

CAN THE PATIENT'S MEMORY OF THE TIMING OF PAIN EVENTS REPLACE CHART NOTES ?

A. L. BARCK

The reliability of the patient's memory as to when pain remitted and relapsed was studied ten years after knee replacement. Pain was chosen because it is the most frequent spontaneous patient complaint, and the remission and relapse points in time are clinically important. The standard for the comparison was information extracted from the medical records. The patient's information on the time of remission of pain could not be trusted. For relapse there was a fair but insufficient association (Spearman's correlation coefficient + 0.51).

Keywords : pain ; arthroplasty ; knee.

Mots-clés : douleur ; prothèse de genou.

INTRODUCTION

The dilemma when formulating treatment studies for new designs of knee replacement is that for each generation the relative benefit becomes progressively smaller. If the clinical contribution is small, it is important to have large samples that are thoroughly followed up over decades. Increasing migration in modern society magnifies this problem. One solution is follow-up interviews by telephone. Accuracy is then a major problem, and time specially is a worrisome issue in this framework.

The aim of the study was to check the patient's capacity to remember clinical points in time.

MATERIALS AND METHODS

The patient's notion of the points in time for remission and relapse of pain was correlated with the information found in the medical records. The clinical chronologic items analyzed were : the patient's memory of when the initial period of stable pain relief started

(remitted) and when it ended (relapsed). As the standard for comparison, the corresponding information was extracted from the medical records.

The patients were the remaining cohort of 104 patients who had been operated with a compartmental knee prosthesis described by Barck (3). It was developed on the Gunston concept, based on a design resembling the St. Georg compartmental prosthesis. The patients had been followed postoperatively over a ten-year period and have been described thoroughly before by Barck (1, 2, 4). At the ten year follow-up 41 patients had died, five were too ill to answer, three refused to participate and five could not remember.

Fifty patients with 56 knees were included. Rheumatoid arthritis afflicted 16 patients (20 knees) and degenerative arthritis 34 patients (36 knees). Thirty-five were women (39 knees), and 15 were men (17 knees). Medial replacement had been performed in 32 knees, lateral in five and bicompartamental in 19 knees. Their median age at the ten-year follow-up was 71 years (range, 43 to 87 years). The median of Quetelet's body mass index (Kg/M.M [body weight in kilograms divided by the square of the patient's length in meters]) was 25 for men (range, 22 to 30) and 24 for women (range, 17 to 38). Normal values of Quetelet's body mass index for men are 20 to 25 and for women 19 to 24 [Hollingworth *et al.* (6)]. The general health was very good in 20 patients assessed according to the assessment system developed by Waugh *et al.* (11). Memory was clinically classified as normal in 38 patients. The clinical state at the ten-year examination was also expressed by two conventional clinical scores, the American Knee Society's clinical rating system (AKS - maximal score 200 points) described by Insall *et al.* (7) and the Hospital for Special Surgery knee-

Department of Orthopedics, Stockholm Söder Hospital, Karolinska Institute, S-11883 Stockholm, Sweden.

Correspondence and reprints : A. L. Barck.

rating system (HSS - maximal score 100 points) described by Ranawat *et al.* (9). The median value of AKS was 113 points (range 21 to 180), and the median value of HSS was 73 points (range 13 to 97).

Ninety-five percent of the clinical examinations had been done by two orthopedic surgeons in the same department. The question to the patient at the ten-year follow-up was asked by the surgeon (AB) who had not done any of the surgical procedures but had followed the patients clinically from five years onwards. The patients had been examined postoperatively after six weeks, six months, 12 months and then yearly, not counting consultations for acute knee problems. The date of pain remission was set at the first citation of pain relief, provided an identical value for pain relief was reported on the following examination. Pain relapse was set at the first year after remission when pain of any kind was reported. Time was arranged on an ordinal scale because it derived mainly from fixed appointments for follow-up rather than a continuous time curve. To allow for patients who said they never had a stable period of remission, pain was classified on a 5-category ordinal scale as :

1. "0 to 0.3 yr." ;
2. "0.4 to 0.7 yr." ;
3. "0.8 to 1.4 yr." ;
4. "1.5 to 2.4" ; and
5. "never a stable period of pain relief".

Relapse time data were also analyzed on an ordinal scale.

The statistical calculations were made with JMP®, version 3.1 statistical software from the SAS® Institute. The association between the times for remission of pain was expressed as the Kappa statistic recommended by Kramer *et al.* (8). Kappa corrects for agreement expected by chance. The correlation of the time data for relapse was calculated as Spearman's rho (rs) recommended by Siegel (10).

RESULTS

From the medical record findings it could be seen that all patients experienced some pain relief within the first two years. The median time to pain remission as defined in this study was one year, and to relapse seven and a half years. Eight patients never had a stable period of pain relief. Five patients with rheumatoid arthritis had no change in their pain relief over time. Twenty-four

patients (28 knees) had continuous pain relief up to the day of the ten-year follow-up.

There was no association between the pain remission information in the medical records and the patient's memory of when the remission occurred (Kappa -0.09 ; p-value > 0.05).

For the relapse of pain there was a fair correlation between data from the medical records and from the patients (Spearman's Rho = + 0.51 ; p-value 0.0001). The results did not change if the 12 patients who seemed to have memory problems were excluded (Kappa -0.13, Spearman's Rho + 0.51).

DISCUSSION

The patients' capacity to remember clinically important points of time for pain was poor. The time at relapse was a little easier to remember than remission. Pain was chosen because it is the most likely of clinical manifestations to be remembered and cause the patient to seek medical attention. It is also the most obvious clinical manifestation for the patient and an important target of treatment for the clinician.

The importance of methodological questions in comparison of different observational methods has been thoroughly discussed by Feinstein (5). Suitability and similarity of the examined group, the compared procedures and the resulting scale of output are key factors. The patients analyzed in this study were well suited to a process study. The group was the remainder of a consecutively operated cohort that was carefully described by Barck (1, 2, 4) and represented the clinical reality in a city hospital. The patients had been closely supervised because they had been treated during a period when the clinical indications for compartmental knee replacement had been explored. They represent a wide range of clinical severity, co-morbidity and origin of cartilage destruction. The challenge to the methods in terms of mental capacity was broad enough judged from the results. The clinical examinations had been done by two motivated surgeons in the same surroundings. The question to the patient at the ten-year follow-up was asked by the surgeon who had not done any of the surgical procedures.

In choosing between the patient's memory and the physician's indication in the medical record on the timing of a clinical manifestation it is probably the best to rely on the chart notes.

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SAMENVATTING

A. L. BARCK. Kan de herinnering van de patiënt inzake pijnervaring de dossiernota's vervangen ?

10 jaar na een knieprothese werd de betrouwbaarheid van de herinnering van de patiënt inzake pijn nagekeken. Men opteerde voor de pijnsensatie gezien dit de meest spontane klacht van de patiënt is en dat herhal of regressie belangrijke klinische waarden hebben. Als standaard werd er vergeleken met de informatie uit de medische dossiers. De herinnering van de patiënt inzake regressie van de pijn is niet betrouwbaar. Voor herhal was er een zwakke doch insufficiënte associatie (Spearman-correlatiecoëfficiënt van 0,51).

RÉSUMÉ

A. L. BARCK. Les souvenirs du patient concernant l'évolution de sa douleur peuvent-ils remplacer son dossier médical ?

Cinquante patients ont été revus, dix ans après avoir subi une arthroplastie de genou, pour tester la fiabilité de leurs souvenirs concernant l'évolution de leur douleur. La douleur a été étudiée parce que c'est la plainte spontanée la plus fréquente, et parce que sa rémission et sa récurrence sont des faits cliniques importants. L'élément de référence était l'information extraite du dossier médical. L'information fournie par les patients concernant les dates de rémission de leur douleur s'est avérée non fiable. En ce qui concerne la date de la récurrence de la douleur, la correspondance avec l'information du dossier était moins mauvaise mais restait insuffisante (coefficient de corrélation de Spearman : + 0.51).