Not a question of age: rheumatoid arthritis

It is a broadly held misconception that rheumatoid arthritis is a condition of the elderly. The result of this lack of awareness is that affected individuals often do not take their symptoms seriously and wait too long to see a physician. By this time, the best time for starting effective treatment has often passed.

Rheumatism is a word used to designate a number of symptoms. In fact, “rheumatism” does not exist; in its place are over 100 different types of disease covered by this single term.

The German Society for Rheumatology estimates that about ten million people suffer long-term from one of these rheumatic diseases in Germany alone. They have pain in their muscles and joints and suffer from painful connective tissue and inflamed tendons.

When physicians speak of rheumatism, they generally mean “chronic articular rheumatism” or “true rheumatism”, as rheumatoid arthritis is also often called. This is the most common inflammatory disease of the joints. About one percent of the global population...
suffers from this disease; in Germany that is about 800,000 people. About twice as many women as men get rheumatoid arthritis.

Contrary to common belief, rheumatoid arthritis is no minor ailment and is not a sign of old age. In fact it is a serious disease that affects people at all ages. Young people can also have rheumatoid arthritis, even children.

Diverse symptoms
The term “chronic polyarthritis” includes the two most important characteristics of this disease: “chronic” means enduring, indicating the long-term nature of the disease, and the medical term “arthritis” refers to the typical inflammation of the joints, the primary indicator of the disease. The prefix “poly-” indicates that multiple joints are affected.

Rheumatoid Arthritis often remains undetected for a long time. As a rule it begins stealthily, often on the right and left in the joints of the little fingers, hands, and toes. However, the disease can also appear suddenly and abruptly, or start in only a few larger joints, such as the knee, shoulder, or elbow.

Affected joints often suddenly become painful, swollen, and overheated, while their range of motion is significantly decreased. Usually, the joint inflammation appears on both sides of the body simultaneously and symmetrically. The pain and stiffness of the joints are particularly pronounced in the morning, which has led to the concept of “morning stiffness” being listed as a typical symptom of rheumatoid arthritis.

As the weeks and months pass, the disease progresses, affecting more and more joints. The sheaths of the tendons may also become affected and swollen. The fact that the whole body is affected by this disease is indicated by the general symptoms that accompany it: fatigue and weakness appear. Fever, night sweats, and sometimes weight loss occur as well.

Initially, rheumatoid arthritis leads to decalcification of the bones of the joint (osteoporosis), then it destroys the bones where they attach to the articular capsule. As the disease
advances, the articular cartilage is degraded and the articular surface destroyed. Patients find it harder and harder to move and the bones of the joint slip out of their normal positions. The joints deform and lose their function. Together with the pain, this considerably inhibits movement of the joints. Everyday manoeuvres such as opening a jar, holding a pen, or tying a shoelace become impossible for those affected.

Other tissues, such as the salivary and lachrymal glands, can also be directly affected by rheumatoid arthritis, as can organs like the eyes, heart, or lungs. In severe cases and highly advanced disease, disability may result. Patients with severe disease also have a shorter life expectancy.

No cure currently exits for rheumatoid arthritis. However, the earlier the diagnosis is made and treatment begins, the better its progression can be slowed or even stopped.

What causes rheumatoid arthritis?

The trigger for this disease remains unknown; however it is certain that the rheumatic symptoms result from a malfunction of the immune system, which causes inflammation of the joints. Infection by viruses or bacteria could play a role in its inception, but no proven connections have yet been found. It is highly probable that a hereditary predisposition plays an important role in this disease, since the risk of contracting rheumatoid arthritis is higher when another family member has the disease. It has also been demonstrated that smokers are at higher risk.

Rheumatoid arthritis is an autoimmune disease. The body’s immune system can no longer differentiate between “the enemy” and “itself” and forms antibodies directed toward its own tissues. A complex interaction between different immune cells, including phagocytes (scavenger cells) and T- and B-cells, as well as anti-inflammatory proteins known as cytokines, initially leads to swelling of the mucous membranes in the affected joints. The synovial membrane begins to grow and generates substances that destroy cartilage and bone.

As the disease progresses, the joint is increasingly damaged, which causes constant and severe pain. The joints deform, and in the worst cases become rigid and cease to func-
tion. This destruction of the joints can only be stopped through early and correct treatment.

**Early detection, targeted therapy**

The goal for the treatment of rheumatoid arthritis today is early detection and initiation of the earliest possible effective treatment. Rheumatism support groups, regional rheumatology centres, the European League Against Rheumatism (EULAR), and other institutions organise local meetings or conventions, as well as World Arthritis Days, to increase awareness of the possibility of early detection and the great benefits of early treatment.

The significance of rheumatic disease is not as prevalent in the conscience of the population as is the case for cancer, for example. Despite an affliction rate of nearly one percent in the population – in the second half of life the prevalence rises to nearly two percent – it goes nearly unnoticed that untreated or inadequately treated rheumatoid arthritis can lead to complete helplessness and disability, with loss of the ability to work, loss of mobility, and frequently also loss of social contact – not to mention the severe pain. The sooner rheumatoid arthritis is detected and treated, the better it can be influenced. Early treatment – when possible within the first three to six months of onset – is critical in determining the course of the disease.

As a rule, patients with joint pain initially consult their general practitioner or orthopaedist. The diagnosis of rheumatoid arthritis is not always easy to establish. It is particularly difficult to recognise rheumatoid arthritis shortly after onset, since a number of diseases have symptoms similar to those of this early form of the disease.

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**Rheumatoid arthritis: What do the laboratory results mean? (extract)**

The **ESR value** (erythrocyte sedimentation rate): When blood is placed in a glass tube and left to stand, the solid components sink to the bottom, leaving a clear liquid above (plasma). The rate at which this happens is measured in mm/h and is known as the erythrocyte sedimentation rate, ESR. A wide variety of diseases are associated with an elevated ESR value. An elevated ESR may indicate inflammation, or in rare cases a tumour.

The **CRP value** (C-reactive protein): Elevated CRP values are an unspecific indicator of the presence of inflammatory disease. This test is suitable for screening when disease is suspected, and is a useful laboratory test to monitor progression of the disease, especially during treatment. C-reactive protein is an acute-phase protein that is formed when there is an inflammation, among other things.

**Autoantibodies**: Autoimmune diseases like rheumatoid arthritis are associated with the appearance of autoantibodies that are directed toward the body’s own tissues and structures due to a malfunctioning immune system. The detection of rheumatoid factors can be an indicator of rheumatoid arthritis; antibodies against specific citrullinated proteins (ACPAs) are highly specific biomarkers of this disease.
In addition, rheumatoid arthritis manifests itself differently in every patient. Ongoing discomfort – whether slight or severe – is as common as months or even years of remission with almost no symptoms. Periods of disease can follow over several weeks or months. The variation in rheumatoid arthritis can severely complicate diagnosis and treatment. Diagnosis and treatment of this disease should thus be left to a specialist with experience in rheumatology, if possible. The description of symptoms given by the patient is very important for the establishment of a diagnosis by the physician. This is usually followed by a general and targeted physical examination by the doctor with particular attention to the condition of the joints. Imaging procedures such as X-ray and ultrasound examination, as well as scintigraphy or magnetic resonance imaging can add weight to the suspicion of rheumatoid arthritis. Even at an early stage of the disease, certain laboratory data are an important indicator and significantly support the diagnosis.

**The meaning of laboratory results**

The most important laboratory tests include measurement of the erythrocyte sedimentation rate (ESR value) and the concentration of C-reactive protein (CRP). If these values are elevated, an inflammation is indicated.

Another significant laboratory test used when rheumatoid arthritis is suspected is the detection of rheumatoid factors. The name of these autoantibodies is misleading because rheumatoid factors can also be found in patients with a number of other diseases. For example, rheumatoid factors are detectable in cases of chronic liver disease, tumours, and after infections; they even occasionally appear in healthy individuals. Their detection thus does not confirm a diagnosis of rheumatoid arthritis, it is merely an indicator.

A new method used in the diagnosis of rheumatoid arthritis is the detection of autoantibodies against specific substances known as citrullinated proteins and peptides. These “ACPAs” – an abbreviation for anti-citrullinated protein-/peptide antibodies – are highly specific and reliable biomarkers for rheumatoid arthritis and have vastly improved the ability to detect the difficult-to-diagnose, early form of the disease. These autoantibodies can sometimes be detected in the blood of affected individuals years before onset of the disease. Tests carried out on blood donors demonstrated that they may even be detected up to 14 years before onset.
Individual Treatment

If rheumatoid arthritis is detected early enough, modern treatments can be used to slow its progress in most patients. Symptoms like inflammation and pain can be controlled over the long term; though the risk of permanent disability always remains.

Destruction of the joints is at its worst at the beginning of the disease; however, at this time it is also best treated with a family of drugs known as DMARDs. DMARDs (Disease-Modifying Antirheumatic Drugs) can slow progression of the disease and the loss of functionality this entails. The long-term prognosis can be significantly improved if treatment is begun within six months of appearance of the first symptoms. The decision as to which drug to use is best made by a specialist, because not all drugs are suitable for every patient.

For patients who do not respond well to DMARD therapy, other drugs known as biologics are available. These are modern, genetically engineered medications that intervene directly in the inflammatory process and interrupt the vicious cycle of self-perpetuating inflammation.

The medical treatment of symptoms with nonsteroidal antirheumatic (NSAR) or pain medication can relieve pain and stiffness of the joints. However, they cannot influence the disease process over the long term.

In addition to drugs, physical therapy and – if necessary – surgery are also beneficial. It is very important that there be good cooperation between the primary care physician, specialist, physical therapist, and caregivers. Their collaboration has a highly significant effect on the success of treatment for rheumatoid arthritis.

Do alternative treatments help?

Whether alternative treatment approaches such as homeopathy or specific dietary supplements and herbal remedies have any positive influence on rheumatoid arthritis is disputed. The fact is that scientific data regarding their effectiveness are only available for a small fraction of the substances and agents derived from natural products; some of them have even been proven to be damaging.

In a recent study, the British Arthritis Research Campaign, a non-profit organisation for rheumatoid arthritis research, has evaluated many natural remedies for rheumatoid arthri-
tis. The result is sobering: two thirds of the supplements taken by rheumatoid arthritis patients to alleviate their joint pain have no effect or only a minor one.

The message from the British researchers is clear: even when taking arthritis remedies available over the counter at pharmacies, drug stores, or by mail order, patients should ensure that the medical effectiveness and harmlessness of the product are scientifically proven.

For Editors:

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Do you need more information about rheumatoid arthritis and autoimmune diseases or their diagnosis? – Please contact us:

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Links:

www.arc.org.uk – Arthritis Research Campaign
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