“Dr. Desarda’s Repair”

For

Inguinal Hernia

BASED ON THE NEW CONCEPTS OF
PHYSIOLOGY OF ING. CANAL THAT
PREVENT HERNIA FORMATION
PROF. Dr. Desarda M. P.
M.S. (GEN. SURG.); FICS (USA); FICA (USA)
HERNIALOGIST & GENERAL SURGEON

1. IN CHARGE, HERNIA CENTRE, POONA HOSPITAL & RESEARCH CENTRE
2. PROF. & HEAD OF DEPT OF SURGERY POONA HOSPITAL & RESEARCH CENTRE
3. EX-PROFESSOR OF SURGERY AT KAMALA NEHRU GENERAL HOSPITAL
4. EX-ASSO. PROFESSOR OF SURGERY AT BHARATI VIDYAPITH MED. COLLEGE
President: Royal College of Surgeons
Sir Cecil Wakely said in 1948 that
"A surgeon can do more for the community by operating on hernia cases and seeing that his recurrence rate is low than he can by operating on cases of malignant disease"
He said so because hernia is the commonest disease in the community with many post-repair complications
Unacceptable recurrence rate was the major hurdle of various surgical techniques described in the past. But the Introduction of Lichtenstein mesh, mesh plugs, plug & mesh, PHS & endoscopes have all addressed well to the problems of recurrences, pain, infection & recovery. But these problems are not yet completely over.
Recurrence is reduced but it is still there

Studies with longer follow up have shown 7-8% of recurrence rate in USA in spite of using a standard & costly mesh prostheses.

Mesh plug—

Pre-cut mesh
1) Pre-cut mesh is not at all used by all and some times a Bigger size mesh is cut & used to repair bilateral hernias. **Cutting a mesh will reduce its strength.**

2) Mesh shrinkage is more with low quality mesh used by some to save on the cost - **Result is more recurrences**

3) Post. Wall is not protected for 2-3 years till fibrous tissue is laid down and gains enough strength.

4) Loose suturing or too tight suturing of mesh invites more recurrences.
Infection is reduced but it is still there

1) The bad part of this infection is that it does not respond to simple drainage procedures and we have to do a much larger surgery to take out the infected mesh completely.

2) Pus discharge, sinus formations, pain & repeated visits to doctors for months together and last advise of repeat surgery makes turmoil in the life of such patients and their family members.
“Post hernia repair pain syndrome is a major problem”

1) Deposition of fibrous tissue entraps nerves, vessels, vas difference and the surrounding muscles.

2) 28-42% of patients in USA had to take medical treatment for pain & some of them even needs re-exploration.

3) Specialist doctors and clinics are established in USA to treat pain or to take out the mesh. This itself indicates the severity of those problems.
I had Two mesh replacements: Such emails are pouring

Aubrey Sonsini Fri 12/19/2008 4:38 AM [aubrey777sonsini@gmail.com]

I had some meshes taken out for inguinal hernias because the meshes folded up, didn't stay put etc. or balled up. My last repair was to take out a dual layer mesh which the top layer kept retracting. I was in a lot of pain. After this mesh was removed, the doctor did a laparoscopic mesh repair. (TAPP). After about 10 months, I started feeling some pulling sensations which didn't hurt. Then one day, I felt a sharp pain which lasted for a few seconds but was very intense. The doctor went back in recently and was able to cut the illionuinal nerve laparoscopically. He tucked this into muscle. He couldn't find or did not see the other 2 main nerves. Anyway, he said the mesh looked intact and could see no hernias. But I wonder if the mesh migrated? The pain started giving me very light intermittent testicle pain to that side. Could the mesh have migrated and then one of the staples pressing on a nerve? Are you able to take this mesh out and do the repair you do? Thanks
RESULTING LOSSES WITH TODAY’S PROBLEMS ARE

1] LOSSES DUE TO RECURRENTENCES

2] LOSSES DUE TO RE-EXPLORATION REQUIRED FOR COMPLICATIONS OR PAIN

3] LOSSES DUE TO LONGER TIME REQUIRED TO RESUME ‘NORMAL ROUTINE WORK'
All above factors result in a loss of 7-8 million Pounds and 295 lost years of productivity every year in a small country like UK including the cost of mesh.

No organized data is available for India. 1% incidence and just 2% recurrence comes to a huge loss of 250 millions & 10000 lost years of productivity every year for a large country like India.
To reduce those recurring losses

Develop an operation technique which is

1. Simple & safe to do & learn by the resident surgeon also with good results
2. Does not use foreign body in any form
3. Does not use weak muscles & fascia
4. Early ambulation without much pain
5. Patient goes home in a day
6. Pt. is back to his work within a week
7. No major complications
8. NO RECURRENCE
“Recurrence free, no mesh-open inguinal hernia repair with continuous absorbable suture was a dream of every surgeon for a long time”
To achieve this let us understand the CONCEPTS OF ING. CANAL PHYSIOLOGY THAT PREVENT HERNIA FORMATION

**Conventional Concepts**
- Strength of the transversalis fascia
- Obliquity of Inguinal canal
- Shutter mechanism

**My Concepts**
- Aponeurotic extensions make post wall strong
- Musculo-aponeurotic structures play role by:
  - S - Shielding action + C - Compression action + S - Squeezing action (SCS Action)
CONVENTIONAL CONCEPTS

- Some questions of the physiology or factors that prevent hernia formation still exist.

1] “Obliquity of the inguinal canal” is not a perfect description since the spermatic cord is lying throughout its course on the trans. Fascia alone. It does not pierce any muscle.

2] Repeated acts of crying & increased intra abd. pressure do not increase the incidence of hernia in new born babies in spite of the almost absent "obliquity of the inguinal canal" or "shutter mechanism of the canal".

3] Every individual with a high arch or a patent processus vaginalis does not develop hernia.
Those concepts that are said to prevent herniation are not at all restored in the traditional techniques of inguinal hernia repair and yet 70–98% of pts. are cured. **SO, THESE ARE NOT REAL FACTORS**

Then what are real factors that play a real role in prevention of hernia in normal individuals? OR recurrence after surgery?

The role played by the Aponeurotic Extensions from the Transversus Abdominis Aponeurotic Arch in the posterior wall is important & that is not emphasized in the literature at all.
Myo-Pectineal Orifice- Post. Wall - Anterior view

- Pubic Ramus & Pectineal ligament
- Inguinal ligament
- Weak Posterior wall
- No aponeurosis
- Lower leaf of EOA
Transversus Abdominis Aponeurotic Arch sending Aponeurotic Extensions
Scanty Aponeurotic Extensions seen
Fig. 2.6. Variation in the extent of the aponeurosis of transversus abdominis in relation to the inferior epigastric vessels and the lateral edge of rectus abdominis (percentages are approximate) (redrawn from reference 7 by permission of Surgery, Gynecology and Obstetrics, now known as the Journal of the American College of Surgeons).
MUSCULO-APONUROTIC STRUCTURES

- 47% of individuals having full cover of Apo. Ext. will never develop hernia in their life time
- If Apo. Extensions are absent or deficient (seen in 53% of individuals), then the trans. fascia alone can not resist the internal blows for a long period and herniation occurs
- But all 53% individuals with absent or deficient Apo. Ext. do not develop hernia because of the additional role played by the strong musculo-aponeurotic structures around the ing. canal
- ‘Shielding-Compression-Squeezing’ action of those musculo-apo. structures around the canal prevent herniation in such people with weak post. Wall (Article published in BMC Surg 03)
The posterior inguinal wall is composed of two layers. 1) The transversalis fascia & 2) aponeurotic extensions from the transversus abdominis aponeurotic arch.

The condensed transversalis fascia and aponeurotic extensions both give mechanical strength to the posterior inguinal wall to resist internal abdominal blows and prevent hernia formation.

The strength of the posterior inguinal wall is directly related to the number of aponeurotic fibers it contains & not to the strength of the tr. Fascia alone.
Thus you will find that trans. Fascia hardly plays any role in prevention of hernia formation except at places where it is strengthened by additional fibrous condensation called as Iliopubic tract. Elsewhere Trans. Fascia is papery thin just as endo-abdominal fascia.

Proper cover of Apo. Ext. over this trans. Fascia gives real protection.

And you will never find them in your hernia patients while operating.
POSTERIOR WALL AT REST

Post.ing.wall without tension
Secondly, the posterior inguinal wall is kept physiologically active and dynamic due to those accompanying aponeurotic extensions & muscle contractions.

Muscular contraction of the transversus abdominis pulls this posterior wall and the aponeurotic extensions upward and laterally creating tension in it to prevent hernia formation (Physiologically dynamic action of the post. wall)
POSTERIOR WALL IN ACTION

Anterior posterior compression action

Cremaster muscle squeezing action

Dense cremast. fascia Binding action

Muscle contraction

Raised intra-abd. pressure

Post.ing.wall under tension (Dynamic shielding action)
POSTERIOR WALL (cont.)

- This tension in the posterior wall is created in gradation as per the force of contraction of the muscles. And the force of contraction of the muscle changes as per the force of the internal abdominal blow. This is important physiological phenomenon. The posterior inguinal wall should be described as an independent entity, playing an important role in the prevention of hernia formation, not only because of its mechanical strength but also because of its dynamic nature.

- Such a physiologically dynamic & strong posterior wall is needed to be constructed to give 100% cure from the ing. hernias.
If Apo. Ext. are absent or deficient AND muscles used for repair are also weak then recurrence is sure to take place Failures in today's Bassini/Shouldice repairs are seen in only those cases where muscles used are weak

“Therefore, any new approach to inguinal hernia repair must consider replacing Apo. element in the post. wall to make it strong and also give additional muscle strength to the weakened muscle arch to keep it physiologically dynamic”
SUTURES

- Interrupted sutures with non-absorbable suture material has been a thumb rule in any hernia repair till today.
- Continuous suturing & that too with absorbable suture material was never even imagined by any body till today.
NO MESH OPEN INGUINAL HERNIA REPAIR WITH CONTINUOUS ABSORBABLE SUTURES
Mechanism of action that prevents recurrence

Sutured two leaves of EOA in front of cord

Strip going behind the cord

Cord

Strip of EOA behind the cord

(INGUINAL CANAL AT REST)
Mechanism of action that prevents recurrence

Sutured two leaves of EOA in front of cord

Strip going behind the cord

Contraction

Strip of EOA behind the cord

(INGUINAL CANAL IN ACTION)
Star Points of Technique

- It is a Herniorrhaphy operation / plasty
- Locally available live & active tissue
- EOA is large enough to get strip easily
- You get physio. dynamic post. wall
- No difficult dissection is required
- No foreign body or special material
- Satisfies all criteria of modern Hernia surgery like day surgery, low learning curve, early ambulation, recovery in a week, minimal pain, no major complications and **ZERO RECURRENCE**
OUR STUDY

- We operated on 1500 pts. During last 18 years with median follow up of 7 yrs
- Continuous Absorbable sutures were used in more than 400 pts during last 5 years.
- Median follow up period was 3.5 years
- 98.5% patients went home within 24 hrs.
- 95% pts started routine work in 3-4 days. Pts. could drive car and go to office.
- Pt. can bend, squat, climb up a staircase, carry luggage & travel. Pts from abroad go back to their country on 3rd day.
- No recurrence & minor complications .1%
STATUS TODAY

- Today, this operation is being followed in many countries like Poland, Cuba, Ukraine, Albania, Libya, Iran, Brazil, Afghanistan, Russia, Korea, Yugoslavia, Uganda, Abu Dhabi and many other countries.
- Surgeons from those countries have presented their papers on this technique showing same results & no recurrence.
- Web site [http://herniasurgery.tripod.com](http://herniasurgery.tripod.com) and [http://www.geocities.com/desarda](http://www.geocities.com/desarda) have been visited by more than 2-3 lac of people till today.
“RECURRENT FREE INC. HERNIA REPAIR WITH CONTINUOUS ABSORBABLE SUTURES LEAVING NO FOREIGN BODY IN SIDE THE PATIENT IS NO LONGER A DREAM BUT MAY BECOME A REALITY IN FUTURE”
REFERENCES


10. Webb k, Scott NW, GO PMNYH, Ross S, Grant AM on behalf of the EU Hernia Trialists Collaboration. Laparoscopic techniques versus open techniques for inguinal hernia repair (Cochrane Rebiew) In: The Cochrane Library, Issue 4, 2000, Oxford Update Software. 33
From: Jan Guthrie [j.guthrie@thehealthresource.com]
Sent: Tuesday, January 04, 2005 7:21 AM
To: desarda@lycos.co.uk
Subject: physicians in North America utilizing your new procedure

Dr. Desarda,

Congratulations on your revolutionary breakthrough in inguinal hernia repair. Have you trained any physicians in North America in this procedure? I have a patient who would very much like to have your procedure to correct his inguinal hernia.

Thank you,

Jan Guthrie
Researcher
The Health Resource, Inc.
www.thehealthresource.com
EMAILS ARE POURING FROM FOREIGN COUNTRIES

From: Wasilij Wlasow vvlasov@mail.ru
Date: Monday, December 05, 2005 9:29 AM
To: Prof. Dr. Desarda MP desarda@hotmail.com
Subject: Letter for Desarda

Dear Dr. M.P. Desarda

Hello. My name is Sviatoslav. I was translator for you in Biskupin. **I was very glad to see you. It was my dream to speak with you, real Desarda. And it came true.** Thanks for your words about me. I will try to learn English better to speak with you in a future. We have many interesting photographs with you from Poland. And I have a little question for you. Would you like to find and send me E-mail few materials from literature about methods of treatment of femoral hernia in India. Because it necessary for my scientist work and is very difficult for me to find it in our country.

We remember our visit to Poland & our acquaintance. We just successfully had used your method of hernioplasty in 9 cases of operation on 8 patients.

We invite you to take part in the III-d Ukrainian Scientist-Practical Conference “Modern methods of surgical treatment of abdominal hernia”, which will take place on 14-15 April 2006 in Kyiv city. And send you announcement about conference.

Ministry of Public of Ukraine
Ukrainian Association of Hernia Surgeons
National Medical University by name O.O. Bogomolets
Centre of surgery of abdominal hernia

Yours truly
V. Vlasov
29th International Congress of the European Hernia Society. Athens, Greece, 6-9 V 2007

Власний досвід в лікуванні пахвинних гриж за методою Desarda

Uniwersytet Mikołaja Kopernika w Toruniu
Collegium Medicum im. L. Rydygiera w Bydgoszczy
Katedra i Klinika Chirurgii Ogólnej i Endokrynologicznej
OPERATIVE WORKSHOP
AT RAMOWY PROGRAM KONFERENCJI
Czwartek 16 listopada 2006

12:00 - 17:00 Workshop: operacje przepuklin pachwinowych (przekaz z sali operacyjnej do hotelu Gromada):

1. Metoda Desardy (bez wszczepu syntetycznego) - S. Dąbrowiecki
2. Metoda Yalentiego PAD - G. Yalenti (Włochy); A. Opertowski
3. Laparoskopowa naprawa 1POM - S. Czudek (Czechy)
4. Metoda Lichtensteina (częściowo wchłanolna siatka Ultrapro) - A. Matyja
5. Absorbable Pług Gore (wchłanolny korek) - M. Śmietański
6. Prolene Hernia System (siatka przestrzenna prolenowa) - P. Ryli
7. Ultrapro Hernia System - (częściowo wchłanolna siatka przestrzenna) - J. Stanisławek
Speakers from different countries

„Czy operacja Desardy jest alternatywą dla metod z siatką syntetyczną?”

- prowadzący: S. Dąbrowiecki, J. Szopiński, V. Ylasow
- V.V. Vląsov „Our experience of herniorrhaphy by M. Desarda in inguinal hernia repair”.
- K. Kometą „Pierwsze doświadczenia w naprawie przepuklin pachwinowych metodą Desardy”.
- J. Orzechowski „Wczesne wyniki operacyjnego leczenia przepukliny pachwinowej metodą Desardy”.
- J. Szopiński „Zaproszenie do wieloośrodkowego badania klinicznego (RCTj nad porównaniem wyników leczenia przepuklin pachwinowych metodami: Desardy i Lichtensteina z zastosowaniem zaawansowanego oprogramowania internetowego”.
2. Oddział Chirurgii Ogólnej z Pododdziałem Ortopedycznym
Ordynator – Lek. med. Władysław Sędek
Oddział liczy - 47 łóżek. Dzięki nowoczesnej bazie diagnostycznej i wyszkolonej kadrze medycznej wachlarz procedur chirurgicznych wykonywanych w Oddziale jest bardzo szeroki. Wykonuje się praktycznie wszystkie operacje w obrębie jamy brzusznej (z wyjątkiem zabiegów naczyniowych), łącznie z wielonarządowymi, resekcjami z powodów onkologicznych (np. operacja Whipple'a). Od 5 lat Oddział posiada zestaw do zabiegów laparoskopowych, który stosuje się do małoinwazyjnych operacji usunięcia pęcherzyka żółciowego z powodu kamicy lub do laparoskopowych operacji z powodu żylaków powrózka nasiennego. Przepukliny operuje się najnowocześniejszymi metodami beznapięciowymi (metoda Shouldice'a i Desarda), również z wykorzystaniem siatek polipropylenowych (metoda Lichtensteina). Zastosowanie tych metod znacząco obniża odsetek nawrotów i podnosi komfort pacjenta w okresie pooperacyjnym. W Oddziale wykonuje się również operacje
A preferable method of inguinal hernia repair nowadays is the use of mesh graft in tension-free techniques. In the past few years a new technique developed by a surgeon from India, Mohan P. Desarda, was introduced. This method is based on the use of a strip of the external oblique aponeurosis which strengthens the posterior wall of the inguinal canal. Aim: To evaluate the initial results of Desarda’s inguinal hernia repair six months after the surgery. Material and methods: A group of 17 patients was analyzed. 15 male and 2 female patients
ORIGINAL ARTICLE
imie i nazwisko osoby prezentującej: Waldemar Kwiecień
stopień naukowy: lekarz medycyny
miejsce pracy: Oddział Chirurgiczny Szpitala ZOZ w Jędrzejowie (woj. świętokrzyskie)
e-mail: w-kwiecien@o2.pl

 autorzy zgłaszanej publikacji: Waldemar Kwiecień Leszek Kania, Jerzy Prawda

tytuł zgłaszanej publikacji: Wyniki leczenia przepuklin sposobem Desardy u 47 operowanych

Informacja o wielośrodkowym badaniu klinicznym Desarda vs Lichtenstein

- imię i nazwisko osoby prezentującej: Waldemar Kwiecień
- stopień naukowy: lekarz medycyny
- miejsce pracy: Oddział Chirurgiczny Szpitala ZOZ w Jędrzejowie (woj. świętokrzyskie)
- e-mail: w-kwiecien@o2.pl
- Published in 2005
Operacja Desardy jak możliwa metoda z wyboru w leczeniu przepuklin pachwiny.

- imię i nazwisko osoby prezentującej: Orest Lerchuk
  stopień naukowy: lek.med.
  miejsce pracy: Szpital Wojewódzki we Lwowie. Klinika Chirurgii Ogólnej i Endokrynologicznej we Lwowie.
  e-mail: Lorest@mail.lviv.ua

- autorzy zgłoszonej publikacji:
  Pawlowskyj Mychajlo, Lerchuc Orest, Markewich Yuri, Zaleskyj Igor

- Study of 43 patients
Porównanie kosztów wykonania operacji przepukliny pachwiny metodą Desarda i Lichtensteina

Piotr Cisowski stopień naukowy: Dr n. med.
miejsce pracy: SU Bydgoszcz
ulica: C. Skłodowskiej 9
miejscowość: Bydgoszcz
e-mail: p.cisowski@vp.pl

Porównano koszty wykonania zabiegu jednostronnej przepukliny pachwinowej metodą Dessarda i Lichtensteina na podstawie dostępnych w szpitalu zasad rozdziału kosztów opartych o system ICD 9 oraz na podstawie kosztów rzeczywistych. Dokonano również analizy zmian stawek płaconych przez monopolistycznego płatnika od roku 1999 w województwie kujawsko-pomorskim za operacje przepuklin.
PRESENTATION IN CUBA
Organizan Sociedad Cubana de Cirugía Palacio de Convenciones

- 10.40-10.50 AM VIERNES 10 DE NOVIEMBRE DEL 2006
- TÉCNICA MOHAN DESARDA. UN NUEVO ENFOQUE EN LA REPARACIÓN DE LA HERNIA INGUINAL.
- DRS. PEDRO R. LÓPEZ RODRÍGUEZ, FELIPE R. LÓPEZ DELGADO, DR.
- HOSPITAL GENERAL DOCENTE “ENRIQUE CABRERA”. CUBA
Operacja sposobem Desardy
Przygotowaliśmy pokazową operację przepukliny metodą Desardy. Film nagrany w Klinice Chirurgii Ogólnej i Endokrynologicznej AM w Bydgoszczy trwa około 20 min, jest zaopatrzony w komentarz i szczegółowe wyjaśnienie metody. Dostępny w postaci płyty CD. Opłatę w wysokości 30 zł - należy wpłacić na konto:

z dopiskiem "płyta Desardy"

Zamówienie i informację o wpłacie proszę przesłać na adres e-mail: j_szopinski@hernia.pl
Operacja przepukliny pokazowa
M.P. Desarda  15 października 2005

09.00 Transmisja z sali operacyjnej M. P. Desarda

10.00 New concepts of inguinal hernia and its repair in perspective with to days trend M. P. Desarda

11.00 Wyniki leczenia przepuklin sposobem Desardy u 47 operowanych W. Kwiecień

11.10 Doświadczenia własne w leczeniu przepuklin pachwiny met. Desardy. Kapala

11.20 Operacja Desardy jako możliwa metoda wyboru w leczeniu przepuklin pachwiny. O. Lerchuk
THANK YOU