BACKGROUND: Common neuropathies during pregnancy are carpal tunnel syndrome or peripheral facial paralysis. However, there is little information about femoral nerve affection during pregnancy. CASE REPORT: We report on a female at 30 weeks of gestation, complaining of pain in hips and thighs and gait difficulty. Pregnancy was normally developed. Neurological examination showed a bilateral weakness in both quadriceps and iliopsoas muscles combined with soreness in hips and thighs, without deficits of sensibility. Laboratory findings and results of a lumbar puncture were normal. Pelvic ultrasound and an MRI scan of the spine and pelvis showed no mass or disc prolaps. Neuromyographic evaluation bilaterally revealed acute signs of denervation of the muscles innervated by femoral nerve. Caesarean section was performed at 32 gestational weeks, as pain was unbearable and refractory to treatment with even opiates. Post partum, pain relieved immediately, and after weeks of physiotherapy, complete remission was achieved. CONCLUSION: This unusual manifestation of a neuropathy in pregnancy could be due to pressure on the femoral nerve. The patients' anxiety can be eliminated, as the described cases in literature show an excellent prognosis. However, the severity of symptoms can lead us to necessity of premature delivery.