

Arthro-Endoscopic Extra Articular Lateral Retinacular Release.

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History of Arthroscopy

= Vaginal Speculi in Ancient Hebrew literature.

= Proctoscopes in the ruins of Pompeii.

Operative arthroscopy , 1996.

Two Tube device for Cystoscopy.

- * One for the eye.**
- * One for light source by candle.**

Botzini : 1806, Vienna.

Milestone of the Science of Endoscopy.

“Incandescent lamp”.

Edison: 1880

Prof. Kenji Takagi = Japan.

1918: Cystoscopic examination of knee in Cadaver.

1931: Knee arthroscopy instruments.

1936: Color pictures and movie film of knee joint.

World War II

1939 - 1945

Dr. Masaki Watanabe: **Japan.**

1951: No. 13 Arthroscope.

1958: No. 21 First truly arthroscope.

- * Magnification lens: 102 degree.

- * Ability to focus.

1957: Atlas of arthroscopy.

1962: 1st arthroscopic meniscectomy.

1921: Eugen Bircher (Switzerland).

* *Laparoscopy of knee joint (CO).*

* *Meniscal pathology article.*

1925: Kreuscher (USA).

Knee arthroscopy & meniscal lesions article.

1931: Michael Burman (USA).

Many articles on arthroscopy of Cadaveric Joints.

1937 = Sommer }

1938= Vaubel }

GERMANY

***1955 : Hurter * 1956 : Imbert**

→ France.

***1973: Harold Eikerlaar**

→ Holland.

“Thesis on arthroscopy”.

Watanabe

R. Jackson

1965

Jack McGinty

1967

Richard O'Connor

1969

David Dandy

1974

Arthroscopy of the knee

“Jackson, Dandy 1976”

1974: International Arthroscopy Association.

1981: Arthroscopy Association of North America.

1983: ESSKA.

1995: ISAKOS.

Early Pioneers of Operative Arthroscopy.

- **Richard O'Connor** : **1933 - 1980.**

- **Robert Metcalf** : **1936 - 1991.**

Jim Guhl.

- **George Schonholtz.**
- **Dinesh Patel.**

Galen (129 - 200 AD).

**Patellar instability and
treatment using bandages.**

Haxton 1945

**More written about the
Patella relative to its size.**

Merchant and Mercer 1974

Open Lateral Retinacular Release.

McGinty and McCarthy 1975

Arthroscopic lateral release.

Radin: 1979 = Clin. Orth.

**Few Orthopedic Surgeons
are happy with their
treatment of patients with
CMP.**

Hughston Etal 1968

708 patient with knee pain.

- * 69% Passive lateral Patellar hypermobility.**
- * Tight lateral retinaculum.**

Lateral Patellar Compression Syndrome (LPCS)

“Ficat 1975”.

Patellar pain with stable Patella in the sulcus without subluxation but with functional lateralization often anatomically predominant lateral facet.

Mechanism of Pain in LPCS

= **Fulkerson : 1985**

Entrapment Neuropathy - perineural fibrosis.

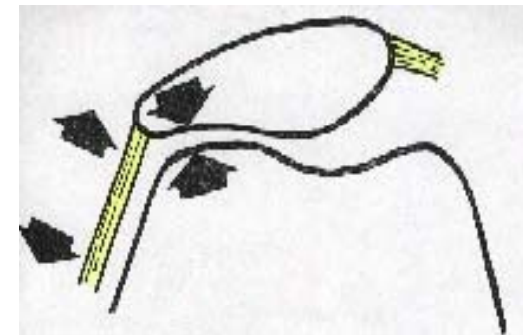
= **Dandy : 1986**

*** Excessive loading of articular cartilage.**

*** Excessive tension in the joint capsule.**

LPCS = Clinical

- Pain along lateral margin of the patella.
- Patellofemoral tenderness.
- Tight patella with little mobility medially.



Hemoarthrosis after Arthroscopic Release

- **Mullhollan** : 1982 : **10 - 85%**.
- **Vialle Etal** : 1997 : **10 - 18%**.
- **Schneider Etal** : 1998 : **42%**.

Vialle Etal 1997

Source of Hemoarthrosis

- = Lateral sup. genicular A** always cut.
- = Lateral inf.** “ “ 60%”.
- = Venous bleeding.**

Indications for lateral release

- 1. Patellar pain with tight retinaculum.**
- 2. Patellar tilt, Subluxation, Maltracking.**
- 3. LPCS.**
- 4. Minimal lateral patellar O.A.**
- 5. Idiopathic CMP.**

Idiopathic Patellofemoral pain

***ELPS**

Ficat etal. 1977.

***Patellar compression, S. Larson etal 1978.**

***Patellofemoral Stress, S.O'Neill etal 1992.**

CONTRAINDICATIONS

= Marked Patellofemoral O.A.

= Genu varum.

= Recurrent Patellar dislocation.

Conservative Treatment

Physiotherapy for all patients.

Success = > 80%.

= Kettel Kamp 1981.

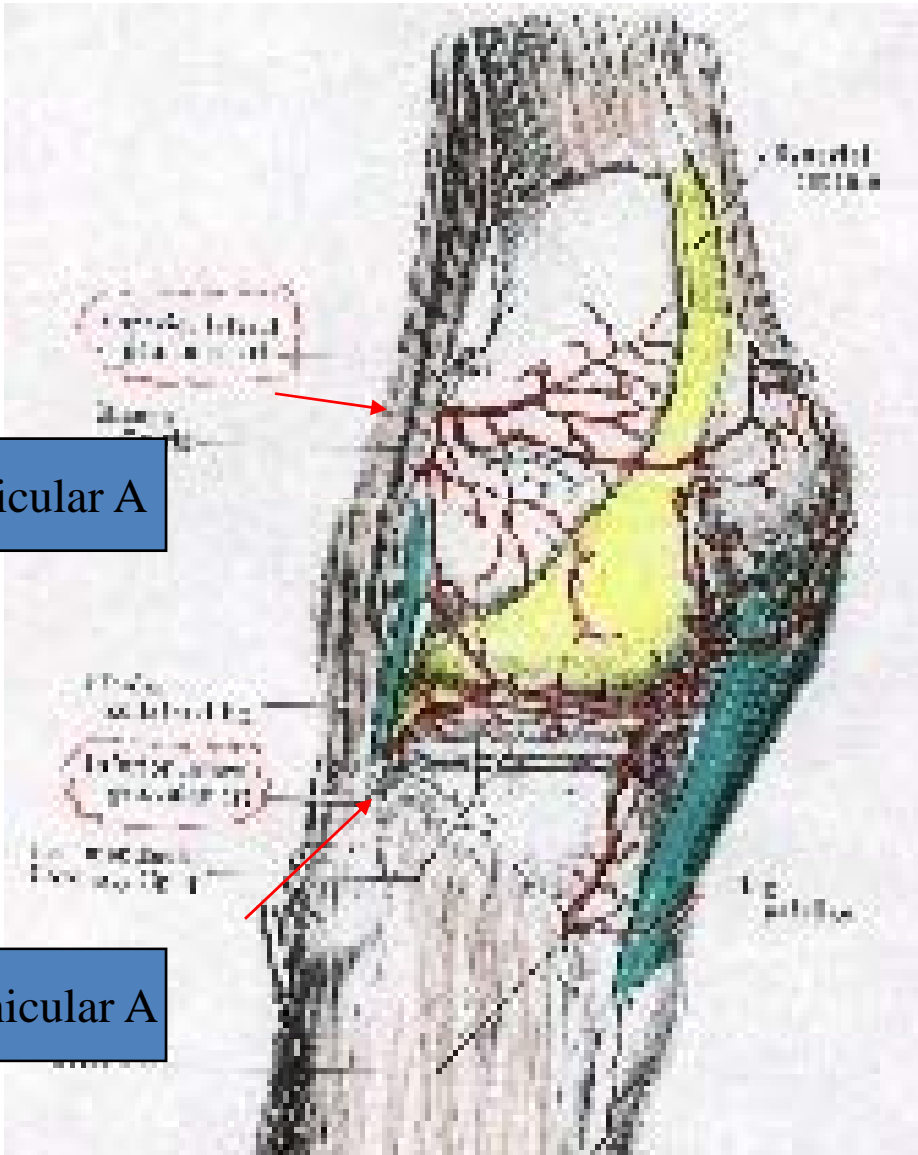
= Insall 1982.

LPCS : Radiological

- = Increase lateral facet density.**
- = Medial facet Osteopenia.**
- = Hypoplasia of lat. facet.**
- = Lateral Osteophyte.**

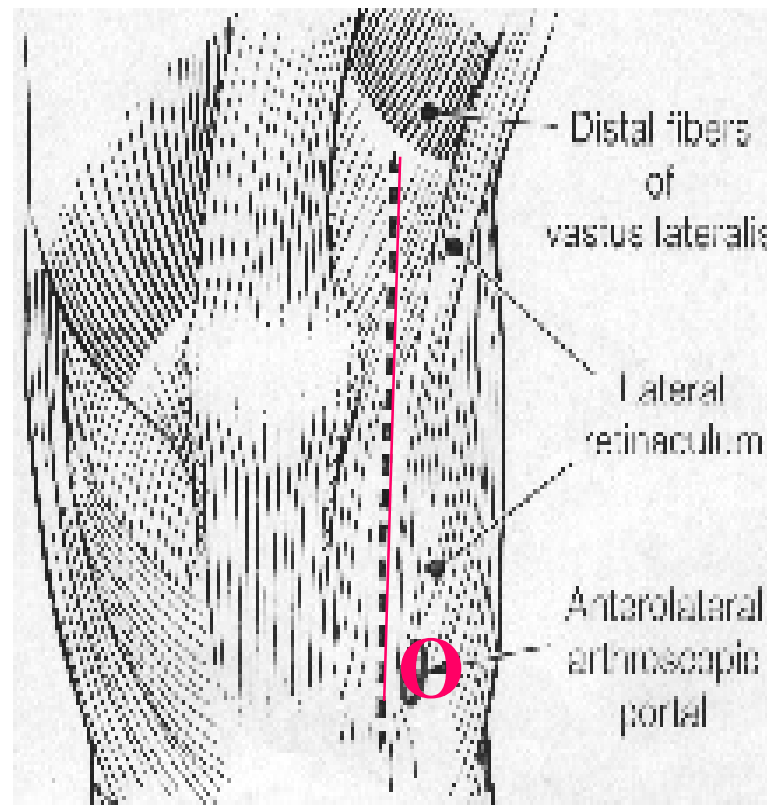
Sup.lat.Genicular A

Inf. Lat. Genicular A



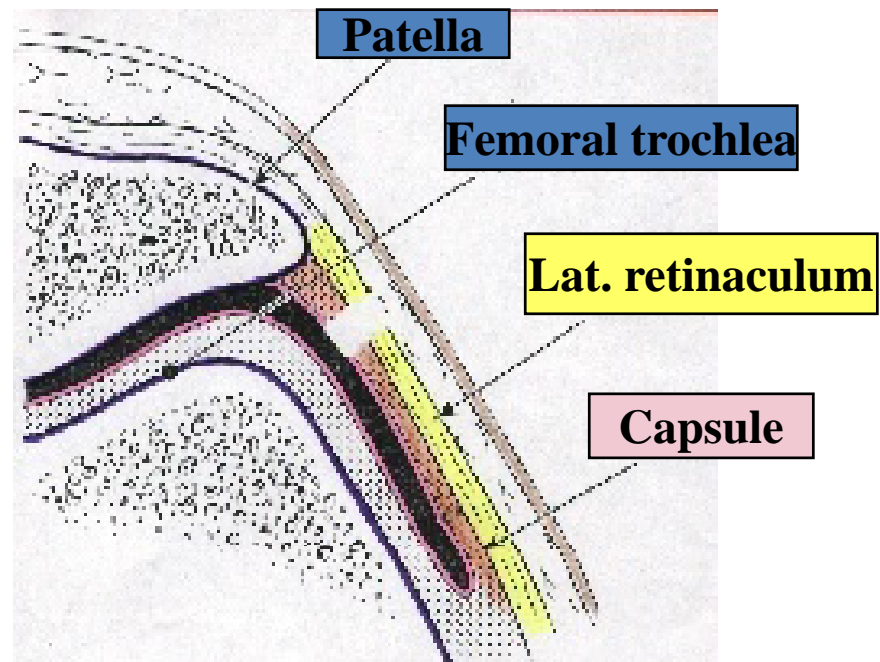
Techniques of lateral release

- Open.



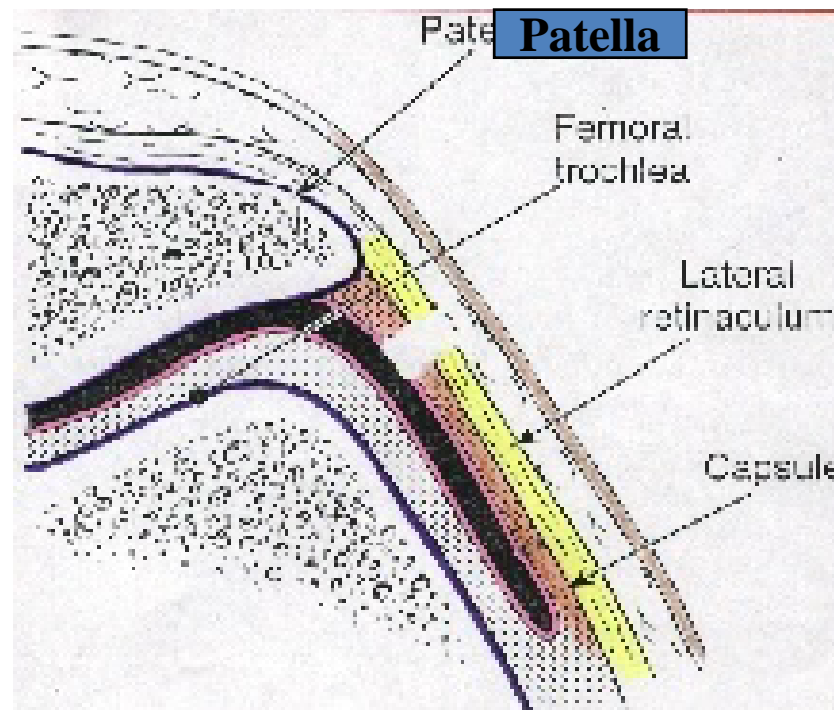
Techniques of lateral release

- Subcutaneous.



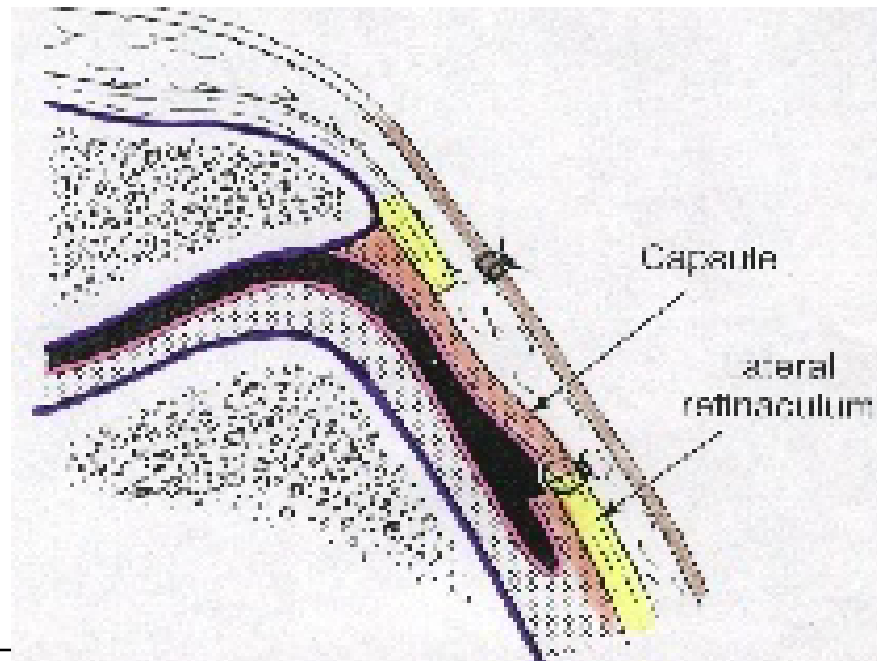
Techniques of lateral release

- Arthroscopic.



Techniques of lateral release

-Open lengthening of the retinaculum.



Techniques of lateral release

-Electro Cautery release.

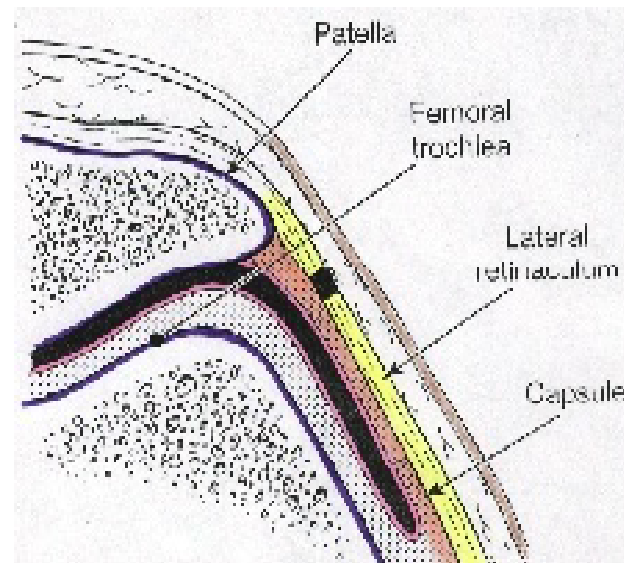
Thermal injury to skin after using Electro Cautery in lateral release.

3 cases out of 85.

Lord etal : 1991

Techniques of lateral release

-Extra capsular release.



PATIENTS

- * 39 Lat. release
- * 3 Technical failure → Sub cut. release

1997-2000

Pre Operative Assessment

- * **Clinical assessment.**

- * **X-ray knee:**

AP Standing, Lat.

Merchant Sky line view.

Epidemiology

*** 21 M – 15 F.**

*** Age = 24 - 52 (37.1 year).**

Causes of Patellofemoral pain

* Idiopathic CMP	10
* Maltracking	18
* Early Patellofemoral O.A.	06
* Trauma	02

Pre Operative Management

- * Progressive Quadriceps strengthening especially VMO.**
- * Stretching of Hamstrings and ITB.**
- * NSAIDs.**

Duration of Symptoms

6M - 6 years (21M).

Associated Knee Pathology

* Meniscal tear	05
* Early Medial Joint O.A.	03
* Synovial Plicae	02
* Synovitis	02

Arthroscopic Procedures

* Partial Meniscectomy	05
* Chondroplasty and Drilling	03
* Plica resection	02
* Partial Synovectomy	02
* Shaving of patella.	04

Post Operative

- * Discharge within 24 hours.**
- * Ice application for 48 hours.**
- * FWB.**
- * NSAIDs/Pain control.**
- * Physiotherapy next day.**

Results

*** Knee movement (Full ROM).**

One week : 29

Two weeks : 7

*** No Hemarthrosis.**

Pain (4 weeks)

- * 29 Patients : Pain free.**
- * 07 Patients : Satisfactory pain relieve.**

Return to Normal Activity

- * **31 patients within 2 weeks.**
- * **05 patients at 3 weeks.**

Follow up :3M-24M (16.5M)

*** 32 Patient : remain pain free.**

*** 04 Patients: Satisfactory pain relieve.**

Excellent Pain relieve.

- * Grade I, II CMP.**
- * Tight Retinaculum clinicaly.**
- * Patellar Maltracking.**
- * Not associated with marked O.A.**

THANK YOU