

HYALURONIC ACID DERIVATIVES

Durolane, Euflexxa, **GelSyn-3**, GenVisc 850, **Hyalgan**, Sodium Hyaluronate, **Supartz**, Synjoynt, Triluron, TriVisc, Visco-3 (sodium hyaluronate)

Gel-ONE, Hymovis, Monovisc, Orthovisc (hyaluronan)

Synvisc, Synvisc-One (hylan G-F 20)

Bolded medications are the preferred products for claims adjudicated through the pharmacy benefit.

RATIONALE FOR INCLUSION IN PA PROGRAM

Background

Osteoarthritis of the knee is a condition in which the elastoviscous property of the synovial fluid in the knee joint becomes diminished, resulting in less protection and shock absorption. Durolane, Euflexxa, Gel-One, GelSyn-3, GenVisc 850, Hyalgan, Hymovis, Monovisc, Orthovisc, Sodium Hyaluronate, Synvisc, Synvisc-One, Supartz, Synjoynt, Triluron, TriVisc, Visco-3 are hyaluronan derivatives that are injected into the knee joints to increase the elastoviscous properties of arthritic joint fluid and slow its outflow from the joint. The goal of therapy is to restore the viscoelasticity in the affected joints, thereby decreasing pain, improving mobility, and restoring the natural protective functions (1).

The American College of Rheumatology (ACR) updated its guidelines for the treatment of osteoarthritis (OA) of the knee in 2019. In mild symptomatic OA, treatment may be limited to patient education, physical and occupational therapy and other non-pharmacologic modalities. Nonpharmacologic modalities strongly recommended for the management of knee OA included exercise, weight loss, self-efficacy and self-management programs, tai chi, the use of a cane and tibiofemoral knee braces. Nonpharmacologic modalities conditionally recommended for knee OA included balance training, yoga, cognitive behavioral therapy, kinesiotaping, acupuncture, thermal interventions, and radiofrequency ablation. Pharmacologic modalities strongly recommended for the management of knee OA included topical NSAIDs, oral NSAIDs and intraarticular glucocorticoid injection. Pharmacologic modalities conditionally recommended for the initial management of patients with knee OA included topical capsaicin, acetaminophen, duloxetine and tramadol (1).

Regulatory Status

FDA-approved indication: Hyaluronic acid derivatives are indicated for the treatment of pain in

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osteoarthritis (OA) of the knee in patients who have failed to respond adequately to conservative non-pharmacologic therapy, simple analgesics (e.g., acetaminophen), NSAIDs, tramadol, or intra-articular steroid injections (2-18).

The hyaluronic acid derivatives are contraindicated for use in patients with known hypersensitivity to hyaluronan (sodium hyaluronate) preparations. Orthovisc lists hypersensitivity to gram positive bacterial proteins as an additional contraindication (4). Caution should be exercised when Gel-One, Hyalgan, Visco-3, Synvisc, Synvisc-One, Supartz, and Triluron are administered to patients with allergies to avian proteins, feathers, and egg products (3-8, 18).

Hyaluronic acid derivatives are contraindicated to treat patients with knee joint infections, infections or skin diseases in the area of the injection site (2-17).

A treatment cycle for most of the hyaluronan derivatives typically involves multiple weekly injections. Euflexxa, GelSyn-3, Sodium Hyaluronate, Synvisc, Triluron, TriVisc, and Visco-3 are given for a total of three injections. Orthovisc is given for three or four injections. GenVisc 850, Supartz and Hyalgan are given for a total of three or five injections. Durolane, Gel-One, Synjojoynt, and Synvisc-One differ from the other hyaluronan derivatives in that it only requires one injection. Repeat courses of hyaluronan derivatives may be administered if symptoms return (2-18).

Upon the basis of high-quality supporting evidence, the American Academy of Orthopedic Surgeons cannot recommend using hyaluronic acid for patients with symptomatic osteoarthritis of the knee (19).

Summary

Osteoarthritis of the knee is a condition in which the elastoviscous property of the synovial fluid in

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Prior approval is required to ensure the safe, clinically appropriate and cost-effective use of the hyaluronic acid derivatives while maintaining optimal therapeutic outcomes.

References

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