INTRODUCTION

The gold standard treatment for femur shaft fractures are intramedullary interlocking nailing. The antegrade nailing can be done either through a piriformis entry or trochanteric entry. However, the chance of femur neck fracture through a piriformis entry is 1%. The other technical aspects which contribute to femoral neck fracture are determining the precise entry point, creating multiple trial drill holes, forceful introduction of the AWL, the orientation of the AWL, and the orientation of nail at insertion and diameter of the nail.3

CASE REPORT:

We came across a 35 year old male patient who sustained road traffic accident and was diagnosed to have left femur shaft fracture at the middle third. The general work-up of the patient was done and the BMI was measured to be 30 kg/m². Patient was taken up for antegrade nailing of the femur shaft using piriformis entry point. Intra-op the patient was put supine on fracture table under S.A. Intra operatively finding the exact piriformis fossa was difficult due to obesity. Fracture was well reduced and a nail of size 11 mm x 400 mm was inserted, after reaming with 12 mm reamer. Post operative X-ray showed a displaced intracapsular femur neck fracture. Pauwel grade III. After planning the patient was taken up for percutaneous 6.5 mm cannulated cancellous screw fixation via miss-the-nail technique. Patient was placed on a fracture table and neck fracture was reduced by minimal traction and internal rotation. Percutaneous incisions were made and 4 mm guide pin passed from the lateral cortex to the head of the femur anterior to the nail. Drilling done over the guide pin and then a 6.5 mm screw was fixed with washer. Another 6.5 mm screw was placed slightly proximal in a similar fashion. Post operatively the patient was kept Non-weight bearing till 6 weeks. During this period only static and dynamic quadriceps exercises were started. After 6 weeks toe touch weight bearing was allowed and full weight bearing after 12 weeks. Fracture showed complete union at the neck and shaft at the end of 4 months. Patient was followed up for a period of 12 months. Patient had no symptoms of pain or difficulty in walking, climbing stairs or sitting crossed leg. There was no signs of avascular necrosis.

DISCUSSION:

Various studies show that femur neck fracture detected during antegrade nailing are either because they were missed preoperatively or due to technical errors while performing nailing. Femur neck fractures occur as a complication of nailing in about 1%.

In our study after detecting the neck fracture, the causes were evaluated retrospectively which are as listed below:

i. Determining the precise piriformis fossa was difficult as the patient was obese.
ii. Multiple entry holes were made with the AWL.
iii. ALW was malleted which might have caused a stress riser in the region.
iv. While introducing the nail, final 2-3 cm were malleted which must have further weakened the area which already had a stress riser.

Christie and Court-Brown’s reported four extracapsular FNFs during closed femoral intramedullary nailing, which were attributed to an excessively lateral insertion point in the trochanteric area and to the oblique insertion of the nail. Khan et al. found three patients with postoperatively identified FNF. All were treated conservatively (due to minimal displacement) and resulted in various malunions in two cases. He attributed the fracture to forceful insertion of the initiating awl in the wrong direction and the use of multiple entry points.

Schweiger et al. stated that antegrade femoral nails, introduced both into the piriformis entry point or laterally, do not induce higher strains if correspondingly designed nails are implanted the correct way. Deviations from these ideal insertion points are associated with higher strains. We induced both into the piriformis entry point or laterally, do not induce higher strains if correspondingly designed nails are implanted the correct way. Deviations from these ideal insertion points are associated with higher strains.

In our case, we opted for percutaneous lag screw fixation by miss-the-nail technique.

Fig 1: X-ray showing only shaft femur fracture of left femur.

In our treatment options for fracture neck of femur while nailing are, a. open/closed lag screw fixation by miss-the-nail technique, b. addressing the neck and shaft fracture separately by using sliding hip screw fixation for the neck and then retrograde nailing for the fracture shaft, c. to remove the antegrade nail and then fix the neck and shaft using a cephalomedullary fixation (Proximal femoral nailing).

Femur neck fractures are common trauma condition dealt by an Orthopaedician.

Femoral antegrade nailing has become the gold standard treatment for such fractures. Fracture neck of femur while doing an antegrade nailing is a known complication.

We present a case of femur shaft fracture who sustained an iatrogenic ipsilateral femur neck fracture, treated by miss-the-nail technique screw fixation.

The femur neck as well as the shaft fracture united completely within 4 months. The femoral antegrade nailing is a known complication.

The femur neck fracture was reduced by minimal traction and internal rotation. Percutaneous incisions were made and 4 mm guide pin passed from the lateral cortex to the head of the femur anterior to the nail. Drilling done over the guide pin and then a 6.5 mm screw was fixed with washer. Another 6.5 mm screw was placed slightly proximal in a similar fashion. Post operatively the patient was kept Non-weight bearing till 6 weeks. During this period only static and dynamic quadriceps exercises were started. After 6 weeks toe touch weight bearing was allowed and full weight bearing after 12 weeks. Fracture showed complete union at the neck and shaft at the end of 4 months.

Decision of addressing the neck and shaft fracture separately using a sliding hip screw and retrograde nailing was deferred in order to prevent opening the knee joint for the entry of retrograde nail and to avoid long duration of surgery. Also when two implants cross at some point there may be forces or trochanter.

i. Choose the correct entry point for the specific nail/fitting.
ii. Locate the precise entry point anatomy before introducing the AWL.
iii. Avoid multiple entry holes.
iv. If at any point further proceeding of the AWL or nail is difficult, don’t use a mallet to hammer. Take out the nail and ream further if required.
v. Don’t proceed the AWL in a different direction other than nail path.
vi. Ream the proximal femur till lesser trochanter so that the wider proximal part of nail can be accommodated without much force.

The various treatment options for fracture neck of femur while nailing are, a. open/closed lag screw fixation by miss-the-nail technique, b. addressing the neck and shaft fracture separately by using sliding hip screw fixation for the neck and then retrograde nailing for the fracture shaft, c. to remove the antegrade nail and then fix the neck and shaft using a cephalomedullary fixation (Proximal femoral nailing).
be chance of stress riser.
Since reduction was easy to achieve, the option of removing the nail and addressing both the fracture with a cephalomedullary nail was thought unnecessary because once the antegrade nail is removed, reducing the neck fracture with an ipsilateral shaft fracture is difficult, though PFN may be a more stable fixation. Hence, the nail technique proved to be reliable from our experience when the reduction is easily achieved and there is enough space around the nail to accommodate at least two 6.5mm cannulated cancellous screws. The advantage is that it is a short duration procedure and will not increase the treatment cost for the patient. But final decision has to be made by the treating surgeon.
If the surgeon feels that reduction is difficult or the stability of the lag screw are not sufficient then he should opt for the other methods of fixation.

CONCLUSION:

From our experience, in case a femur shaft nailing is complicated by ipsilateral neck of femur fracture then miss-the-nail technique should be tried before opting for other treatment methods.

REFERENCES:


INTRODUCTION:

Ovarian pregnancy is a rare type of extrauterine pregnancy. Primary ovarian pregnancy is a rare entity, the diagnosis of which continues to challenge the practising clinicians. In contrast to tubal pregnancy, ovarian pregnancy occurs as a single event in an otherwise healthy women. There is no specific clinical, laboratory test or ultrasonography signs for differentiating ovarian from tubal pregnancy. Laparoscopy frequently shows haemorrhage from the corpus luteum or a rupture of ovarian cyst. Histology is the only means of establishing the diagnosis. Ovarian pregnancy is often more dangerous than tubal pregnancy, but conservative treatment is often possible.

Here we report a rare case of ruptured ovarian pregnancy whose tissue samples sent to the (pathology) department confirms the presence of products of conception with normal tubal morphology.

Case report:
25 year old female with G2P2L2A0 was referred from private hospital as ectopic pregnancy to govt. RSRM hospital. She had complaints of lower abdominal pain and spotting per vaginum from one day before. On examination she was anaemic, acyanosed, afebrile. HR 78/min; PR 82/minute ; BP :110/80mmHg; CVS: S1S2 heard; Rs: normal vesicular breath sounds heard; P: A-soft ; P/V: cervix –normal; uterus –anteverted; right sided fornical fullness positive.

Ruptured Ovarian Pregnancy - A Rare Case Report

A Srimahalakshmi1, K. Valarmathi1,2, Rajesh Nataraj3, Mary Lilly1, V. Kalaivan1

Ovarian pregnancy is an uncommon presentation of ectopic gestation and usually, it ends with rupture before the end of the first trimester. Its presentation often is difficult to distinguish from that of tubal ectopic pregnancy and hemorrhagic ovarian cyst. Hereby, presenting a case of primary ovarian pregnancy in a 23-year-old patient, referred from private hospital as ectopic to govt. RSRM hospital, Stanley medical college. She presented with the complaint of severe lower abdominal pain and c/o spotting per vaginum from the previous day. Patient was diagnosed to have right adnexal mass measuring 3x2cm and the uterine cavity was found empty by transabdominal sonography. Free fluid was found in the Douglas pouch diagnosed as ectopic tubal pregnancy. Henceforth, proceeded with emergency laparotomy and found intraoperatively that patient showing intact tube with ruptured ovarian pregnancy, hence proceeded with right salpingo ovariotomy with left tubectomy. Aetiological, clinical and therapeutical aspects of this rare extrauterine pregnancy are described. Also, the problems of its differential diagnosis are discussed.

KEYWORDS:
Rupture, ovarian pregnancy, laparotomy, ultrasonography

Figure 1: Intra Operative Picture Showing The Ruptured Ovarian Pregnancy With Normal Fallopian Tubes.

Figure 2: Gross Pathology Showing Ovarian Parenchyma With Haemorrhagic Soft Tissue.

Abstract

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