

**PAIN MANAGEMENT**

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**OZONE THERAPY For**  
**OSTEO-ARTHRITIS of KNEE**

*Pain Management Centre --*  
*ACHELOIS PAIN CLINIC*

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We have all experienced pain sometime. **PAIN IS AS OLD AS MANKIND.** The Nobel laureate Albert Schweitzer had to say, “*Pain is a more terrible lord of mankind than, even death itself*”.

*The international association for the study of pain (IASP) defines pain as ‘an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.’*

Pain management is an emerging specialty in the field of medicine. All kinds of pain are dealt with either by pain specialists alone or in association with other specialists. Importance is given for diagnosis of the disease causing the pain and treatment instituted for the disease and pain as well.

Pain is of two types.

- **Acute pain** : This type of pain lasts for a short duration say a few days or a week. It occurs in 25-30 % of population and is due to Medical & Surgical emergencies / accidents. This is easily treated by our usual pain killers.
- **Chronic pain** : This pain lasts for weeks or months or even years. Occurs in 15-20 % of population. Causes may be headache, Backache, Arthritis, Neuropathy or Cancer pain to name a few.

***Chronic pain*** may occur even without apparent injury /reason. These patients get referred to different specialists. But since there is a baffling absence of treatable organic causes, no diagnosis is made and ultimately the conclusion is - “it is all in their head” i.e they have a psychological problem only.

***“Patients with chronic pain, when compared to those with almost all other medical conditions, suffer dramatic reductions in physical, psychological, and social well being, and their Health Related Quality of Life is lower.”***

So where is the respite for these patients? It is a **PAIN CLINIC**. Place of convergence for all these patients irrespective of the etiology of pain

## OZONE THERAPY FOR OSTEO-ARTHRITIS OF KNEE

### **Introduction:**

Osteo-Arthritis of knee is a very common problem of old age. It is one of the commonest causes of knee pain in India. It incapacitates many. 80% of general populations have radiologic evidence of osteoarthritis by 65 yrs of age.

Are you suffering from this? Then read on.

### **Clinical features of OA :**

Pain around the joint that increases with weight bearing and movement and improves with rest, morning stiffness and swelling of the joints.

Clinical signs are tenderness, creptius, joint effusion, decreased range of movement, valgus/varus deformity etc.

X-Ray shows decreased joint space, osteophytes formation and osteoporosis of subchondral bone.

### **Conventional Treatment – Pros and Cons**

#### **I. Non-pharmacological therapy**

- 1. Reduction of obesity**
- 2. Quadriceps strengthening exercises**

Needs patient motivation and may not be possible in advanced stages of disease.

#### **II. Pharmacological therapy**

- 1. Paracetamol /acetaminophen**
- 1. NSAIDs can be tried**
- 1. Opioids**

Long term use can cause adverse effects including analgesic nephropathy.

### **III. Interventions**

#### **1. Intraarticular injections of corticosteroids**

This will be effective for short term period in reducing pain and increasing quadriceps strength.

Sometimes mild flare up might be seen in joint inflammation following intraarticular injections.

Repeated injections (>4/year) are not recommended for the fear of damaging the cartilage of weight bearing joints.

#### **Arthroscopy and arthroscopic lavage**

The principle is washing off the inflammatory mediators, debris and breaking adhesions. But many studies have questioned the efficacy of such a procedure.

#### **Surgery**

Patients having very severe symptoms should be considered for surgical options like tibial osteotomy, arthroplasty and joint replacement. Surgical options should be considered, once medical line of treatment fails. Surgical options should be delayed as much because the total joint arthroplasty might last between 10-20 years. Patients will have to modify his/her lifestyle to certain extent because of the ergonomics of replaced joint.

### **LATEST IN INTERVENTIONAL PAIN MANAGEMENT – OZONE**

#### **THERAPY**

##### **Procedure :**

Injection of tissue proliferants like [ozone](#) inside the joint. A series of 6 injections – 1 injection per week for 6 weeks.

##### **Mechanism of action :**

Reduces inflammation and it strengthens ligaments. It promotes cartilage growth. It stimulates the synovial tissue to produce more lubrication and to produce more cartilage. Stimulates an ordered, natural inflammation. It is the localized inflammation that creates growth factors to stimulate healing.

##### **Efficacy :**

Effective pain relief and improved joint mobility in 80% of treated patients. Effect lasts for 2- 5yrs after which the course of injections can be repeated.

## **Safety / Complications :**

Ozone has been found to be an extremely safe medical therapy, free from side effects. In a 1980 study done by the German Medical Society for Ozone Therapy, 644 therapists were polled regarding their 384,775 patients, comprising a total of 5,579,238 [ozone](#) treatments administered. There were only 40 cases of side effects noted out of this number that represents the incredibly low rate of 0.000007%. Ozone Therapy has been described as the safest known medical therapy.

## **Advantages :**

- Effective pain relief and improved joint mobility in 80% of treated patients.
- Simple day care procedure.
- Cost effective compared to arthroscopy / joint replacements.
- Lack of systemic side effects associated with use of opioids / NSAIDS / Corticosteroids.
- Lack of mild flare up in joint pain and inflammation as might be seen following intraarticular injections of corticosteroids.
- No need for patients to modify his/her lifestyle because of the ergonomics of replaced joint.
- Extremely safe. Side effects only in 0.000007%.

Our aim is

**“GIVING LIFE TO DAYS *and* NOT DAYS TO LIFE”**

For further information, contact,

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