There are many good reasons to be interested in osteoarthritis of the hand:

1 - It is of central importance to osteoarthritis: osteoarthritis of the hand (osteoarthritis of the finger and of the thumb basal joint) is the most common joint site, and affects up to 60% of the general population between the ages of 65 and 75 years. Genetic factors are key: “heritability”, as English speakers call it, is estimated to be present in 70% of cases, but trauma and repetitive strain are also often involved, whether in combination with genetic factors or not.

2 - Although many women with osteoarthritis do not experience pain, the deformation caused by bony nodules is unsightly and can sometimes cause a great deal of upset to those affected. When there is pain, it is most commonly intermittent, and appears in flares. However, there is a specific sub-group of so-called “erosive” osteoarthritis which can be particularly disabling; these may be difficult to distinguish clinically from psoriatic arthritis.

3 - Validated assessment tools are available for monitoring these patients. From a clinical point of view, Dreiser’s algo-functional index is simple, reproducible and sensitive to change. From a radiographic point of view, various classifications allow structural changes to be monitored.

4 - Finally, the recently published European recommendations for treating osteoarthritis of the hand provide useful guidelines for the systematic management of the condition.

In short, all the conditions are present for us to carry out clinical trials in this joint site, as we have already done with knee osteoarthritis and hip osteoarthritis. Osteoarthritis of the hand is the third form of osteoarthritis to be validated for the evaluation of treatment modalities, whether these be pharmacological, educational or surgical. The osteoarthritis section of the French Society for Rheumatology has clearly understood this, and has just launched a randomized study of erosive osteoarthritis of the hand.

OSTEOARTHRITIS OF THE FINGER

Professor P. Mansat, Professor J.-J. Railhac, Professor B. Fournié

Epidemiology and pathogenesis

Osteoarthritis of the hand is particularly common in women of over 50 years. It is often more deforming than debilitating but it can have profound adverse effects on quality of life by making it more difficult to perform the activities of daily living, such as dressing and eating. It is usually located in the distal interphalangeal joints of the fingers and at the base of the thumb. Treatment consists of joint rest in combination with symptomatic therapies. Surgery is only used in cases of pain and disability and consists of stabilizing the distal joints and facilitating proximal joint mobility.

Epidemiology

Osteoarthritis of the hand is estimated to affect 38% of women and 24% of men. It particularly involves the distal interphalangeal joints and increases with age [1-6]. While the prevalence of radiographically detectable osteoarthritis varies from 6 to 20% in young adults, it is present in 80% of older people, although few patients experience symptoms [7]. Distal interphalangeal involvement or Heberden’s nodules are found in 20% of people aged over 55, whilst among the same age group, proximal interphalangeal involvement and Bouchard’s nodules are only found in 5% and thumb basal joint osteoarthritis (trapeziometacarpal osteoarthritis) in 8% of cases. Gender clearly plays a role as osteoarthritis is 50% more prevalent in women than men in all age groups before the age of 70. Thumb basal joint osteoarthritis is almost unknown in men under 50 whilst it is present in 8% of women in this age group [1-3]. Several studies have highlighted the connection, not coincidental, between osteoarthritis of the finger and in other sites, in particular knee osteoarthritis and hip osteoarthritis [8].

Pathogenesis

The influence of genetic factors seems to have been confirmed. However, hormonal factors, obesity, and repetitive and mechanical strain are also involved.
1) Genetic factors
Several studies have demonstrated the influence of genetic factors. Keilgren and Lawrence showed that Heberden’s and Bouchard’s nodules are present in 36% of men and 49% of women who present with osteoarthritis of the hand, while they are present in 17% and 26% respectively of the general population [9]. Spector’s study of twins found a concordance rate of 51.6% among monozygotic twins for Heberden’s nodules in contrast to 27.3% among dizygotic twins, confirming the influence of genetic factors in osteoarthritis of the hand in women [10]. This study also demonstrated the role of genetic factors in concomitant osteoarthritis of the finger and knee osteoarthritis. The Bristol study showed that 44% of patients who had presented with osteoarthritis of the finger alone when they entered the study had osteoarthritis of the knee or hip eight years later [8]. A possible link with HLA antigens has been demonstrated, in particular for type HLA A1 B8 [11]. Molecular biological studies appear to have demonstrated mutations in the type II procollagen gene, the predominant collagen in joint cartilage; mutations of the type II procollagen gene (COL 2A1) have been identified in severe forms of chondrodysplasia and also in certain early onset and progressive forms of hereditary osteoarthritis [11].

2) Hormonal factors
Although there is an increased incidence of osteoarthritis of the finger in menopausal women, no correlation has been established between hormonal changes and the onset of osteoarthritis of the finger [12]. Experimental studies have produced contradictory results on the protective [13] or destructive role of estrogen on cartilage [14]. Similarly, no correlation has been found between bone mineral density and osteoarthritis of the hand [15] or between non-insulin dependant diabetes and osteoarthritis of the finger [16].

3) Obesity
Surprisingly, a correlation has been established between obesity and osteoarthritis of the finger. Obesity appears to be an important risk factor for osteoarthritis of the knee and hand, with an increased risk of 9 to 13% for each kilo of extra body weight [17].

4) Repetitive and mechanical strain
Repetitive and mechanical strains are factors which are frequently implicated. Osteoarthritis preferentially involves the index finger and trapeziometacarpal joint, which are subject to particular strain during the five finger pincer grasp. Lesions are mainly present on the patient’s dominant hand. The Framingham study showed that strain in men leads to an increased risk of osteoarthritis in the proximal interphalangeal, metacarpophalangeal and basal thumb joints, whilst in women, this is mostly relevant to the metacarpophalangeal joints [18]. No link was found between manual activity and osteoarthritis of the distal interphalangeal joints, in men or women.

Functional assessment methodology
There is no correlation between radiographically detectable and clinical signs in this condition. Lawrence has shown that only 9% of men and 25% of women presenting with radiographically detectable osteoarthritis of the distal interphalangeal joints experience any symptoms [19]. Functional impairment is best assessed using a functional index such as Dreiser’s index [20]. A higher score indicates a more significant level of impairment.

A subjective self-administered questionnaire for overall functional ability of the upper members has also been drawn up. The DASH (Disability of the Arm, Shoulder and Hand) questionnaire is recommended by Dubert et al. [21]. This questionnaire comprises 30 questions, of which 21 assess difficulty in performing activities of daily living which require precise movements. The other nine deal with social activities (three questions) and particular symptoms, such as pain, strength, mobility and sleep (six questions). The questionnaire may be interpreted as long as the patient leaves no more than three answers blank. The assigned values for all completed responses are summed and averaged. This result is then algebraically transformed to give a score out of 100, which can be more intuitively interpreted. A high score indicates a significant level of impairment.

Table 2: Items from the DASH questionnaire

1. Open a tight or new jar
2. Write
3. Turn a key
4. Prepare a meal
5. Push open a heavy door
6. Place an object on a shelf above your head
7. Do heavy household chores (e.g. wash floors)
8. Garden or do yard work
9. Make a bed
10. Carry a shopping bag or briefcase
11. Carry a heavy object (over 10lbs)
12. Change a light bulb overhead
13. Wash or blow-dry your hair
14. Wash your back
15. Put on a pullover sweater
16. Use a knife to cut food
17. Recreational activities which require little effort
18. Recreational activities in which you take so...
Validation of an algo-functional index in osteoarthritis of the hand

By RL Dreiser et al.

Revue du Rhumatisme 1995 62 - 129 S

This questionnaire covers 10 everyday activities with four levels of response possible (0 to 3), with a total score from 0 to 30. This study aimed to evaluate its reliability, sensitivity and specificity. The average score is 12.41 ± 5.41 for people suffering from painful osteoarthritis and 0.59 ± 1.23 for the control group.

The algo-functional index was judged to be a good tool for functional assessment that could be useful in clinical trials.

Activities of daily living
- Turning a key
- Using a knife to cut meat
- Using scissors to cut fabric or paper
- Lifting a full bottle
- Making a fist
- Tying a knot
- Sewing, using a screwdriver
- Buttoning up clothing
- Writing for a long time without a break
- Shaking hands firmly

Difficulty
- None = 0, moderate = 1, significant = 2, impossible = 3

Clinical forms: imaging

Radiographs allow us to confirm the diagnosis of osteoarthritis, assess it as erosive or non-erosive and to evaluate the number of joints involved. In the initial stages, radiographs are normal or only show very slight signs of osteoarthritis, such as the beginning of joint space narrowing and hypertrophy of the epiphyses.

Subsequently, osteosclerosis, cysts and osteophytes in particular appear very clearly on the lateral radiograph at the dorsal surface of the base of the phalange. These changes progress until they become visible on a PA radiograph.

The signs are particularly clear for the distal interphalangeal joints. From Olejarova et al, osseous scintigraphy could be useful in predicting a tendency towards worsening clinical and radiographic osteoarthritis of the hands, erosive or not [22].

Clinical forms

These are perfectly described by Delcambre et al.[23].

1) Distal interphalangeal joint osteoarthritis (Heberden’s nodules)

Osteoarthritis most commonly affects the distal interphalangeal joints and appears in inflammatory flares. It can affect several fingers concomitantly, and involve both hands symmetrically. Functional symptoms are variable. Although the nodules are only rarely accompanied by significant functional impairment, their appearance is often preceded by pain (often mild or sometimes throbbing) in the posterior surface of the joint. Sometimes symptoms are restricted to dysestaehesia or numbness in the extremities of the fingers, particularly while performing manual tasks. These symptoms can entail significant functional handicap [24]. The pain usually lessens when joint deformity has become established. It may even completely disappear after several years of progression, in which case functional impairment is limited to a certain degree of clumsiness and difficulties in precise prehension.

2) Proximal interphalangeal joint osteoarthritis (Bouchard’s nodules)

Bouchard’s nodules are associated with proximal interphalangeal joint osteoarthritis. These are rarer than Heberden’s nodules, and appear concomitantly with these in 30% of cases. The appearance of the swelling caused by Bouchard’s nodules differs from Heberden’s nodules: it is more widespread, without the posterior swelling which causes a knot-like hypertrophy of the joint. Often, only a few joints (or sometimes only one) are involved. Its course is characterised by an initial painful phase, often accompanied by effusion. After a progression of several years, persistent swelling limits flexion and causes functional handicap to a greater or lesser extent.

3) Metacarpophalangeal joint osteoarthritis

Metacarpophalangeal joint osteoarthritis is less common without being exceptional, especially in older patients. It seems to often be associated with trauma caused by manual activities or sports. The most frequent site is the thumb, often following a sprain.
Functional impairment is usually insignificant or non-existent, apart from for the thumb. The joint is only slightly deformed. However, in advanced forms, deviation towards the ulnar side of the hand may be observed, in characteristic ulnar drift.

4) Carpometacarpal joint osteoarthritis

This is a rare site, normally post-traumatic, and which preferentially involves mobile fourth and fifth metacarpal joints. The symptom is pain at the base of the fourth and fifth fingers when the hand is clenched, which can cause a loss of strength and failure to grip a heavy object.

5) Thumb basal joint osteoarthritis

This mainly affects women (in 80 to 90% of cases) and was described as a separate condition by Forestier in 1937. It is most often bilateral and appears around the menopause. It is mainly secondary to mechanical strain resulting from opposition movements of the thumb. Certain anatomical features may also be implicated, such as dysplasia of a flattened and oblique trapezius, which may lead to the subluxation of the first metacarpal, or abnormal insertion of the tendon of the long abductor muscle of the thumb. Trapeziometacarpal joint osteoarthritis is often part of more widespread osteoarthritis, providing an illustration of the concept of peritrapezial osteoarthritis where scaphotrapezial or trapeziotrapezoid joint osteoarthritis are also present.

Thumb basal joint osteoarthritis is usually first indicated by mechanical pain at the base of the thumb. It varies in intensity from patient to patient, and even in the same patient over time. It may be sudden, sharp or throbbing and lead to significant functional impairment: lack of strength, failure to grip heavy objects and increasing difficulty in prehension. There is no correlation between radiographic and clinical signs. Night pain may occur during flares, but should be investigated to exclude carpal tunnel syndrome, which appears to be present in nearly half of cases. In the initial phase, there is no swelling; sharp pain is produced by applying pressure to the trapeziometacarpal joint space through the column of the thumb, by applying pressure to the dorsal surface of the thumb in the area of the anatomical snuff-box (thumb flexed) or by applying pressure to the palmar surface of the joint (thumb extended). Next, slight swelling appears at the base of the thumb, and the base of the metacarpal becomes gradually more prominent, as a result of dorsal subluxation. Active and passive movement of the joint causes pain and sometimes clicking. Joint mobility gradually becomes more restricted and the thumb becomes adducted with closure of the first commissure and loss of abduction, then compensatory hyperextension of the metacarpophalangeal joint. Progression can lead to the thumb taking on a “Z” shape. After some years, the pain may decrease or even disappear, at the cost of the thumb being fixed in a very awkward position, which is particularly disabling. A detailed radiographic assessment focusing on the column of the thumb and performed in line with Kapandji’s recommendations allows an evaluation of the extent of osteoarthritis and deformity as well as investigation of possible peritrapezial osteoarthritis [25].

6) Erosive osteoarthritis of the finger

This is a particular progressive type of osteoarthritis of the finger. It is much rarer than other forms of osteoarthritis of the hand and almost always affects women. It usually first appears in post-menopausal women of around 50 years. Its onset is normally severe and sudden, with pain and localized inflammation, initially involving the distal interphalangeal joints and successively spreading to the proximal interphalangeal joints and the trapeziometacarpal joint. After a variable period of inflammation, marked by redness, inflammation and pain and limited joint mobility and sometimes morning stiffness, the fingers become deformed and nodules form. As a rule, involvement is bilateral and symmetrical and the index and little fingers are primarily affected. In around one case out of ten, mucosal cysts form around the distal interphalangeal joints or, much more rarely, around the proximal interphalangeal joints. Once the deformities have been formed, they appear identical to those caused by common forms of osteoarthritis of the finger, but they may develop into ankylosis of the proximal and distal interphalangeal joints.

From a biological point of view, the erythrocyte sedimentation rate is moderately high in one case out of two, but only exceeds 40 mm at the first hour in one case out of ten. Rheumatoid factor and anti-nuclear antibodies are negative. Attention has recently been drawn to a higher level of p-ANCAs than observed in rheumatoid polyarthritis (21% in contrast to 13%), whereas this was not observed in a control group of patients with osteoarthritis. When analysed, synovial fluid has changes in keeping with joint disease or mild inflammation; examination for micro-crystals is negative. Diagnosis may be suggested clinically from the intensity of pain and local inflammation, but this can only be confirmed by radiographs showing erosion and new bone formation. Erosion begins in the central part of the joint and in the end results in the classic osteolytic “pencil in cup” deformation of the distal and proximal phalanges. Signs of reconstruction and osteophytosis similar to that occurring in common osteoarthritis are also present. In the most severe forms, the articulating bones become deformed and eventually embedded in each other; this results in misalignment and sometimes severe deformity.
Treatment

1) Conservative treatment
As in any site affected by osteoarthritis, the aim of treatment is to alleviate or eliminate pain and to try to slow the progression of joint lesions. It therefore normally involves the analgesics commonly used during painful flares and oral non-steroidal anti-inflammatory drugs (NSAIDs). Local therapies are sometimes prescribed, such as percutaneously administered NSAIDs, and intra-articular injection of cortisone derivatives, which we believe to be particularly beneficial in the initial phase of thumb basal joint arthritis and Bouchard’s nodules. Chondroprotective agents can also be used at this stage. Physiotherapy as well as heat treatments can also provide significant functional improvement [26].

In general, although restricting movement may cause practical difficulties for the patient, splinting does relieve pain. This is particularly true for thumb basal joint arthritis where wearing an orthosis which fixes the joint in a functional position allows pain to be reduced and the thumb to be held in opposition, in order to prevent closure of the commissure and dorsal subluxation of the metacarpal base.

In the particular case of erosive osteoarthritides of the finger, hydroxychloroquine may be prescribed as an alternative to conventional therapy [27]. Use of gold salts and more recently methotrexate have been suggested, but their efficacy has not been clearly proven.

2) Surgical treatment
The indications for surgery in the treatment of osteoarthritis of the finger are age, joint function and in particular pain and success of medical treatment. The main aims of surgery on the hands are to maintain mobility of the metacarpophalangeal joints, arthrodesis of the distal interphalangeal joint and a compromise between the stability and mobility of the proximal interphalangeal joint, depending on which finger is involved and how many joints of the same finger are involved. Classically, in the five finger pinch, the two radial fingers need to be sufficiently stable to resist pressure from the thumb; in contrast, the mobility of the two ulnar fingers, which curl to help the hand apply force, needs to be preserved. For the thumb, surgery usually aims to improve mobility of the trapeziometacarpal joint and stability of the metacarpophalangeal and interphalangeal joints.

1) IPD joint osteoarthritis
Surgical intervention can be considered in inflammatory and erosive forms which often appear post-menopausally and are frequently associated with mucosal cysts.

Arthrodesis is the surgery of choice for forms of osteoarthritis which resist medical treatment on the joints which most frequently suffer stiffness, and in cases of disabling clinodactyly, particularly of the index finger. This is performed with an angle of flexion that increases from the index to the little finger (20 to 40°).

2) IPP joint osteoarthritis
Surgery is indicated when the patient experiences pain and disability despite medical treatment. Depending on the joint affected and the joints affected on the same finger, a choice is made between a joint prosthesis, which allows joint mobility to be maintained, or arthrodesis, which will stabilize the joint permanently in functional position. For the index finger, arthrodesis tends to be used, at a flexion angle of 30°, in order to resist lateral pressure from the thumb during the thumb and forefinger grip. For other fingers, a digital prosthesis may be considered. Classically, this is a silicone implant, based on the model described by Swanson, but hinged and sliding prostheses also exist. These enable non-painful movement in a functional area. However, they are not free from mechanical problems, and patients are advised to limit their activities in order to preserve implants for as long as possible [28, 29].

3) Thumb basal joint osteoarthritis
Surgical intervention can be considered when pain is not alleviated after medical treatment has been followed for at least a year. The decision to operate should be taken before the thumb deformity becomes severe and irreversible. Dell’s classification allows the radiographic grade to be assessed, including the degree of involvement of the joint surface and whether peri-trapezial osteoarthritis is present [30].

Comtet’s classification also takes into account peri-trapezial lesions and metacarpophalangeal joint lesions. Concomitant conditions should also be investigated, in particular the simultaneous incidence of compression of the median nerve at the wrist. If surgery is indicated, we advocate beginning by freeing the median nerve in order to see how this affects pain in the column of the thumb.
As regards treatment, we base therapeutic decisions on Comtet’s classification [31]:

- **Grade 0:**
  Trapeziometacarpal ligamentoplasty

- **Grade 1:**
  Partial trapezectomy with tendon realignment and interposition; the alternative is prosthetic arthroplasty if the trapezium is of sufficient volume. Arthrodesis can be considered in young patients;

- **Grade 2:**
  Partial trapezectomy with tendon realignment and interposition or prosthetic arthroplasty with metacarpophalangeal ligamentoplasty in both cases if joint hyperextension is not reduced spontaneously in the course of this operation;

- **Grade 3:**
  Capsuloplasty of the MPP joint is no longer possible; trapeziometacarpal prosthetic arthroplasty is contra-indicated because of the risk of destabilization by MPP arthrodesis; the combination of a partial trapezectomy with tendinoplasty and an MPP arthrodesis seems to present a less serious risk of instability;

- **Grade 4:**
  Involvement of the two main peritrapezial joint spaces (TM and STT) is the typical indication for total trapezectomy combined with tendinoplasty.

Partial trapezectomy is of interest as it aims to remedy the principal disadvantage of total trapezectomies: collapse of the thumb column causing decomposition by the metacarpophalangeal joint, and a lack of strength [32]. In our experience, partial trapezectomy provides satisfactory results in 88% of cases, and over 90% of patients are satisfied: the pain either disappears or is minimalized in 88% of cases, opposition is sub-normal, with just a diminution of the retention of the thumb, and the patient recovers the correct degree of opening of the commissure. The strength of the thumb and forefinger pinch is evaluated as 6.5 kg.

The main risk of anatomical prostheses is instability caused by the relaxation of ligaments that commonly occurs during osteoarthritis. The risk of more constraining prostheses is loosening. A multicentric study found the overall failure rate to be 14%. Complications mostly involved loosening, fractures and luxation. The rate of survival at 6 years was 66% [34]. In a study of patients assessing 77 De Lacaffinière prostheses after an average of 8.5 years, loosening was noted in 44% of cases, and survival was evaluated at 72% at 16 years [35]. Contraindications for these prostheses are patients under 65 years, patients who are active, metacarpophalangeal arthrodesis and insufficient height of the trapezium. Their strong points are the recovery of the strength of the thumb and forefinger pinch, varying from 4.2 to 6.6 kg, an average opening of the commissure of 25° and a shorter period of post-operative immobility than for trapezectomies.

Pure hands in rheumatology:

- **Osteoarticular origin**
  - Traumatic and post-traumatic
  - Osteoarthritis (wrist and finger)
  - Inflammatory (RA and psoriatic arthritis)
  - Metabolic (gout, micro-crystals, diabetes, endocrine)

- **Tendinous origin (tendinopathies)**
  - Various topography and etiology, often strain lesions

- **Neurotrophic origin**
  - (algodystrophy) or CRPS (Complex Regional Pain Syndrome)

- **Vascular origin**
  - (Raynaud’s, erythromelalgia, erythrocyanosis)
  - Osseous necrosis (e.g. Kienbock disease)

- **Neurological origin (local or regional)**
  - Tunnel syndromes
  - Projected pain
  - Secondary to brain injury

- **Sceptic origin**
  - Common germs
  - Tuberculosis
"Numerical scoring systems for the progression of osteoarthritis of the finger joints"

G. Verbruggen & al
Revue du Rhumatisme 1995 113 - 129 S

This article supplements Kallman’s scoring system as described in Buckland and Wright’s article. The authors distinguish four phases in the radiographic progression of osteoarthritis: normal joint, joint space narrowing, erosion of the articular and sub-articular surfaces, and remodeling with eventual joint fusion. This results in a scoring system that allows radiographic change to be monitored.

"Therapeutic trials in digital osteoarthritis: a critical review"

R. Treve, E. Maheu, RL Dreiser
Revue du Rhumatisme 1995 113 - 119 S

The authors conducted a critical review of 13 therapeutic trials in osteoarthritis of the finger between 1983 and 1994. Seven related to NSAIDs - systemic (two) and local (five); three involved SAARDs and three involved other therapies. The authors examine the methodology employed in these studies, focusing particularly on criteria for assessing efficacy. This article complements the suggested methodology to be used in clinical trials in this area.

EULAR 2006’s 11 Recommendations

1. Optimal management of hand OA requires a combination of nonpharmacologic and pharmacologic treatment modalities individualized for each patient.

2. Therapy of hand OA should be individualized based on the localization of OA risk factors (age, sex, adverse mechanical factors); type of OA (nodal, erosive, traumatic); presence of inflammation; severity of structural change; level of pain, disability and restriction of quality of life; comorbidity and comorbidities (comparing OA at other sites); and patient wishes and expectations.

3. All patients with hand OA should receive education concerning joint protection (how to avoid adverse mechanical factors) together with an exercise regimen (involving both range of motion and strengthening exercises).

4. Local application of heat (with paraffin wax or hot pack), especially before exercise, and ultrasound are helpful.

5. Splints are recommended for thumb base OA, as well as orthoses to prevent or correct lateral angulation and flexion deformity.

6. Local treatments are preferred over systemic treatments, especially for mild to moderate pain and when only a few joints are involved. Typical NSAIDs and capsaicin are safe and effective.

7. Because of its efficacy and safety, paracetamol (up to 4 g/day) is the analgesic of first choice. It is the preferred long-term oral analgesic for patients who respond.

8. In patients who respond inadequately to paracetamol, oral NSAIDs should be used at the lowest effective dose and for the shortest duration, and the patient’s requirements and response to therapy should be reevaluated periodically. Patients with increased gastrointestinal risk should use nonselective NSAIDs plus a gastroprotective agent or a selective COX-2 inhibitor. In patients with increased cardiovascular risk, COX-2 specific inhibitors are contraindicated, and nonselective NSAIDs should be used with caution.

9. Symptomatic Slow-Acting Drugs for Osteoarthritis (eg, glucocorticoid, chloroquin sodium, methotrexate, sodium salicylate, indomethacin, intra-articular hyaluronic acid) may offer symptomatic relief with low toxicity, but effect sizes are small, suitable patients are not defined, and clinical relevance, structure modification and pharmacoeconomic benefits have not been established.

10. Intra-articular injection of long-acting corticosteroid is effective for painful flares of OA, especially at the trapeziometacarpal joint.

11. Surgery, such as interposition arthroplasty, osteotomy, or arthrodesis, is effective for severe thumb base OA and should be considered in patients with marked pain and/or disability after failure of conservative treatments. These 11 propositions are ranked in descending order of relevance. They are based on study data as well as the opinions of clinical experts.

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tations and participation restrictions in women with hand osteoarthritis: patients’ descriptions and asso-


Osteoarthritis of the finger is especially prevalent in women of over 60. Symptoms are only present in 20 to 40% of cases of radiographically detectable osteoarthritis. The criteria for clinical assessment (RL Dreiser’s DASH Score) and radiographic change (Kellgren and Lawrence, Kallman, and Verbruggen) are very precise. This site of osteoarthritis is often associated with others (such as the knees, spine or polyposteartothritis and hyperostosis) and tends to be considered as a model for the clinical and radiographical evaluation of protracted symptomatic anti-osteoarthritis therapies or chondroprotective therapies (RL Dreiser; E Maheu; K Pavelka).

B Mazére’s analysis of etiologic factors demonstrates osteoarthritis of the finger to be a structural type of osteoarthritis, with reference to the importance of factors such as age, genetic predisposition, gender, hormonal factors and obesity. In contrast to osteoarthritis of the lower limbs, which tends to be mechanical (dysplasia, dysmorphia and dysfunction), however, like any other form of osteoarthritis, osteoarthritis of the finger is multifactorial - people in certain occupations, for example, chefs, are more likely to be affected. However, structural factors tend to be strongly implicated, probably because of lower resilience of cartilage and other connective structures in the joint. To K.D. Brandt’s assertion that “Osteoarthritis is not a cartilage disease” we should add, “not only a cartilage disease”. The cartilage’s biomechanical properties, its visco-elasticity in particular, are in part connected to the characteristics and high degree of hydrophilia of anionically charged proteoglycan aggregates (COO– SO4 H– –) which maintain the molecules in a state of expansion. Water displacement within the cartilage towards the joint space and under the effect of pressure is the essential characteristic, together with the ability of cartilage collagen fibres and connective tissues in the joint to resist tension.

Chondrocytes (2000/mm3) ensure tissue homeostasis and their basic function is synthesis, in particular of the components of aggregan (HA, protein and Ch S). Their turnover is relatively quick (200 per day), and they are chemo and barosensitive. Some structure-modifying compounds used to treat osteoarthritis, such as chondroitin sulfate and glucosamine, do not substitute for a chondrocyte deficiency (these are less active and less numerous in older patients). Instead, they specifically act on cell chemoreceptors in order to re-start the synthesis of GAG on synovial fluid viscosity and hence on restarting HA synthesis is an example of this.

The indisputable therapeutic effects of SAARDs, which alter structure to a greater or lesser extent, must in future be demonstrated using objective criteria. The most frequently used subjective criteria are arbitrary.

The symptoms of osteoarthritis are very variable, especially at stage II and III. The action of therapies which do not target symptoms but instead aim to modify joint structures will be clearer in cases where osteoarthri-