

## **SYNVISC® PACKAGE INSERT – CE**

### **DESCRIPTION**

Synvisc® (hylan G-F 20) is a sterile, nonpyrogenic, elastoviscous fluid containing hylans. Hylans are derivatives of hyaluronan (sodium salt of hyaluronic acid) and consist of repeating disaccharide units of N-acetylglucosamine and sodium glucuronate. Hylan A has an average molecular weight of approximately 6,000,000 and hylan B is a hydrated gel of the same material. Synvisc contains hylan A and hylan B (8.0 mg ± 2.0 mg per ml) in buffered physiological sodium chloride solution (pH 7.2 ± 0.3).

### **CHARACTERISTICS**

Synvisc is biologically similar to hyaluronan. Hyaluronan is a component of synovial fluid which is responsible for its viscoelasticity. The mechanical (elastoviscous) properties of Synvisc are, however, superior to those of synovial fluid and hyaluronan solutions of comparable concentration; Synvisc has an elasticity (storage modulus  $G'$ ) at 2,5 Hz of  $111 \pm 13$  Pascals (Pa) and a viscosity (loss modulus  $G''$ ) of  $25 \pm 2$  Pa (elasticity and viscosity of knee synovial fluid of 18-27 year old humans measured with comparable method at 2,5 Hz are  $G' = 117 \pm 13$  Pa;  $G'' = 45 \pm 8$  Pa). Hylans are degraded in the body by the same pathway as hyaluronan, and breakdown products are nontoxic.

### **INDICATIONS AND USAGE**

- Synvisc is a temporary replacement and supplement for synovial fluid.
- Synvisc is beneficial for patients in all stages of joint pathology,
- Synvisc is most effective in patients who are actively and regularly using the affected joint.
- Synvisc is only intended for intra-articular use to treat pain associated with osteoarthritis of the knee and hip.

Synvisc achieves its therapeutic effect through viscosupplementation, a process whereby the physiological and rheological states of the arthritic joint tissues are restored. Viscosupplementation with Synvisc is a treatment to decrease pain and discomfort, allowing more extensive movement of the joint. *In vitro* studies have shown that Synvisc protects cartilage cells against certain physical and chemical damage.

### **CONTRAINDICATIONS**

- If venous or lymphatic stasis is present in the relevant limb, Synvisc should not be injected into the joint.
- Synvisc should not be used in infected or severely inflamed joints or in patients having skin diseases or infections in the area of the injection site.

### **WARNINGS**

- Do not inject intravascularly

- Do not inject extra-articularly or into the synovial tissue and capsule. Adverse events, generally in the area of the injection, have occurred following extra-articular injection of Synvisc.

### **PRECAUTIONS**

- Synvisc should not be used if there is a large intra-articular effusion prior to the injection.
- As with any invasive joint procedure, it is recommended that the patient avoids any strenuous activity following the intra-articular injection, and resume full activities within a few days.
- Synvisc has not been tested in pregnant women or in children under 18 years of age.
- Synvisc contains small amounts of avian protein, and should therefore not be used in patients with related hypersensitivities.

### **ADVERSE EVENTS**

- Adverse events involving the injected joint: transient pain and/or, swelling and/or effusion of the injected joint may occur after intra-articular injections of Synvisc. In some cases the effusion may be large and can cause pronounced pain; it is important to remove and to analyze the fluid to rule out infection or crystalline arthropathies. These reactions generally abate within a few days. Clinical benefit from the treatment may still be apparent after such reactions. Intra-articular infections did not occur in any of the clinical trials and have been reported only rarely during clinical use of Synvisc.
- The post marketing experience has identified the following systemic events occur rarely with Synvisc administration: rash, hives, itching, fever, nausea, headache, dizziness, chills, muscle cramps, paresthesia, peripheral oedema, malaise, respiratory difficulties, flushing, and facial swelling. In the controlled clinical trials, there were no statistically significant differences in the number or types of systemic adverse events between the group of patients that received Synvisc and the group that received control treatments.

### **DOSAGE AND ADMINISTRATION**

- Remove synovial fluid or effusion before each Synvisc injection.
- Do not use Synvisc if package is opened or damaged.
- Inject at room temperature.
- Administer using strict aseptic procedures, taking particular care when removing the tip cap.
- Use an appropriate size of the needle (e.g. 18 to 22 gauge) and length of needle, depending on the joint to be treated.
- To ensure a tight seal and prevent leakage during administration secure the needle tightly while firmly holding the Luer hub.
- Do not resterilise Synvisc.
- Inject into the synovial space only, using if necessary, appropriate guidance such as fluoroscopy especially in joints such as the hip.

- The syringe contents are for single use only.

## **DOSAGE GUIDELINES**

The dosage regimen for Synvisc is dependent on the joint being treated.

### *Osteoarthritis of the knee:*

The recommended initial treatment regimen for Synvisc is three injections in the knee, one week apart. To achieve maximum effect, it is essential to administer all three injections. The maximum recommended dosage is six injections within six months, with a minimum of four weeks between treatment regimens.

### *Osteoarthritis of the hip:*

The recommended initial treatment regimen is a single injection. If however, adequate symptomatic relief is not achieved after this injection, it is recommended to administer a second injection. Clinical data have demonstrated that patients benefit from this second injection when administered between one and three months after the first injection.

Generally the duration of effect for those patients who respond to treatment, has been reported up to 26 weeks, although shorter and longer periods have also been observed. However, prospective clinical data in knee OA patients have shown benefit of treatment up to 52 weeks, following a single course of three Synvisc injections.

Synvisc treatment affects only the infected joint; it does not produce a general systemic effect.

## **CONTENT PER mL**

Each 1 ml contains: hylan 8.0 mg, sodium chloride 8.5 mg, disodium hydrogen phosphate 0.16 mg, sodium dihydrogen phosphate hydrate 0.04 mg, water for injection q.s to 2.0 ml.

## **HOW SUPPLIED**

Synvisc is supplied in a 2.25 ml glass syringe containing 2 ml Synvisc. The contents of the syringe are sterile and nonpyrogenic. Store between +2°C and +30°C. Do not freeze.

Genzyme Biosurgery

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