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St. Maartenskliniek
Postbus 9011
6500 GM Nijmegen
The Netherlands

The floating shoulder—a multicenter study

A van Noort¹, R L te Sla, R K Marti, C van der Werken

¹Interne Orthopedics, Dept of Surgery, St Elisabeth Hospital, Tilburg, the Netherlands

Our objective was to analyse a series of patients with an ipsilateral fracture of the neck of the scapula and the clavicle (1991 to 1996).

Material and method: Medical files and radiographs of 46 patients were seen. 35 patients took part in a follow-up study. Of these, radiographs were made and the function of the result was determined using the Constant score.

Results: Of these 35 patients, ultimately 28 were treated conservatively (score: 76) and 7 by operation (score: 71). Seven conservatively treated patients had a caudal dislocation of the glenoid (score: 42). The remaining 22 had a score of 85.

Conclusions: Conservative treatment can give a good functional result if there is no caudal dislocation of the glenoid.

Open capsular shift procedure in anterior instability of the shoulder

W W J Rosenberg, A B Wymenga, M de Vos and P G Anderson

Dept of Orthopedics, St Maartens Clinic, Nijmegen, the Netherlands

Anterior instability of the shoulder can be treated using the modified open capsular shift procedure according to Warner. Preservation of mobility is an important objective.

Method: 44 of the 46 patients were examined clinically (the Constant-Murley and the Rowe scores) and radiologically between 1996 and 1998.

Results: The loss of mobility was determined by comparison with the unaffected shoulder. Exorotation (in 0° and 90° abduction): a mean loss of 7° and 6°, respectively; endorotation (in 90° abduction) a loss of 20°. These values show a significant difference.

Recurrence of the dislocation was seen in 3 patients.

Conclusion: There is virtually no loss of mobility in exorotation after a capsular shift. There is a loss in endorotation, however. The capsular shift procedure restores the stability of the shoulder.

Reconstruction of complete acromioclavicular (AC) dislocations (Rockwood V) by means of transposition of the coraco-acromial ligament and augmentation at the level of the AC articulation

T G van Tienen, J F C H Oyen and P J M G Eggen

Dept of Orthopedics, Elkerliek Hospital, Helmond, the Netherlands

A prospective study was carried out since 1994 of a surgical reconstruction of complete acromioclavicular (AC) dislocations (Rockwood V).

Patients and methods: 21 patients were followed up after an average period of 33 (4–55) months. Indications for operation were heavy manual labor and/or fanatical practising of sports. An anamnesis and a score of shoulder pain and function were taken and radiographs of the AC articulations were assessed.

Results: 18 of the 21 patients could resume their occupations/sports without symptoms. The mean score was 93% (66–100). In 18 patients, the AC articulation regained its anatomical position. In 2 patients there was a minimal residual subluxation, in 1 patient a recurrent dislocation near a local infection and in 6, some para-articular ossifications.

Conclusion: 90% of the patients were free of symptoms after the operation. Accordingly, in our opinion this method is to be preferred given adequate definition of the indication.

Long-term results of resection of the head of the radius after fractures of the head of the radius type Mason III

R P A Janssen and J Vegter

Department of Orthopedics, St Joseph Hospital, Veldhoven, the Netherlands

The implantation of a prosthesis for the head of the radius in stable elbows after radial head resection in radial head fractures of Mason type III is controversial. We have carried out a long-term follow-up study (16-30 years) of 21 patients (radial head fractures type Mason III with resection of the head of the radius) by means of a standardized questionnaire and clinical and radiological examination of elbow and wrist. 17 patients showed an excellent result, 3 a fair and 1 a mediocre result. Resection of the head of the radius is an adequate treatment of Mason type III fractures of the head of the radius. Implantation of a prosthesis for the radial head appears to be indicated only in case of valgus instability of the elbow.

Proximal row carpectomy—a new articulation?

M. Vischjager and H. de Boer

Depts of Orthopedics and Traumatology, Atrium Medical Center, Heerlen, the Netherlands

Our objective was to establish the indications and relative advantages of proximal row carpectomy (PRC). It is still not clear what procedure optimally preserves mobility in post-traumatic carpal instability.

Method: 3 patients with a scapholunar dissociation were treated in this study by means of a PRC. The mean duration of follow-up was 9 years.

Results: After 9 years, all patients had functional flexion and extension reaches. Radiographically there were no signs of development of degenerative abnormalities.

Conclusion: PRC may be recommended as a salvage procedure. After failure of a PRC, a pulse prosthesis or a pulse arthrodesis remain possible.

Results after posterolateral dislocation of the elbow in relation to valgus instability

D Eygendaal, S H M Verdegaal, W R Obermann, A B van Vugt, R G Pöll and P M Rozing

Depts of Orthopedics and Radiology, Medical Center, University of Leiden, the Netherlands

This study was concerned with the long-term results of uncomplicated posterolateral dislocations of the elbow in relation to valgus instability.

Method: 48 out of 50 patients submitted a questionnaire and underwent physical and radiological examination.

Results and conclusion: The mean HSS score was 91 (49-

100). 23 patients had 5–10° limitation of extension. 24 patients showed valgus instability at dynamic radiology. MRI scanning in some cases revealed a rupture of the medial collateral ligament. The medial instability was linked to degenerative lesions, formation of heterotopic ossifications and a lower HSS score.

A posterolateral dislocation of the elbow may lead to persistent valgus instability with less than optimal results.

The osteogenetic activity of OP-1 bone morphogenetic protein (BMP-7) in a human fibular defect model

R G T Geesink, N H M Hoefnagels and S K Bulstra

University Hospital Maastricht, the Netherlands

Definition of the problem: Can OP-1 with collagen type 1 as the carrier (NOVOS® Stryker Biotech, Natick, USA) heal a critical size bone defect?

Material and method: Prospective randomized study in two phases in 24 tibial osteotomy patients: 1) validation of critical size fibular defects by a comparison of untreated defects and defects treated with demineralized bone (Grafton® BIS, Leiden, the Netherlands); and 2) determination of the osteogenetic activity of OP-1 as compared with the collagen carrier. Clinical, radiological and DEXA evaluations.

Results: Phase 1 confirmed the critical size. Phase 2 showed no reaction with collagen alone, while combination with OP-1 resulted in new formation of bone in 5 of the 6 defects.

Conclusion: OP-1 possesses the osteogenetic activity to heal in critical size fibular defect.

Lower incidence of posttraumatic dystrophy following wrist fractures after use of vitamin C

P E Zollinger¹, W E Tuinebreijer², R W Kreis² and R S Breederveld²

Depts of ¹Orthopedics, Leyenburg Hospital, The Hague, and ²Surgery, Red Cross Hospital, Beverwijk, the Netherlands

The pathogenesis and treatment of reflex sympathetic dystrophy (RSD) are not clear. Scavenger treatment was administered with a view to prevention.

114 adults with 118 conservatively treated wrist fractures in a randomized double-blind study were treated with one capsule of 500 mg vitamin C or a placebo once daily for 50 days. The follow-up period amounted to 1 year. 53 fractures were treated with vitamin C, 65 received placebo.

The incidences of RSD were 8 and 22%, respectively ($p = 0.04$). Other significant variables are plaster cast symptoms ($p = 0.000$), age ($p = 0.006$) and fracture type ($p = 0.015$).

This first study of the question shows that vitamin C reduces the incidence of RSD in wrist fracture cases.

Results in THP or TKP patients treated according to a new multidisciplinary protocol

A L Verhaasdonk¹, L M C Faro² and W C Runne¹

¹Dept of Orthopedics, Bosch Medical Center 's-Hertogenbosch, and ²Biomet Merck, Zwijndrecht, the Netherlands

Increasing demand and decreasing funding in health care necessitate new methods of treatment. One solution is to shorten the duration of hospitalization.

A pilot study of this question was started on 1 April 1998 in the Bosch Medical Center. Question: what are the results?

Method: Pilot study comprising 15 TKPs and 25 THPs evaluated with KSS and HSS, measurement of patients' satisfaction, and quality of life with SF36 and WOMAC.

Results: KSS: improvement 42%, HSS: improvement 48%. Measurement of satisfaction: duration of hospitalization (7 days): 85% satisfied, information: 95% good. WOMAC: improvement, SF36: idem.

Complications: TKP: postoperative hemorrhage, dislocation. THP: wound leakage, dislocation.

Conclusion: Candidates for a knee or hip prosthesis can be discharged with safety and satisfaction 6 days after the operation.

The results of the treatment of fractures of the acetabulum

A W Plat, S de Lange, L M Kingma¹, V A de Ridder

Depts of Traumatology, Medical Center Haaglanden, and ¹Radiology, Medical Center Haaglanden, the Netherlands

A total of 138 consecutive acetabular fractures were treated using a protocol proposed by Matta (1980). 41 patients were treated conservatively, 82 underwent surgery. 15 patients were lost to follow-up.

Results: One patient died during the postoperative period, 5 others within 3 months. The remaining patients were followed up for an average of 62 months.

These patients were reviewed clinically and radiographically. In all, 83.5% had excellent or good, 2.5% fair and 14% poor results.

A correlation was found between the radiographic and clinical outcomes. The results were best in simple anterior and transverse fractures; comminuted and impacted posterior fractures gave a disappointing results.

The results obtained are similar to those mentioned in various studies. It is concluded that this protocol allows adequate treatment of acetabular fractures.

Functional results and complications after ablation treatment and after limb-saving therapy in osteogenic sarcomas of the lower extremity

A J S Renard¹, R P H Veth¹, H W B Schreuder¹, C J M van Loon¹, H Schraffordt Koops² and J R van Horn³

Depts of ¹Orthopedics, University Hospital St Radboud, Nijmegen, ²Oncological Surgery, University Hospital Groningen, and ³Orthopedics, University Hospital Groningen, the Netherlands

The functional results and the complications were evaluated after various limb-saving and ablative treatments because of osteogenic sarcomas of the lower extremity.

Method: 77 surviving patients (52 with limb-saving and 25 with ablative treatment) were evaluated according to the ISOLS functional score system.

Results and conclusions: The functional results were significantly better in the limb-saving than in the ablative group ($p = 0.0001$). The functional results in patients with tumors round the knee joint were significantly better ($p = 0.006$) after limb-saving than after ablative surgery.

Complications occurred three times more often after limb-saving procedures and four times more often after reconstruction with an endoprosthesis than after ablative procedures.

17 years' follow-up after knee prostheses

P Konings and R G H H Nelissen

Dept of Orthopedics, Leiden University Medical Center, Leiden, the Netherlands

In the course of the last 10 years, a considerable number of new knee prostheses were introduced into the market. One of the oldest types of the current generation of knee prostheses is the Total Condylar knee prosthesis (Zimmer, Warsaw, USA). A group of 220 of these knee prostheses (cruciate ligament resection type) were analysed.

The evaluation was based on a clinical (Hospital for Special Surgery) and a radiological (Knee Society) score. At the time of the last follow-up examination, a visual analog score (VAS) was carried out as well. Variables were analysed during the follow-up by means of a repeated measurements ANOVA test.

Mean preoperative age was 69 years. The mean flexion amounted to 100°, the mean extension to -8° over 17 years' follow-up. The mean score decreased on average by approx. 15 points during the follow-up of 17 years. In one patient, radiolucence 2 mm was visible in all areas of the entire knee prosthesis.

Revision operations were carried out in 8 knee prostheses (one septic loosening). The VAS scores of the last follow-up 10–17 years) were 9 for pain (SD 1.6), 9 for satisfaction (SD 1.3) and 9 for function (SD 1.8).

The total condylar knee prosthesis is still a well functioning prosthesis, with few long-term complications.

The 15-year results of peripherally operated knees with anteromedial and/or anterolateral instability in the presence of a surgically confirmed rupture of the anterior cruciate ligament

B Nelemans¹, A J G Nollen¹ and D D Niesten²

Depts of Orthopedics, ¹St Joseph Hospital, Veldhoven, and ²Leyenburg Hospital, The Hague, the Netherlands

99 patients with rotary instability of a knee and surgically confirmed anterior cruciate ligament (ACL) ruptures were operated on between 1 January 1983 and 1 January 1985 after random division into two groups: Group A (50x) peripheral repair and suturing of ACL, and group B (49x) peripheral repair without suturing the ACL or removal of remnants of the ACL. Conclusion: No difference in stability between the two groups (doctoral thesis M.J.M. Driessen, Verse Knieband Letsels/Fresh Knee Ligament Injuries, 1989).

Subject of the study: 15-year results.

Method: Examination as in 1986.

Material: 91 of the original 99 patients were traced. 49 patients were examined completely, 82 completed a questionnaire. 9 patients were not eligible for the study.

Results: The Lysholm score remains good but decreases by approx. 4 points. The functional capacity of the operated knee remains less than that of the contralateral knee. Measured isokinetically, the quadriceps force of the contralateral knee is greater than that of the operated knee. The hamstring strength is the same on both sides. The anterior drawing sign (Edixhoven instrumentarium) increased in group A and remained the same in group B. Posterior drawing sign remains unchanged. Reoperations show little difference between the two groups. Five of the 91 patients (5.5%) were subjected to plastic repair of the ACL. Arthrosis occurred in both groups: 17% in group A and 27% in group B.

Conclusion: Primary suturing of an ACL rupture in severe knee ligament injury with rotatory instability has no effect on the stability after 15 years and consequently is not useful.

Results of the treatment of fractures of the lower leg with the UTN

N C Goelema and R M Castelein

Dept of Orthopedic Surgery, Isala Clinics, location Weezenlanden, Zwolle, the Netherlands

UTN (Unreamed Tibia Nail) is used in many Dutch hospitals for the stabilization of fractures of the lower leg. What are the results of the use of this pin?

Method: Clinical records, condition and radiographs were studied on 45 patients treated with a UTN. Anamneses were taken, clinical examination performed and total leg radiographs made in 38 of them.

Results and conclusion: Over 75% of the patients were (highly) satisfied with the result. A valgus or varus position of the tibia amounting to 5 U or more (max 12 U) was seen in 54% of the total leg radiographs made.

Conclusion: The clinical results are good. The radiological results, however, are not excellent.