

## **1. INTRODUCTION**

The treatment of joint injuries has seen marked development in the last few years. Minimally invasive surgical techniques are those which allow the surgeon to effectively accomplish the required surgical manipulations with little disruption of the associated tissue. The impetus for using these techniques in veterinary orthopaedics stems from their proven usefulness and effectiveness in human orthopaedics. Minimally invasive joint surgery has become a viable alternative to conventional surgery. The technical advantages of minimally invasive surgery can be translated into clinical benefits for the patient, i.e., less post-operative pain and impairment of lung function, better cosmetic results, shorter hospitalization and earlier convalescence.

Arthroscopy was introduced as the first minimal invasive surgical technique for equine joint diseases. By that time arthroscopy had replaced arthrotomy as a method of choice for diagnostic and /or therapeutic procedure in joint surgery (McIlwraith 1984).

Since the early 20<sup>th</sup> century, fluoroscopy has been integral to the practice of diagnostic radiology. However, over the past 10-15 years, fluoroscopic procedure mixes have included fraction that are primarily therapeutic (Mahesh 2001). Fluoroscopic guided joint surgery in which the joints are operated under X-ray control with the aid of C-arm during surgery is a valuable supposition for minimally invasive techniques. Intra-operative fluoroscopy was first used in human medicine by Coltman (1948) and since then has been used extensively in many areas of surgery. To our knowledge, no reports exist in the English literature regarding fluoroscopy in the equine joints. Fluoroscopic guided surgical removal of radiopaque bodies in the region of extensor process of the 3<sup>rd</sup> phalanx in horse was first presented in the German literatures in 1992 (Hertsch 1992).

The purpose of this work was planned to use intra-operative fluoroscopy as a valuable tool for joint surgery with the following objectives

- 1- To describe a simple and effective technique for performing minimal invasive joint surgery.
- 2- To introduce a new surgical technique in equine joint surgery.
- 3- To describe the advantages and disadvantages of this technique over other techniques.
- 4- To evaluate the success of this method as a new minimal invasive method.