

CMM 312: Lysis of Adhesions/Manipulation Under Anesthesia

Manipulation under Anesthesia (MUA) is a closed method to improve pathologic range of motion of a knee joint that has developed arthrofibrosis (also referred to as stiffness or joint contracture) after surgical intervention or trauma. Lysis of adhesions (LOA) is a surgical method used to improve pathologic range of motion. A diagnosis of arthrofibrosis may be made based on symptoms, history, physical examination, and supportive imaging findings [1]. It is characterized by excessive collagen production forming adhesions resulting decrease range of motion and pain [7]. Manipulation is often combined with arthroscopic synovectomy. Conservative management should be completed prior to manipulation and manual therapy should be continued after manipulation to maintain and optimize results. Extensive discussion of the timing of manipulation has been made particularly in the case of Total Knee Replacement. Early manipulation has not been shown to have better long term outcomes in Total Knee Replacement [2]. Prior to manipulation, at least 2 months of conservative management is needed to assess results and confirm the diagnosis [3]. For trauma cases, waiting until 90 days to perform manipulation did not inhibit good long term results [4]. Besides the risk of anesthesia, risks of MUA/LOA include additional trauma to the limb from the force of manipulation, recurrent arthrofibrosis, revision surgery, infection, periprosthetic fracture, hemarthrosis, and extensor mechanism disruptions [5]. The risks are offset by the benefits of appropriately applied manipulation or lysis, whose long term outcomes often are comparable to the knee without stiffness issues [6]. Given the potential possibility for significant complications, proper patient selection per EviCore's evidence based guidelines is crucial to minimize the risk benefit ratio and to best ensure patient safety. Although the use of any coverage criteria includes the possible risk of delayed care, EviCore firmly believes the benefits of our evidence based criteria highly outweigh any clinical harms.

1 - Sculco, PK. The Stiff Knee: Causes and Cures. Orthopedic Proceedings. 99-B (Supp 15); p-52.

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3 – GR Scuderi: The Stiff Total Knee Arthroplasty: Causality and Solution. Journal of Arthroplasty: 2005;20:23-26.

4 - Adam A Sassoon, et al. Manipulation Under Anesthesia: A Safe and Effective Treatment for Posttraumatic Arthrofibrosis of the Knee. Journal of Orthopedic Trauma. 2015 Dec;29(12): e464-8.

5 – MR Bong, et al: Stiffness After Total Knee Arthroplasty. Journal of the AAOS: 2004;12:164-171.

6 - Erik T Newman, et al. Risk Factors, Outcomes, and Timing of Manipulation Under

Anesthesia After Total Knee Arthroplasty. *Journal of Arthroplasty*. 2018 01;33 (1):245-249. Epub 2017 Aug 10.

7 – Usher, K.M., et al. Pathologic Mechanisms and Therapeutic Outlooks for Arthrofibrosis. *Bone Res* 7, 9 (2019).