A young female presenting with pentazocine induced muscle contractures for emergency LSCS

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We report a case of pentazocine induced multiple contractures leading to residual deformities in a young female presenting for emergency caesarean section. During preoperative assessment, severe disabling abduction deformities of both lower limbs at hip as well as knee and restricted movements of right upper limb were noted. History revealed intramuscular abuse of pentazocine and promethazine for 6 years, from an early age. She was presently de-addicted for last 3 years. Despite difficult positioning, we were able to perform the subarachnoid block successfully.

Keywords: pentazocine abuse, contracture, pregnancy, regional anaesthesia.

Introduction:

Pentazocine is a commonly prescribed analgesic in south East Asia. Its abuse is on the rise among adolescents including women of child bearing age. We report a rare complication of intramuscular pentazocine induced multiple contractures and myopathy leading to difficulty in positioning for regional anaesthesia for emergency cesarean section.

Case report: A 24 year old $G_4P_1L_0A_2$ presented at 35 weeks of gestation with labour pains. LSCS was planned in view of bad obstetric history, gestational hypertension, preterm labour and breech presentation.

During initial pre-anesthetic assessment, patient did not reveal any significant family and personal history. On examination, she was anxious, thin built and pale. Her blood pressure was 120/80 mmHg, marked deformities at both hips and knees were noticed (Figure 1), with legs almost fixed in abducted position. Spinous processes and intervertebral disc spaces were felt to be normal, no lordosis or scoliosis was present. According to patient she developed these deformities suddenly and spontaneously five years back but took no treatment. Her airway examination revealed Mallampati grade II. Because of the urgency of surgery and unreliable history, we decided to proceed under subarachnoid block despite a possibility of difficult positioning. Patient was neither able to sit nor able to adopt a classical knee chest position. She was placed in a compromised left lateral position with right upper leg supported by an assistant for subarachnoid block which was successfully carried out (Figure 2). In supine position her legs were extending outside the O.T. table therefore they were padded and supported with a splint. Patient was unable to abduct her arms beyond 60^0 and fully extend her elbows. Intra operative period was uneventful Postoperatively she revealed her addiction to pentazocine and promethazine since 14 yrs of age by self injection three to four times daily intramuscularly in gluteal, thigh and deltoid muscles for almost 6 years resulting in deformities 5 years ago. Presently she was de-addicted for the last 3 years.

Postoperative assessment revealed abductor deformity of 0- 60^0 of right shoulder, 0- 20^0 in both legs. Flexion up to 30^0 at right hip and only 10^0 at left hip was possible, knees were fixed in extension. Radiograph of pelvis showed irregularly ossified projections along both iliac blades and greater trochanters (Figure 3).[1]

Considering past history of prolonged intramuscular pentazocine abuse, with contractures of specific muscle groups and

normal joint radiographs, diagnosis of pentazocine induced contracture and residual deformities were confirmed.

Discussion:

Abuse of non-narcotic opioids such as pentazocine, is on the rise in India and developing countries. Medical and paramedical personnel are at high risk for pentazocine abuse in combination with other drugs because of easy access. Common routes of pentazocine abuse are intravenous, subcutaneous and intramuscular.

Cutaneous complications such as sclerotic ulcers, thrombophlebitis and local abscess are common with intravenous or intramuscular pentazocine. Complications specific to prolonged intramuscular pentazocine are focal myopathy, fibromyositis and contractures. Pentazocine induced contracture is a rare complication described in literature.[2,3,4]

Opioid abuse in females of reproductive age group can cause IUGR, congenital malformations and neonatal withdrawal symptoms. Irrespective of whether patient is in recovery phase, present abuser or in a de-addiction program, their emotional, physical and psychological reactions are much different from that of a non addict. Anaesthetic implication in such cases would be the need for psychological support during perioperative period. Information on the exact nature of drug abuse, its route, frequency and duration of administration should be obtained from other reliable family members.[5] HIV, HBV and HCV status are important concerns, and therefore universal precautions should be taken. Peripheral intravenous access can be difficult due to thrombosis of veins.

Regional anaesthesia is considered to be safe in opioid addicted pregnant patients; however these patients are prone to hypotension. Lordosis due to contractures at glutei, quadriceps and knee can make regional anaesthesia more difficult[2], and general anaesthesia may be considered in such cases. Other considerations include symptoms of acute withdrawal, abnormal liver function tests, haemodynamic instability, and combative behaviour. Opioid agonist-antagonist drugs like pentazocine may precipitate acute withdrawal in addicts. If opioids are given to a labouring mother to prevent withdrawal symptoms, it may lead to neonatal respiratory depression.[6]

In conclusion, proper pre anaesthetic assessment, reliable history taking with history of drug abuse is important even in emergency scenarios. Pentazocine induced myopathy and contracture should be considered as a differential diagnosis in a patient with atypical contractures. Regional anaesthesia may be difficult due to contractures and deformities.

To our knowledge this is the first case report of a pentazocine addicted female with residual deformities and contractures presenting for caesarean section. Such patients may present to anaesthesiologists for emergency and elective surgeries. Thus one should be aware of the anaesthetic implications in order to achieve a favourable outcome.

Figure 1: Abduction deformity of lower limbs

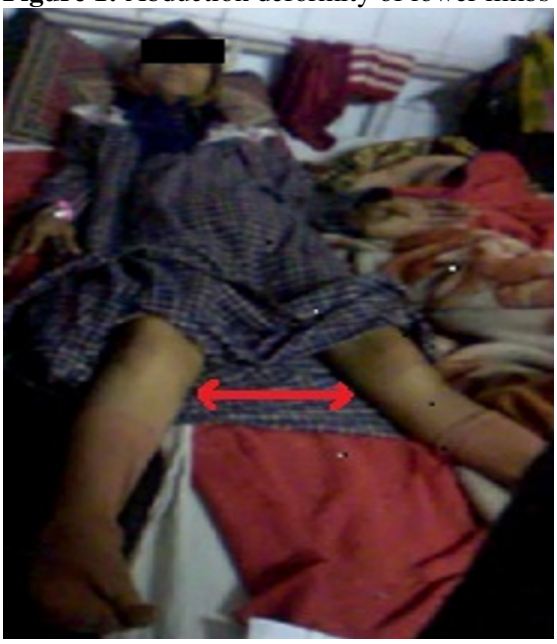


Figure 2: Difficult positioning for spinal anaesthesia: right leg supported by assistant

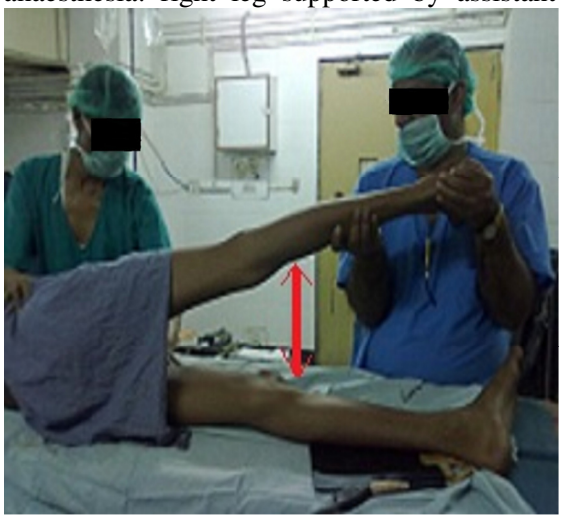
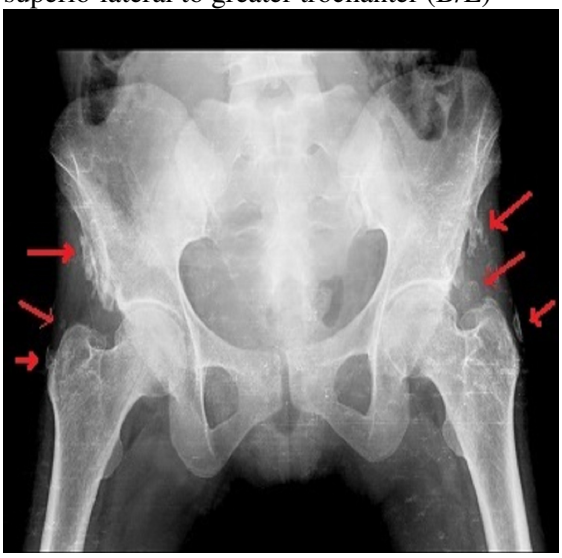


Figure 3: Radiograph of pelvis showing irregularly ossified projections along lateral margin of both iliac blades and ossific bodies superio-lateral to greater trochanter (B/L)



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