American Hernia Society \(AHS\)](#)

Personalised recommendations

1. [A comparative study of Desarda's technique with Lichtenstein mesh repair in treatment of inguinal hernia: A prospective cohort study](#)
Gedam, B.S.... Akhtar, Murtaza
International Journal of Surgery (2017)
2. [Comparison of Lichtenstein inguinal hernia repair with the tension-free Desarda technique: a clinical audit and review of the literature](#)
Zulu, H. G.... Singh, B.
Tropical Doctor (2016)
3. [Prolene Hernia System compared with Lichtenstein patch: a randomised double blind study of short-term and medium-term outcomes in primary inguinal hernia](#)
Kingsnorth, A.... Robertson, G.
Hernia (2002)

Want recommendations via email? [Sign up now](#)

Powered by: **Recommended** 

SPRINGER NATURE

© 2017 Springer International Publishing AG. Part of [Springer Nature](#).

Not logged in Not affiliated 219.91.153.34