

Current European Practice in the Treatment of Proximal Interphalangeal Joint Arthritis



Daniel B. Herren, MD, MHA

KEYWORDS

- Arthroplasty • Proximal interphalangeal joint • Conservative treatment • Osteoarthritis • Finger joint
- Arthritis • Function

KEY POINTS

- Joint arthroplasty of the fingers is one of the options to treat painful destroyed proximal interphalangeal joints. It is gaining more and more popularity in Europe, especially in the growing population suffering from osteoarthritis of these joints.
- The most popular prostheses are Silastic implants, which provide predictable results with low revision rates. The main disadvantage is lateral instability, which can lead to significant joint deformity and the risk of implant breakage over time.
- Newer implants include 2-component hard bearing joints that mimic the joint constrain to maintain lateral stability and better correct deformity of finger joints.
- In Europe, most surgeons prefer uncemented prostheses, but implant fixation remains an issue; additionally, loosening and subsidence are often seen complications.
- The newest generation of proximal interphalangeal joint prosthesis in Europe has a modular structure, allowing optimal tensioning of the joint and surrounding tissues.

INTRODUCTION

Among the different treatment options in proximal interphalangeal (PIP) joint disease, arthroplasty has gained a lot of popularity in the last few years and undergone a remarkable evolution.¹ New implants, different surgical approaches, and different rehabilitation are part of the development in this field. The main indication for PIP arthroplasty is this degenerative joint disease (ie, osteoarthritis [OA]). The treatment of post-traumatic conditions seems to be stable or even decreasing over the last few years probably due to improved fracture management. Likewise, PIP arthroplasty in

rheumatoid arthritis (RA) has become less frequent because of improved treatment of RA.

Some studies suggest that the finger joints are the most common site of osteoarthritis in the entire musculoskeletal system.² It has been shown that the cumulative incidence of finger joint osteoarthritis is generally higher in women, but the distribution over the different finger joints is the same in both sexes.

The growing number of patients affected by this disease, together with the increasing therapeutic possibilities, makes this probably one of the fastest growing patient population in hand surgery, especially for PIP joint arthroplasty.

Disclosure: The author receive royalties from KLS Martin Tuttlingen, Germany, for one of the devices mentioned in the article (CapFlex prosthesis).

Hand Surgery Department, Schulthess Klinik, Lengghalde 2, Zurich 8008 CHE, Switzerland

E-mail address: daniel.herren@kws.ch

Hand Clin 33 (2017) 489–500

<http://dx.doi.org/10.1016/j.hcl.2017.04.002>

0749-0712/17/© 2017 Elsevier Inc. All rights reserved.

INDICATIONS AND TREATMENT

The main symptom in PIP joint osteoarthritis is pain. The degree of functional impairment in the PIP joint after OA depends on which joints are affected, the degree of stiffness, and the range of the residual arc of motion. Stability of the interphalangeal joints is an important issue, especially in the radial digits for strong pinch with the thumb. Patients with an erosive and inflammatory type of OA in these joints may have significant instability and deformity, which must be addressed when evaluating surgical treatment options. Another important issue for patients, especially women, is aesthetics.

Diagnosis

The diagnosis of OA of the PIP joint is based mainly on the clinical picture and confirmed by radiographs (Fig. 1).

The initial phase of disease is an inflammatory process that comes to a halt at a later stage.³ This explains why many patients have fewer symptoms at the end stage of the disease than at the beginning. It is recognized that radiographs and



Fig. 1. Typical appearance of multiple osteoarthritis in the finger joints. Most often the DIP and PIP joints are involved, as well as the thumb saddle joint. The index PIP joint is often deviated to the ulnar side due to the mechanical forces in pinching with the thumb.

symptoms do not correlate. That is, the main reason that classifications and staging based on radiographs are rarely used. More important is the radiographic evaluation of the bone quality, namely defects and cyst formation. These and the presence of stiffness and deformity play a crucial role in the indication of possible surgical treatment options.

Conservative Treatment

Osteoarthritis is an incurable disease, and all attempts to treat this condition do no more than modify the symptoms. There is little evidence that any sort of prevention might be effective in stopping unaffected joints becoming part of the disease process. Besides oral medication, intra-articular treatment with an infliximab injection showed a good symptomatic benefit with a possible intra-articular disease-modifying action in erosive osteoarthritis of the hands⁴ in a pilot study.

Conventional treatment includes analgesics and nonsteroidal anti-inflammatory drugs. Intra-articular viscosupplementation with hyaluronic acid has been shown to be effective in terms of pain relief and improved disability. Compared with intra-articular corticosteroids, it seems to have a longer benefit,⁵ especially in the knee joint. However, personal experience does not support this observation for the finger joints.

Glucosamine and chondroitin are important components of the normal cartilage. Like viscosupplementation, the efficiency of glucosamine and chondroitin in the treatment of OA has been documented best in early arthritis in the knee joint.⁶ They seem to reduce the need for anti-inflammatory drugs and improve functionality.⁷ Because these substances show few adverse effects, many patients in Europe use these substances in the treatment of their finger arthritis, although there is no scientific evidence that they help.

Operative Treatment

Synovectomy

Surgical treatment options include synovectomy, joint replacement, and joint fusion. There is no conclusive literature on synovectomy of the PIP joint for OA. Synovectomy may be considered in the early stages of the osteoarthritic process when there is marked inflammation and the cartilage is still reasonably preserved.⁸ Because no data on the mid- and long-term effects are available, the authors can only report their personal experience of this intervention. Overall, the results of this procedure are mixed at best.

Download English Version:

<https://daneshyari.com/en/article/5708094>

Download Persian Version:

<https://daneshyari.com/article/5708094>

[Daneshyari.com](https://daneshyari.com)