**ARTHROCENTESIS AND SYNOVIAL FLUID ANALYSIS IN THE EMERGENCY DEPARTMENT**

**INSTRUCTOR’S GUIDE**

**BACKGROUND:**

Joint effusions are commonly seen in the Emergency Department and physicians should be familiar with performing arthrocentesis procedures and interpreting synovial fluid analysis.

**PURPOSE & GOALS:**

To provide a general overview of arthrocentesis including indications, contraindications, techniques and synovial fluid analysis with cases to prompt discussion and discuss management of frequently encountered clinical scenarios.

**EDUCATIONAL OBJECTIVES:**

By the end of this didactic session, the learner will be able to:

* Describe indications and contraindications to arthrocentesis
* Provide patient education for arthrocentesis
* Be familiar with technique and joint specific approaches for arthrocentesis
* Order and interpret synovial fluid lab studies
* Interpret synovial fluid lab results

**RESOURCE FILES:**

1. Arthrocentesis and Synovial Fluid Analysis in the Emergency Department (filename: Arthrocentesis and Synovial Fluid Analysis in the Emergency Department.pptx)

* This didactic provides an overview of arthrocentesis and synovial fluid analysis
* Estimated time: 60 minutes

2. Summary Handout (filename: Arthrocentesis and Synovial Fluid Analysis in the Emergency Department Summary.docx)

* This document provides a summary of the teaching points for the module

**TOTAL MODULE DURATION:** 60 minutes

**REQUIRED RESOURCES:**

* Computer with capability of running PowerPoint

**DESCRIPTION OF MODULE:**

Intended Audience

* This module was developed for medical students, EM residents at any level of training and attending physicians

Recommended implementation/timeline

* During the module
  + This didactic session can be delivered to any size group. Participants may be divided into small groups by level of training to further facilitate discussion.
* **Arthrocentesis and Synovial Fluid Analysis in the Emergency Department** Didactic presented by a senior resident or faculty member. (60 minutes)
* Optional simulation practice: The learners may participate in a short session to practice arthrocentesis on a commercially available simulation model of the knee. (15 minutes)

**CONCLUSIONS:**

Care of musculoskeletal disorders is part of the ABEM Model of Clinical Practice, which is designed for use as the core document for our specialty, and a foundation for developing residency curricula. This module was developed to train medical student and residents in the basic concepts of emergency care for joint effusions. After completion of this curricular module, learners will better understand arthrocentesis techniques and synovial fluid analysis.

**REFERENCES:**

1. Roberts J. *Roberts And Hedges' Clinical Procedures in Emergency Medicine*. 7th ed. Philadelphia: Elsevier/Saunders; 2019.
2. Tintinalli J, Ma O, Yealy D et al. *Tintinalli's Emergency Medicine*. 9th ed. New York: McGraw-Hill Education; 2019.