Acute Gout Flare Following Intra-Articular Hylan G-F 20 Injection: A Case Report and Literature Review

Alireza Oladaskari, Alexa Lean, MD

University of California, Irvine School of Medicine, Department of Anesthesiology & Perioperative Care

ASRA PAIN MEDICINE
25th Annual Pain Medicine Meeting
November 5-7, 2026 | Tampa, Florida
#ASRAFALL26

INTRODUCTION

Background:

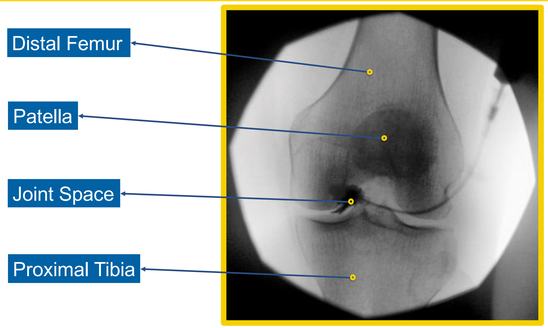
- Hylan G-F 20 is a cross-linked hyaluronan used for intra-articular viscosupplementation in symptomatic knee osteoarthritis.[1]
- It restores synovial fluid viscoelasticity, improving lubrication, shock absorption, and pain.[1]
- Viscosupplementation is generally well tolerated, though rare severe inflammatory reactions can occur.[1-3]

Literature Context:

- Post-injection reactions include inflammatory flares and pseudoseptic arthritis, especially after repeated courses.[2-4]
- Crystal arthritis is much rarer, pseudogout has been reported, while true gout appears even less common.[7-9]

MECHANISM OF ACTION: Hylan G-F 20 (Viscosupplementation)

Hylan G-F 20
(Viscosupplementation)



Fluoroscopic intra-articular knee injection

Improves viscosity
Restores synovial fluid properties

Lubricates & cushions
Less friction + better shock absorption

- **Result: ↓ osteoarthritic pain**[1]

DIFFERENTIAL DIAGNOSIS

	Septic	Pseudo-septic	Gout (This Case)
Culture	Often +	-	-
Crystals	±	-	MSU+
WBC	↑	↑ / variable	↑ / variable

Refs. 2, 5, 6

CLINICAL TIMELINE

Day 0



Hylan G-F 20 injection
- Pain began that night

Day 5



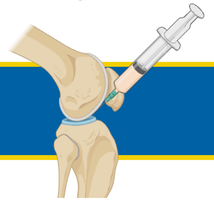
Acute Worsening
- Left-knee swelling
- Unable to walk
  No fever or chills
- **10/10 pain**

1 Week



Primary Care Visit
- Limited flexion
- 2+ LLE pitting edema
- **Venous ultrasound negative for DVT**

Shortly After



ED → Arthrocentesis
- Light-yellow & cloudy synovial fluid

Later Follow-up



Rheumatology / Pain Follow-up
- Colchicine: No relief
- Prednisone: 10/10 pain → 5/10
- **Improved ambulation; no pain at rest**

- 80-year-old woman with left-knee osteoarthritis
- Prior steroid injections with waning benefit
- Fluoroscopic Hylan G-F 20 injection, 48 mg
- No systemic signs of infection at presentation


Synovial WBC: 52,670 cells/µL


98% Neutrophils


MSU crystals Present



Gram stain & Culture (Negative)

DIAGNOSTIC REASONING

- **Initial concern:** The acute post-injection presentation raised concern for septic or pseudoseptic arthritis.
- **Key diagnostic finding:** Arthrocentesis revealed 52,670 cells/µL with 98% neutrophils and monosodium urate (MSU) crystals. Gram stain and culture were negative, supporting acute gout rather than infection. Importantly, the markedly elevated synovial WBC could not distinguish septic from sterile inflammation on its own, emphasizing the importance of crystal analysis and culture in post-injection arthritis.[2,5,6]

TAKEAWAYS & CONCLUSION

- Post-viscosupplementation inflammation has a broad differential, including septic arthritis, pseudoseptic reaction, gout, and pseudogout. Because sterile inflammatory reactions can also cause marked synovial leukocytosis, arthrocentesis with culture, Gram stain, and crystal analysis is essential for diagnosis.[2,5-9]
- **Consider crystal arthritis in patients with severe inflammation following viscosupplementation, even when the synovial WBC is markedly elevated.** Although true gout following Hylan G-F 20 has rarely been reported[8], this case demonstrates that MSU crystal analysis can establish the diagnosis and help guide targeted anti-inflammatory treatment after infection has been evaluated.

Scan For Full References