

One Stitch Technique for Core Decompression in Ficat 2a Avascular Necrosis of Head of Femur & Comparison with Conventional Technique.

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Abstract:

We performed core decompression in a bilateral case of avascular necrosis of femoral head. We used the conventional open technique on one side and a minimally invasive One Stich technique on the other side. These was considerably less pain on the minimally invasive side with less drain output. Patient reported better post-surgery comfort on the minimally invasive side in terms of pain and ease of movement. This technique does offer certain benefits and may be recommended for all core decompression procedures of proximal femur.

Key words: Avascular necrosis, core decompression, one stich technique.

Introduction

Avascular necrosis (AVN) is cellular death (necrosis) of bone components due to interruption in blood supply. There are many theories about what causes AVN. Proposed risk factors include alcoholism, excessive steroid use, chemotherapy, post trauma, Caissons disease, sickle cell anemia, in some cases it is idiopathic. RA and Lupus are also common causes of AVN [1]. It affects people between 30-50 years. In early stages bone scintigraphy & MRI are diagnostic modalities of choice [3,5]. According to FICAT classification, In FICAT stage 2A, the core decompression is performed [2]. In the present study we have performed core decompression in both the hips by two different methods in the same patient. One side ONE STITCH technique was performed on one side and other side the conventional method of exposure was used. We have compared these two procedures in the same patient.

Case Report

We report a case of 40 yr old pt. sedentary worker by profession, who has a history of bilateral hip joint pain and restriction in range of movements of both hip joints and interference with his daily day to day routine activities. The patient is advised bilateral x ray of hip joint and further MRI of both hip joints. The MRI

features suggestive of bilateral AVN. We performed core decompression⁶ in both hips by different methods in which one side was performed with conventional method and other side was performed with mini incision or One Stich technique.

Operative Procedure: On the left side, we performed conventional technique in which an incision of approximately 7 – 8 cm taken, iliotibial band was cut with vastus lateralis and retracted. Bone was approached and core decompression was done in the femoral head. On the RIGHT side we performed a Mini incision technique or One Stich technique, in which only an incision of one cm taken and through that incision IT band was cut and vastus lateralis was split by trocar and cannula hitting the appropriate part at the base of trochanter under image intensifier control and drilled with a long bone drill bit at base multiple times at affected area. The area was estimated on pre operative drawings in AP & Lateral views

Discussion

Prognostically core decompression is not a promising procedure. It does not affect the disease progression nor does it affect final outcome. It helps to reduce the pain considerably for variable period. The results of core decompression in the series of literature are not that encouraging. The purpose of this case report is to present a minimally invasive core decompression technique.

This technique minimises pain considerably, reduces the hospital stay. It rehabilitates the pt. earlier with better patient's satisfaction. The patient was discharged after 48 hours from hospital. The drain was specifically kept

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Figure 1: a,b- Intraoperative picture showing introduction of trochar. c,d One Stitch technique with drain.

on both sides operated by different methods considering the post operative bleeding under the incision and myofascial planes. One stitch technique was not found in the literature review, however we do believe minimally invasive practices exists for core decompression.

The importance and difference of this study is that we have operated the other side with conventional method

decompression was compared with conventional technique for AVN in the same pt. with bilateral involvement and found that the immediate post operative morbidity for one week is less in one stitch technique. The satisfaction and ease of movements and less amount of pain on one stitch technique side was observed by the pt. himself.

The progression of the disease is not dependent on the procedure, only it reduces the pain by decreasing the intraosseous pressure and toxic products in the area of AVN. While performing such procedures we preferred the minimal invasive method to reduce the post operative morbidity.

METHOD	DAY 1	DAY 2	DAY 3	DAY 4	DAY 15
ONE – STITCH TECHNIQUE	3	3	2	1	0
CONVENTIONAL	5	5	4	4	0

Table 1: Post operative site pain & grading according to visual analogue score

Method	Easiness Of Movements	Drain Assessment	Satisfaction
ONE STITCH	Much Better	Less	Good
Conventional	Restricted & Painful	More	Fair

Table 2: Post operative patient satisfaction

with bigger incision using retractors and cutting vastus lateralis at its insertion. So the same patient having these two procedures at different sites can compare post operative pain on both sides.

Visual Analogue Score for pain was compared and found that one stitch technique incision was having post operative pain score 3 and conventional method side score was 5 on 2nd post-operative day. The drain collection was less on the one stitch technique side (80 ml) compared to conventional side (120 ml). The patient was discharged after 48 hrs and post operative easiness of movements was considerable on one stitch side. The patient was satisfied and happy about the one stitch side compared to the other side.

Conclusion: The one stitch technique for core

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