腱板疎部損傷の臨床

信原 克哉
信原病院・バイオメカニクス研究所

“昔々あるところ”に 33 歳の女性がいた。彼女は過去 13 年も脛、脛の痛みと失調を広げて持てないのでのだらさを訴えていた。18 歳の頃、スポーツをしていたがとくに大きな外傷歴はない。臨床所見としては、鳥口突起の外側に圧痛が強く上腕痛があり、前後下方への不安定性が認められている。過去に受けた保存的療法はすべて無効で、腱板断裂を疑って諸検査が行われたが断裂像はない。

当初、診断はつかなかったが、動的関節造影の画像を繰り返しているうちに、挙上位で鳥口突起外側に造影剤が突出する所見に気づき、上記の症状とこの部位に何か関係があるのではないかとの疑問が生じた。これまでも、内旋位で上肢に荷重をかけると肩が“えくぼ”のように陥凹する前下方への不安定性、挙上位で痛みを伴って上腕骨頭が臼蓋から滑り落ちる現象 slipping phenomenonなどを呈する病巣の存在に気づいていたが、異常所見が観察できないため腱板炎、肩峰下関節包炎、インピンジメント症候群などの帯状の診断のもとに治療が行われていた状況であった。その上、この病巣が他の医療機関で治療されていたこともあって、この新しい clinical entity の発表には慎重を期した。さらに症例を重ねて原因を調査したうえでないと世間に問えないと考えたからである。

Rotator interval という用語は 1978 年に Dr. Post が著した「The Shoulder」に記載されている。そこで私はこの疾患を Rotator Interval lesion と命名、邦訳は仲間の尾崎先生と共著して腱板疎部損傷とした。

1984 年、第 11 回肩関節研究会の会長は Controversial Issue というセッションを設けて、私に Rotator Interval lesion について話をするよう依頼してきた。そこで私は過去 14 年間の 74 関節の手術例を報告したが、新しい病巣を発見して発表する者とまったく経験したことのない者との discussion では成果を得るはずもなく、無駄な時間を費やしたという感慨があったことを記憶している。

1987 年、私達は 101 症例について、臨床病態の総括と遠隔成績の結果を「Clinical Orthopaedics」に報告した。しかし当時は、解剖的意義はおそらく機能的・臨床的に重要な腱板疎部に注目するものはほとんどなく、内外反のいわゆる脛の専門家達はこの論文に対して無関心であった。この論文が脚光を浴びているようになったのは、1992 年に Dr. Harryman らが“腱板疎部が肩関節の安定性に重要な役割を果たしている”という研究を発表してからである。

今回この topics を取り上げられた米田会長の創出に応えて、過去 34 年間に信原病院で腱板疎部損傷と診断され、治療された 346 例の手術例を資料として、腱板疎部損傷を再評価してみよう。さらに、病態に大きく関与する関節内圧、関連するスポーツ疾患、影響を与える広背筋症候群などについても触れていきたい。
Curriculum Vitae

信 原 克 哉  Katsuya NOBUHARA

生年月日：昭和 8 年 4 月 22 日
学 歴：昭和 33 年 3 月神戸医大卒

●職 歴
昭和 34 年　神戸医大整形外科入局
38 年　米国留学
40 年　医学博士修得
44 年　神戸大学整形外科講師
53 年　日本肩関節研究会会長
62 年〜平 3 年　日本整形外科学会理事・兵庫県整形外科医会会長

●現 職
昭和 45 年　信原病院・バイオメカニクス研究所院長
58 年　米国肩・肘関節外科学会客員会員・北国整形外科学会名誉会員
61 年　北京医院整形外科名誉顧問・香港中文大学客員教授
平成 1 年　柔道整復研修試験財団理事
2 年　上海第二医科大学客員教授
5 年　アジア肩関節学会会長
7 年　日本整形外科学会名誉会員
8 年　中国第 4 陸軍医大客員教授
10 年　日本肩関節学会名誉会員
16 年　日本柔道整復接骨医学会会長
18 年　明治国際医療大学教授

●病院経歴
平成 1 年　バイオメカニクス（生体力学）研究所開設
10 年　米国ジョンズホプキンス大・新潟大学との共同研究発足

●賞 獲
ニューオリンズ市名誉市民・兵庫県国際労働表彰・JCOA 学術賞・兵庫県医師会医学奨励賞

●著 書
・肩 - その機能と臨床（昭和 41 年初版、62 年第 2 版、平成 13 年第 3 版）医学書院
・肩診療マニュアル（昭和 62 年 初版、平成 3 年第 2 版、平成 16 年第 3 版）歯科出版
・肩こりの本　神戸新聞総合出版センター
・The Shoulder — Its function and clinical aspects —, 2003, World Scientific Pub.
・明智光秀と旅
・相撲の始祖野見宿禰の墓屋　ブックハウス HD
・がんこな肩こり 株式会社 小学館

●論 文
・論文総数（英文を含む） 370 編
・肩に関する論文 270 編

（平成 20 年 4 月 1 日現在）
Partial-thickness Rotator Cuff Tears

Hiroaki Fukuda\(^1\), Kazutoshi Hamada\(^2\), Yoshiyasu Uchiyama\(^1\), Tomotaka Nakajima\(^3\) and Kaoru Yamanaka\(^4\)

1) Department of Orthopaedic Surgery, Surgical Science, Tokai University School of Medicine
2) Shizuoka Red Cross Hospital
3) Nakajima Orthop Clinic
4) Yamanaka Orthop Clinic

Partial-thickness rotator cuff tears (PTRCTs) are not rare and can be a cause of unexplained pain in the shoulder giving considerable disability. Although they occupy a significant position in the spectrum of rotator cuff diseases, they have been inadequately defined and often elude diagnosis even by MRI, ultrasound and arthroscopy. In this presentation only the degenerative partial tear is considered.

To avoid reiteration of what have been described, definition, classifications and incidence of PTRCTs will be shown on the slides.

Little is known of the spontaneous healing and natural history of PTRCTs. In a series of 35 en-bloc histological sections from surgical specimens, no active repair was observed in any portion examined. The intrinsic healing capacity of torn supraspinatus (SSp) tendons was confirmed in an in situ hybridization study (1997), which has implications for the natural history and conservative treatment of PTRCTs.

Our arthrographic follow-up over two years on 40 joint-side tears, which had not been operated, revealed that 80% enlarged in size or progressed to FTRCTs.

During the last three decades, there were extensive studies on the pathogenesis of PTRCTs. Evidence has been accumulating that the pathogenesis of the rotator cuff tears is multifactorial. Often more than one aetiological factor is involved. We postulated that it may be different in each subtype. In tears of the bursal surface, subacromial impingement may be responsible. Intratendinous lesions may occur in the presence of differential shear between the superficial and deep surface layers of the tendon and in joint-side tears because of trauma to the degenerated tendon.

The use of arthroscopy has allowed visualization of PTRCTs on the joint and bursal side. Diagnosis of the intratendinous tear still remains elusive. For confirmation of the anatomical diagnosis, careful inspection and palpation of the critical portion of the SSp tendon are necessary during the operation. Incising the tendon along its fibers for direct visualization of the substance is also a helpful diagnostic maneuver.

Treatment Despite repair evidence on molecular level, spontaneous healing of PTRCTs is unlikely in most cases. What is the explanation then for the 'cure' with conservative treatment? We believe that if the signs and symptoms of inflammation are alleviated, and if those due to the mechanical deficiency of the torn cuff are compensated for by the residual cuff muscles and prime movers, then a clinical 'cure' is achieved.

The indications for the surgical treatment of PTRCTs have not been clearly delaminated. Surgical treatment, however, is generally considered for those patients with symptoms of sufficient intensity and long duration, and in whom imaging suggests the presence of partial or small FTRCTs. The timing of surgical intervention after failed conservative treatment ranges from a few months to 1.5 years.

Operation may involve debridement of the partial tear, acromioplasty alone, acromioplasty and debridement or repair of the cuff in addition to acromioplasty. It may be performed either as open, arthroscopically-assisted mini-open, or entirely arthroscopically. Intratendinous laminations are associated with approximately 50% of bursal- and joint-side tears. In this situation, we recommended suturing of the superficial and deep layers of the cuff using an "in-and-out" suture after thorough debridement of the inner surfaces. This suture technique is based on an in situ hybridization study, which demonstrated abundant signal-positive-cells containing procollagen alpha 1 type-I mRNA in intratendinous laminations of torn SSp tendons obtained at surgery. Although the short-term results with this technique are promising, a definitive surgical treatment
of intratendinous lesions has not been established.

We believe that these combined open procedures with acromioplasty and tenorrhaphy after excision of the diseased portion give the following advantages: 1) good tendon repair and anchoring are accomplished; 2) decompression is reinforced by tenorrhaphy; 3) hidden lesions are uncovered by inspection, palpation, mobilization, the color test, and exploration of the tendon; 4) tissue repair is enhanced by excision of diseased tissue; 5) progression of the tear is prevented by a good repair; 6) concomitant intratendinous lamination is treated; and 7) surgery on the tendon is done with the same exposure and minimal risk.

Results of treatment. At present, if surgery is indicated for PTRCTs, standard open anterior acromioplasty and repair of the tendon after excision of the diseased portion appear to give satisfactory results, i.e. 82% to 95% (2003) (Fukuda 94% 1996).

In conclusions, Degenerative PTRCTs are an important part of the spectrum of pathology of the rotator cuff. Functionally and morphologically, they can best be placed in the subacromial impingement syndrome, i.e. between tendinitis, or the 'pre-tear' stage and FTRCTs. This disabling condition occurs more often in the population aged over 40 years than has been hitherto recognized. Unfortunately, the diagnosis is still elusive even with MRI and ultrasound. As with other disorders, early recognition and appropriate treatment undoubtedly diminish the serious consequences so often encountered when the lesion is neglected.

Curriculum Vitae

福田 宏明     Hiroaki FUKUDA

生年月日：昭和 10 年 8 月 20 日

●略歴
昭和 36 年 3 月 慶応義塾大学医学部卒業
昭和 37 年 4 月 慶応義塾大学医学部整形外科助手
昭和 38 年 7 月 米国留学 (Intern, Samaritan Hospital, Troy, New York, Graduate School, Univ. Pennsylvania, Fellow, Boston City Hospital, ～40年)
昭和 47 年 4 月 慶応義塾大学医学部整形外科医局長
昭和 49 年 4 月 慶応義塾大学医学部整形外科講師
昭和 49 年 12 月 東京大学医学部整形外科助教授（今井望教授）
昭和 55 年 7 月 米国留学（Fellow, Shoulder Service, Columbia-Presbyterian Medical Center (Prof. Charles Neer)）
昭和 59 年 4 月 東京大学医学部整形外科教授・附属大築病院長
平成 14 年 4 月 薬生会平塚病院長（～18年）・東京大学医学部名誉教授
平成 20 年 9 月 30 日 退去

●所属学会など
日本整形外科学会・日本骨髄腫学会・米国肩肘学会（Corresponding Member, American Shoulder Elbow Surgeons, 1982-）
平成 8 年 10 月 特別講演（Plenary Lecture, Partial-thickness tears of the rotator cuff A clinicopathological review based on 66 surgically verified cases 20th SICOT, Amsterdam）
平成 10 年 8 月 Codman Lecture, Partial-thickness rotator cuff tears: A modern view on Codman’s classic 7th ICSS, Sydney)
平成 14 年 5 月 日本整形外科学会賞

以上
Present Development Situation and Future Foresight of Shoulder Surgery in Korea for Rotator Cuff Tear

Kwang-Jin Rhee
Daejeon Hankook General Hospital, Daejeon, Korea
Present Development Situation and Future Foresight of Shoulder Surgery in Korea for Shoulder Instability

Yong-Girl Rhee

Dept. of Orthopedic Surgery, Kyung Hee University Hospital, Seoul, Korea
The Arthroscopic Treatment of Bony Defects in Glenohumeral Instability

E. Taverna M.D., P. F. Battistella M.D., C. Perfetti, G. Pacelli, V. Pascale
Chief of Surgery, IX Department Orthopedic Surgery, Director of the Center for Arthroscopic Reconstructive Shoulder Surgery, Istituto Ortopedico Galeazzi, Milan, Italy

Introduction
We describe our technique of a bone graft procedure for the treatment of shoulder instability.

Surgical Technique
The shoulder joint was scoped in a standard fashion. We then harvested a bone graft measuring 1 cm by 2 cm from the Iliac Crest. With a 1-mm Kirschner wire we created two holes at 0.5 cm from the ends, and exactly in the middle of the bone graft. Then we placed two suture anchors at a distance of 1 cm from each other, and 0.5 cm medial to the glenoid rim, centered on the bone deficit of the anterior glenoid. The limbs out of the anterior-inferior cannula were passed through the holes of the bone block graft. The bone graft was pushed into the joint. The two anterior sutures kept gently under tension drove the bone block graft exactly into the anterior-inferior part of the glenoid.

Hence two 1-mm diameter Kirschner wires were introduced percutaneously through the bone block. After we detected with a probe the correct placement of the bone block, we drilled the bone block and the glenoid under the guidance of the 1-mm Kirschner wires and we then introduced two 3.5-mm diameter half threaded cannulated screws measuring 35 mm in length. Hence an anterior inferior capsuloligamentous repair with suture anchors was performed. In this way the graft became an extra-articular platform.

Discussion
The greatest disadvantage of the arthroscopic procedure is the inability to successfully treat significant chronic structural bone loss. The initial clinical results using this technique are encouraging.
Curriculum Vitae

Ettore Taverna

Date of Birth: March 11, 1961
Office Address: Istituto Ortopedico Galeazzi, 4 via R.Galeazzi, Milan 20161, Italy
Phone: 011 (39) 02 66214926
Fax: 011 (39) 02 66214916
E-mail: ettore.taverna@fastwebnet.it or taverna@shoulder.it

- Active hospital appointments
Chief of Surgery, IX Department Orthopedic Surgery Director of the Center for Arthroscopic Reconstructive Shoulder Surgery, Istituto Ortopedico Galeazzi – Milan, Italy
Staff privileges: Clinica La Madonnina, Milan, Italy
Clinica Le Betulle, Appiano Gentile, Italy
Ospedale Beata Vergine, Mendrisio, Switzerland

- Academic affiliations
Associate Professor ("Professore a Contratto")
University of Milan ("Università degli Studi di Milano")

- Residency
July 1992 (1987 – 1992)
Italian Board Certification of Orthopedic Surgery and Traumatology

- Fellowships
September 1995 – December 1995
Fellowship in Reconstructive Shoulder Surgery and Arthroscopy
J. W. King Orthopedic Institute, center at Texas Orthopedic Hospital, Houston, TX, U.S.A.

- Membership
Member of the Executive Board of SIA (Società Italiana di Artroscopia – Arthroscopy Association of Italy) since 2004, member since 1996
President of the Upper Limb Committee of ESSKA since 2008, member since 2007
Member of the Upper Extremity Committee of ISAKOS since 2007 member since 2007
ASES corresponding member since 2005
AANA corresponding member since 2006
AAOS corresponding member since 2008

- Honors
Winner of Scholarship, Karlova University, Prague, Czechoslovakia, 1985
Winner of three scholarships during orthopedic residency at Università degli Studi, Milan, 1989-1991
Winner of scholarship from the Italian Society of Orthopedics and Traumatology, (SIOT), 1994

- Administrative Positions
Editor for Shoulder Section, Artroscopia (Journal of SIA Italian Association of Arthroscopy)

- Contributions to Shoulder and Elbow Education
Beginning in the academic year 2001-2002, I was nominated “Professore a Contratto” (Associate Professor) for first and second year residents of the School of Orthopedic Surgery and Physical Therapy and Rehabilitation at the "Università degli Studi di Milano" (University of Milan), consisting in lectures and residency training in arthroscopic shoulder surgery.
First Results Using New Type of Glenosphere in Reverse Shoulder Arthroplasty

Hans Rudolf Bloch, A. Ghidelli
Ars Ortopedica Department, Ars Medica Clinic, Lugano, Switzerland

Background
One possibility for the surgical treatment of disabling shoulder arthropathy where anatomical total shoulder arthroplasty is limited is Reverse Total Shoulder Arthroplasty. First evaluation in our own patients as well as in the whole literature by short and midterm results of arthroplasty with the use of Reverse Prosthesis confirmed new, unusual complications such as inferior, anterior and posterior scapular notching, not known by previous conventional shoulder arthroplasty.

The results in literature showed that positioning of the glenosphere so as the angle between the glenoid and the scapular neck are correlated with inferior scapular notching and so with good or poor clinical outcome. Analyzing the possibilities to improve clinical outcome by avoiding inferior notching we started as a working idea to implant the new eccentric 36mm glenosphere so as the 44mm glenosphere. With this implants we reduced the prosthesis-scapular neck angle knowing that a high prosthesis-neck angle is correlated with an increased frequency of inferior notching. Lowering the centre of rotation of 4mm with the eccentric glenosphere gave us, with a constant peg-glenoid rim distance, the same effect as described in literature by lowering the whole implant, reducing in this way the peg-glenoid rim distance. There is, leaving the central peg in best bony position in the centre of the bony glenoid, no contact between the humeral implant and the scapular neck. We analyzed retrospectively our own short term results, comparing 36mm concentric (group A, n=36) with the new 36mm eccentric (group B1, n=46) and the 44mm glenosphere (group B2, n=35) in equal diagnosis such as secondary osteoarthritis (n=77), primary irreparable rotator cuff arthropathy with pseudoparesis (n=34) and revision after failed total shoulder arthroplasty (n=6).

Methods
117 patients (2005 and 2006) undergoing surgery were investigated by clinical exam, Xray and score in an average follow up of 14 months comparing the short term outcome after Reverse Shoulder Arthroplasty with the 36mm concentric with the new type of 36mm eccentric and the 44mm glenosphere. The clinical and radiological follow up was fixed at 1, 3, 6, 12 and 24 months post-op.

Results
From the 36mm concentric group (group A), n=13 (36%) showed in the follow-up radiological changings with initial bony erosion on the scapular neck starting in an average postoperative time of 6.3 months, corresponding to inferior scapular notching (Nerot grade 1 : 1, Nerot grade 2 : 7, Nerot grade 3 : 4, Nerot grade 4 : 1). There was no bony erosion in the 36mm eccentric group so as in the 44mm group after the same period of follow up.

We found a clear better subjective shoulder value (pain, adl) so as shoulder function (forward active flexion from av. 118° → av. 145°, active abduction from av. 85° → 125° and external rotation from av. 35° → 75°) in the B1 and B2 group comparing with the group A.

Conclusions
We attribute better clinical outcome in the first short term results after Reverse Shoulder Arthroplasty to the lowering of the centre of rotation preserving the good bone stock in the middle of the glenoid for central peg fixation. We evitate inferior notching (which is associated with poor clinical outcome) of Reverse Shoulder Arthroplasty reducing the prosthesis scapular neck angle with the glenoid rim overlap of 36mm eccentric and 44mm glenosphere. Major mobility, joint stability and patient's satisfaction in subjective shoulder value is encouraging and will lead us to look forward to improve long term results also by new technological materials.
Curriculum Vitae

Hans Rudolf Bloch

Date of Birth: January, 17, 1955 at Glarus (CH)

1974 maturity Berne
1980 final exam physician University of Berne
1981 dissertation ("Etagenfrakturen der Tibia", AO-Bulletin, Orthop. Dep. University of Berne, Prof. M. E. Müller)
01.07.1981 - 30.06.1982 General surgery, Kreuzspital Chur (Head: PD Dr. U. Heim, Dr. K. Infanger)
30.06.1982 – 31.12.1984 General surgery, University of Basle (Head: Prof. M. Allgöwer, Prof. F. Harder)
01.01.1985 – 31.12.1985 Consultant, General surgery, Kreuzspital Chur (Head: Dr. K. Infanger)
01.01.1986 – 31.12.1986 General surgery, University of Basle (Head: Prof. F. Harder)
01.01.1987 – 31.12.1987 Orthopaedic surgery and traumatology, University "Bergmannsheil" Bochum, Germany (Head: Prof. G. Muhr)
01.01.1988 – 30.10.1989 Consultant, General surgery and traumatology, University of Basle (Head: Prof. F. Harder, Prof. A. Gächter)
01.11.1989 – 31.12.1990 Orthopaedic surgery, Schulthessklinik, Zurich (Head: Prof. N. Gschwend, Prof. H. Scheier)
01.01.1991 – 31.12.1993 Consultant, Orthopaedic surgery, Schulthessklinik, Zurich (Head: Prof. N. Gschwend, Prof. H. Scheier)
15.03.1994 – 31.12.2000 Private office Orthopaedic Surgery and Traumatology, Lugano
01.01.2001 – Head of Orthopaedic Department, Ars Medica Clinic, Gravesano - Lugano

1988 FMH General Surgery
1992 FMH Orthopaedic Surgery
2001 – Medical Director Ars Medica Clinic, Gravesano - Lugano
Indications of Shoulder Prosthesis and Its Delimitation: Update

G. Walch, L. Nove-Josserand, A. Godeneche, L. Neyton

Ortho & Trauma Department. Hopital Prive Jean Mermoz. Lyon. France

Although the first shoulder arthroplasty was implanted in 1893 by the French surgeon Jules-Emile Pêan, the development of the procedure came in the 1950s when Neer described the results using a vitallium prosthesis to treat comminuted fracture of the head of the humerus. About 20 years later, and with the addition of a glenoid component, he described a total shoulder replacement for the treatment of osteoarthritis. Since then, there has been a progressive improvement, culminating in the concept of anatomical reconstruction of the proximal humerus in the early 1990s when the size and design of the humeral component were reconsidered. Other surgeons started to use, at the same period, surface replacement implants with good results. Unconstrained prosthetic arthroplasty of the shoulder is now used largely either with or without a glenoid component according to the etiology and surgeon's preference or experience. It has been shown that, whatever the etiology, the postoperative results of the unconstrained prosthesis are satisfactory with a statistically significant increase of all the clinical parameters. However the results and the rate of complications have been disappointing in case of rotator cuff insufficiency. Progressively, by the end of the 90's, the revisited concept of semi-constrained Reverse prosthesis became popular to treat the cases with rotator cuff insufficiency or cases where the nonconstrained, anatomic type prosthesis failed to provide good results.

The Grammont Reverse prosthesis is a semiconstrained reverse ball and socket originally designed by Paul Grammont in Dijon, France in 1987 and subsequently modified in 1991. Our experience with this Reverse type design began in September 1995.
Curriculum Vitae

Gilles Walch

Date of Birth: September 15, 1952 at Lyon 6ème (France)

Professional address: Centre orthopédique Santy 24 avenue P Santy F-69008 LYON

Tél. medical secretariat: (+33) 4 37 53 00 54
Fax. medical secretariat: (+33) 4 78 54 55 95

Tél. scientific secretariat: (+33) 4 37 53 00 24
Fax. scientific secretariat: (+33) 4 37 53 00 25

E-mail address: socoly@free.fr

Graduate education
- Externe des Hopitaux de Lyon (1974)
- Interne des Hopitaux de Lyon (1977)
- Interne Médaille d’Or des Hopitaux de Lyon (1982)
- Assistant des Hopitaux – Clinique de Chirurgie Orthopédique et Traumatologique, Professeur Dejour – (1983)
- Attaché des Hopitaux de Lyon (1987)
- Praticien Hospitalier à temps partiel (1989)

Post-graduate education
- Docteur en Médecine : Thèse presented March 16, 1981
- Maître en biologie humaine
- Attaché-assistant d’anatomie since December 1st 1990, Faculté de Médecine Alexis Carrel
- AEU de Microchirurgie (1980)
- CES de Médecine du Sport (1981)
- Chef de Clinique à la Faculté (1983)
- CES de Chirurgie Générale (1984)
- Spécialité de Chirurgie Orthopédique et Traumatologique (1985)

Scientific works
- One thesis
- Three memories
- Invited lecturer national and international 343 presentations
- 13 scientific movies
- 24 posters
- 17 times: Director of thesis
- 193 national and international publications

Other Activities
- Reviewer for peer review journals: Rev Chir Orthop / J Shoulder Elbow Surg (European editor 1992-2002) / J Bone and Joint Surgery (Am)
- General secretary of the SECEC (European Society for Shoulder and Elbow Surgery) 1987-1994
- Président of the SECEC (European Society for Shoulder and Elbow Surgery) 2004-2006
- Membre du jury de la conférence de consensus – Paris – France – 15 Novembre 1997
- Membre de la commission pour l’élaboration de la nomenclature commune des actes médicaux orthopédie-traumatologie
- N.C.A.M. Coordinateur général Professeur N. BIGH - 1996-1997
- Member of The Editorial Board of the OKU (Orthopaedic Knowledge Update)
- Organisation de colloques avec la participation de professeurs étrangers
- Organisation du D.U. de chirurgie de l’épaule et du coude - Lyon - France - 21-22 Décembre 2001
- Colloque mensuel pluridisciplinaire sur la pathologie de l’épaule - Lyon - France
- Colloque du Centre Livet - Lyon - France - 8 Janvier 2002
- Colloque multidisciplinaire sur la pathologie de l’épaule - Hôpital Edouard Herriot - Lyon - France organisé avec le Docteur Eric Noel (rhumatologue) : 1 colloque par mois.
- Organisation du diplôme universitaire (D.U.) de chirurgie de l’épaule et du coude - Lyon - France – 14-15 février 2003
- Colloque multidisciplinaire sur la pathologie de l’épaule - Hôpital Edouard Herriot – Lyon – France
Dual row rotator cuff repair has become increasingly recognized as advantageous. Although single row repair can be successful with smaller tears, many recent studies suggest that dual row repair results in a more successful repair based on lower rates of recurring tears. In addition, dual row repair has been shown to be a biomechanically more secure repair which may improve healing and provide the necessary confidence for earlier more aggressive physical therapy, and thus earlier return to function.

Dr Halbrecht will review the current biomechanical as well as clinical data on dual row repair and discuss the evolution of dual row repair from two separate rows, to suture spanning techniques, and finally to more complex, evolving techniques that incorporate dual row suture spanning with "rip stop" sutures, combining medial and lateral knotless fixation using the Versalok anchor (Mitek)
Curriculum Vitae

Jeffrey L. Halbrecht

Date of Birth: July 2, 1958 at Brooklyn, N.Y.
Professional Practice: Private Practice Orthopedic Surgery
September 1991-Present
San Francisco, CA

Hospital Appointments
- California Pacific Medical Center, San Francisco, CA, St. Francis Hospital, San Francisco, CA, St. Luke's Hospital, San Francisco, CA, St. Mary's Hospital, San Francisco, CA, Pacific Heights Surgery Center, San Francisco, CA, Presidio Surgery Center, San Francisco, CA

Education and Professional Training
1990-1991 Fellowship in Knee and Shoulder Surgery
Southern California Center for Sports Medicine
Douglas W. Jackson, M.D. Director
Long Beach, CA 90806
(310) 424-6666
1984-1985 Internship in General Surgery
Mt Sinai Medical Center
New York, NY

1985-1990 Resident in Orthopedic Surgery
Hospital for Joint Diseases
Victor H Frankel, M.D. Director
New York, NY
1980-1984 New York University School of Medicine
Distance: M.D.

1986-1987 Research Fellowship
Department of Bioengineering

Honors
Cum Laude: Columbia College, 1980
AOA President NYU Medical School, 1984

Research and Publications: 22

Current Research
Chondrocyte Implantation, Arthroscopic Patella Realignment, Orthoglide Knee Prosthesis, Dual Row Rotator Cuff Repair, Knotless Rotator Cuff Repair

Book Chapters and Books: 8

Videos: 2

Orthopedic Teaching Experience: Lectures & Presentations: 161

Inventions/Patents:
Versalok knotless rotator cuff anchor. Patent 2005.
Patella implant: Patent pending

Team Physician Experience:
Medical Director Women's Pro Ski Tour: 1991-2000
Orthopedic Consultant North American Men's Pro Ski Tour: 1991-1993
Consultant AVP Professional Beach Volleyball 1991-2001
Consultant SF State Sports Medicine Program 1995-1997
Consultant Skyline Junior College Wrestling 1993-2000
Long Beach State Women's Basketball 1990-1991
Harbor Junior College Football: 1990-1991
Sacred Heart Cathedral Prep Football: 1992-1997
USA Soccer: Northern California Orthopedic Consultant 1997-2002
NFL Junior Player Development Team Physician, 2000-2002
Maccabiah Pan Americna Games Team Physician, Santiago, Chile Dec, 2003
Comparative Study of Arthroscopic Treatment of Full Thickness Rotator Cuff Tear with or without Frozen Shoulder

Tae-Soo Park, M.D.

Dept. of Orthopaedic Surgery, Guri Hospital Hanyang University College of Medicine, Guri, Korea

Purpose: To describe the comparative results of arthroscopic treatment of full thickness rotator cuff tear with or without frozen shoulder.

Materials and methods: We evaluated thirty consecutive patients with isolated full thickness rotator cuff tear (group A), and twenty consecutive patients with concomitant full thickness rotator cuff tear and frozen shoulders (group B) for a mean of 3 years 7 months (range, 2 years 1 months to 6 years 11 months) following arthroscopic treatment. The clinical results were evaluated with the UCLA Shoulder Rating Scale.

The average tear size was 24.5 ± 15.1mm in group A, and 17.0 ± 13.0 mm in group B. In this study, severe arthritis in the acromioclavicular joint and the glenohumeral joint was excluded.

Results: In group A, pain score was improved from 2.2 ± 1.2 before operation to 9.2 ± 1.2 after operation, function score, 4.1 ± 1.8 to 9.7 ± 0.7, forward flexion score, from 3.8 ± 1.3 to 5.0 ± 0.2 and strength score, from 4.3 ± 0.7 to 5.0, respectively.

In group B, pain score was improved from 3.0 ± 1.5 to 9.2 ± 1.2, function score, from 4.3 ± 2.0 to 9.7 ± 0.7, forward flexion score, from 2.4 ± 0.7 to 5.0, and strength score, from 4.0 ± 0.8 to 5.0, respectively.

In group B, forward flexion was improved from 86.0 ± 21.6 degree before operation to 173.5 ± 8.8 degree after operation, abduction, from 79.8 ± 32.7 degree to 173.0 ± 6.6 degree, external rotation, from 27.0 ± 12.6 degree to 55.3 ± 5.3 degree, respectively (P<0.05). The UCLA Shoulder Rating Scale showed 93% good/excellent results in group A, and 95% in group B.

Conclusion: Arthroscopic management is an very effective treatment modality of full thickness rotator cuff tear with / without frozen shoulder. For successful results, early mobilization and control of pain after operation as well as adequate arthroscopic procedures are crucial.

Key words: Shoulder, Full thickness rotator cuff tear, Frozen shoulder, Arthroscopic surgery
C\textit{urriculum Vitae}

\textbf{Tae-Soo Park}

\textbf{Date of Birth:} Dec 4, 1956 at Busan, Korea

\textbf{Organization:} Department of Orthopaedic Surgery, Guri Hospital Hanyang University College of Medicine Guri-city, Gyunggi-do, 471-701, Korea

\textbf{Business Phone:} 82-31-560-2314, 2316

\textbf{Fax:} 82-31-557-8781

\textbf{E-mail:} parkts@hanyang.ac.kr

\section*{Education and Professional Experiences}

\textbf{UNDERGRADUATE:}

\begin{itemize}
    \item 1975-1977 Premedical Course Hanyang University College of Medicine, Seoul, Korea
\end{itemize}

\textbf{GRADUATE:}

\begin{itemize}
    \item 1977-1981 Hanyang University College of Medicine, Seoul, Korea M.D
\end{itemize}

\textbf{POSTGRADUATE:}

\begin{itemize}
    \item 1987-1989 Hanyang University College of Medicine, Graduate School, Seoul, Korea Master
    \item 1990-1994 Hanyang University College of Medicine, Graduate School, Seoul, Korea Ph.D.
\end{itemize}

\textbf{POSTGRADUATE TRAINING:}

\begin{itemize}
    \item 1984-1985 Hanyang University Hospital, Seoul, Korea Internship
    \item 1985-1989 Hanyang University Hospital, Seoul, Korea Orthopaedic Surgery Residency
\end{itemize}

\textbf{FELLOWSHIP:}

\begin{itemize}
    \item 1990. 9-1991. 10 Pittsburgh University Hospital, U.S.A. Sports Medicine Fellowship (Shoulder & Elbow, Knee)
\end{itemize}

\textbf{MILITARY SERVICE:}

\begin{itemize}
    \item 1981-1984 Army Medical Officer
\end{itemize}

\textbf{OTHERS:}

\begin{itemize}
    \item 1992. 8 AO Basic Course, Seoul, Korea
    \item 1994. 8 AO Advanced Course, Seoul, Korea
    \item 1999. 6 G.O.T.S. Traveling Fellowship
\end{itemize}

\textbf{PROFESSIONAL APPOINTMENTS AND POSITIONS:}

\begin{itemize}
    \item 2005. 3 - Present Dept. of Orthopaedic Surgery, Guri Hospital Hanyang University College of Medicine, Guri-city, Korea Professor
    \item 2003. 3 - 2007. 3 Chairman, Dept. of Orthopaedic Surgery, Guri Hospital, Hanyang University College of Medicine, Guri-city, Korea Associate Professor
    \item 2000. 3 - 2005. 2 Dept. of Orthopaedic Surgery, Guri Hospital Hanyang University College of Medicine, Guri-city, Korea Assistant Professor
    \item 1996-2000 Dept. of Orthopaedic Surgery, Guri Hospital Hanyang University College of Medicine, Guri-city, Korea Full-time Instructor
    \item 1994-1996 Dept. of Orthopaedic Surgery, Guri Hospital Hanyang University College of Medicine, Guri-city, Korea Staff
    \item 1993-1994 Dept. of Orthopaedic Surgery Hanil General Hospital, Seoul, Korea
\end{itemize}

\section*{Professional Activities}

\begin{itemize}
    \item President, the Korean Shoulder and Elbow Society
    \item Board of Trustee, the Korean Orthopaedic Ultrasound Society
    \item Board of Trustee, the Korean Shoulder and Elbow Society
    \item Board of Editor-In-Chief, the Journal of the Korean Orthopaedic Society for Sports Medicine (KOSSM)
    \item Board of Editor, the Journal of the Korean Arthroscopy Association
    \item Research Board of Advisors, the American Biographical Institute (ABI), USA
    \item Specialist, Central Pharmaceutical Affairs Council, Korea
    \item Specialist, Auto Insurance Medical Fee Review Council, Korea
\end{itemize}

\section*{Publications: 59}

\section*{Presentations: 241
Clinical Features of SLAP Lesions:
Sports-Induced vs Non-Sports-Induced Injury

Kwang-Won Lee, M.D., PhD
Dept. of Orthopaedic Surgery, Eulji University Hospital, Daejeon, Korea

Purpose: The purpose of this study was to morphologically compare the superior labral anterior posterior lesion (SLAP) by sports-induced injury and non-sports-induced injury, and to analyze the incidence of concomitant injury and clinical outcomes.

Materials and methods: The study was performed on 74 patients received arthroscopic surgery for the SLAP lesion, the male was 60 cases, the female was 14, and the mean follow up period was 28 months (13 months ~ 9 years and 5 months). Sports-induced injury patients (group I) were 21 cases, non-sports-induced injury patients (group II) were 53 cases. According to the Snyder's classification, the SLAP lesion was classified. In both group, the frequency of concomitant injury and the clinical outcomes of the last follow up were evaluated. As the functional evaluation of the shoulder joint, the UCLA score Rowe score, and the ASES score were applied.

Results: In regard to the morphological classification of group I, the type II was 10 cases (47%), the type III was 5 cases (24%), and the type IV was 6 cases (29%), and in group II, the type I was 4 cases (8%), the type II was 33 cases (62%), the type III was 10 cases (19%), and the type IV was 6 cases (11%), and according to their injury mechanism, in group I, the overhead injury type was 15 cases (71%), in group II, the compression injury type was 35 cases (66%), and as concomitant injury lesions, in group I, the shoulder instability was 11 cases (52%) and the rotator cuff tear was 5 cases (24%), and in group II, the rotator cuff tear was 31 cases (58%), and 16 cases (30%) of the incidence of the shoulder instability were shown. At the last follow up, the UCLA score of group I was 33.0 points, group II was measured to be 31.6 points, the Rowe score of group I was 92.5 points, group II was 88.7 points, the ASES score of group I was 91.3 points, and group II was measured to be 90.5 points, nonetheless, in each group, a statistical significance was not detected (P>0.05).

Conclusion: A difference of the clinical outcome of the both group was not detected, nonetheless, group I showed a slightly better clinical satisfaction, and as a concomitant injury, in group I, the shoulder instability was most frequency, and in group II, the rotator cuff tear was most prevalent. The possibility of the SLAP lesion accompanying other pathology is high, and thus the accurate assessment of concomitant injury lesions prior to surgery is considered to be important for the treatment outcome.
Curriculum Vitae

Kwang-Won Lee

Date of Birth: Oct 11, 1958 at Korea
Office Address: Dept. Of Orthopaedic Surgery, Eulji University Hospital, 1306, Dunsan-dong, Seo-gu, Daejeon, Korea
Tel: +82-42-611-3280
Fax: +82-42-259-1289
E-mail: kwangwon@eulji.ac.kr

• Education
1977-1983 B.S. in College of Medicine, Han-Yang University
1988-1993 M.S. in Pathology, Chung-Nam National University
1998-2001 Ph.D. in Orthopedics, Dan-Kuk University

• Career
1983 - 1984 Internship in Eulji University Hospital
1984 - 1988 Orthopaedic Residentship in Eulji University Hospital
1988 - 1991 Military service
1991 - 1996 Staff in Dept. of Orthopedic Surgery, Eulji General Hospital
1997 - 2005 Associate Professor in Dept. of Orthopaedic Surgery, School of Medicine, Eulji University
2006 - present Professor in Dept. of Orthopaedic Surgery, School of Medicine, Eulji University
1997 - present Director, Sports Medicine & Arthroscopic Surgery, Eulji University Hospital
Jan.1995 - Dec.1995 Visiting Research Fellow, Center for Sport Medicine and Musculoskeletal Research Center, University of Pittsburgh.
1999. 6.1 - 6.27 GOTS-KOSSM-JOSSM Travelling Fellowship:
3-15 April 2000 Regional (RTC) Training Course for Delivery of Distance Learning Curriculum to Tissue Bank Operators (Phase I)
26-30 April 2001 Regional (RCA) Training Course on "Final Evaluation of Distance Learning Diploma Course" (Phase II)
1997 - present: Councilor, Korean Shoulder and Elbow Society
April 2008 - present President of Korean Shoulder & Elbow Society.

• Special Board: Orthopedics

• Medical Society Membership:
Domestic:
Korean Orthopaedic Association, Korean Shoulder and Elbow Society
Korean Arthroscopy Society, Korean Knee Society, Korean Hip Society
Korean Orthopaedic Society For Sports Medicine
Korean Orthopaedic Musculoskeletal Transplantation Society
Korean Society of Fracture, Korean Society of Spine Surgery
Korean Orthopaedic Research Society
International:
SICOT, ICRS (International Cartilage Repair Society), ISAKOS (International Society of Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine) ESSKA (European Society of Sports Traumatology, Knee Surgery and Arthroscopy), OARSI (OsteoArthritis Research Society International) APASTB (Asia-Pacific Association of Surgical Tissue Banking)

• Attendance & Presentations at Arthroscopy, Knee Sports Medicine related Course(s), Meeting(s), Symposium(s): 41

• Publications: 103