

MANAGEMENT OF UTERINE PROLAPSE WITH ELECTROSTIMULATION — A Case Report

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ABSTRACT

A thirty-year-old woman with a history of first degree prolapse with cystocele and enterocele after ten days of normal delivery was referred for physiotherapy. The patient complained of general discomfort and low back pain while walking. She was treated using faradic electrical stimulation with 2000ms pulse duration and 1000ms pulse interval at an intensity of 37mA. This output was used for 20 minutes at each treatment session twice a week for seven weeks. The indifferent electrode was placed at the lumbosacral region with the patient in supine position. The active electrode was placed in front of the labia majus due to a lack of vaginal electrode, and the patient was asked to cross her legs in order to hold the electrode in place with the adductor muscles. The prolapse resolved and the low back pain disappeared after seven weeks of treatment.

Key words: electrostimulation, uterine prolapse, pelvic floor muscles, exercise

INTRODUCTION

Uterine prolapse is a gynaecological condition commonly seen in physiotherapy departments. Owoeye¹ managed 12 patients with various degrees of uterine prolapse and reported that the patients who had first and second degree prolapse recovered fully

after physical management. His result confirms the suggestion by two authors that electrostimulation may be beneficial in the management of uterine prolapse.^{2,3}

Prolapse, according to Lewis and Chamberlain,⁴ is the result of damage to the supporting structures of the uterus during childbirth, however, in many cases, the prolapse does not become evident until after menopause when some degree of atrophy of these structures occurs. Causes such as prolonged labour, delivery of a large fetus, forceps delivery, post-menopausal atrophy, intra-abdominal pressure as in violent coughing, abdominal hysterectomy, excessive stretching of the supporting tissues at childbirth and early marriage, have been reported.³

The pelvic floor muscles (i.e., the levator ani, urogenital diaphragm and pelvic outlets group of muscles) support the pelvic viscera and aid the control of the bowel and bladder functions.³ Although these muscles are under voluntary control, they are often poorly developed in many women. This may lead to genital prolapse, decreased ability to support a pregnant uterus, stress incontinence, slower rate of healing after an episiotomy, and decreased ability to relax the perineal floor during the second stage of labour.

Fisher et al.⁶ suggest conservative management, especially in young women, as it offers the possibility of postponing surgery. Chou and Yu⁷

encourage the use of pessaries for patients who refuse or are unable to undergo surgery due to medical applications. Adedoyin and Akinloye,⁸ in their study, emphasized the importance of pre- and postnatal exercise in the prevention of birth complications. Despite the increasing number of patients with uterine prolapse seen by physiotherapists, there is a need for more clinical studies to determine the most appropriate treatment for the condition.

PATIENT'S CLINICAL HISTORY

O.B. is a thirty-year-old woman with a history of first-degree uterine prolapse, cystocele and enterocele. Ten days post normal delivery, she observed a protrusion in her vagina while defaecating. She was referred for physiotherapy by her doctor. She complained of general discomfort and low back pain while walking. The protrusion was worsened by coughing and defaecation. There was no history of urinary incontinence.

PAST MEDICAL HISTORY: Nil of significance

FAMILY AND SOCIAL HISTORY: A fish vendor with 2 children.

PHYSICAL EXAMINATION

The patient was asked about her menstrual cycle to rule out pregnancy and haemorrhage. The physiological movements of the spine elicited no pain, and did not relieve her pain. A full evaluation of the patient's vertebral, hip and sacroiliac joints was conducted to rule out musculoskeletal problems. Lower quarter screening (LQS) tests were undertaken as suggested by Balogun and Okonofua.⁹ These entail a series of mobility and neurological tests to identify problems emanating from the lumbar spines, sacroiliac joints, hip, knee, ankle and foot. The LQS tests were negative.

TREATMENT

The pelvic floor muscles were stimulated using an electrical stimulator (Endo-med 581 Enra-Nonius Box 810, 2600 AV DELFT Netherlands) with 200ms pulse duration and 100ms pulse interval at 37mA intensity output was used for 20 minutes during each treatment session. The active and indifferent electrodes were wrapped with eight layers of moist lint for proper conduction. The indifferent electrode was placed at the lumbosacral region and the patient was asked to lie supine and make contact

with the electrode. The active electrode was placed in front of the labia majus and the patient was asked to cross her legs to hold the electrode in place with the adductor muscles due to the lack of a vaginal electrode. The patient was told to expect a tingling sensation beneath the electrodes during the treatment with muscular contraction occurring simultaneously and a comfortable warm sensation. She was warned of the danger of burns if the warmth became excessive.⁵ The patient tolerated a current of 37mA. Faradic current was used throughout the treatment. Downie¹⁰ advised pelvic floor exercises after about six to eight treatments of faradic electrical stimulation. The patient was taught pelvic floor muscle exercises in the fifth week and was encouraged to practice them at home. She was treated twice weekly for 7 weeks.

TREATMENT EVALUATION

Before the initial treatment session, the patient was introduced to a 10-point ratio pain scale: 0 = no pain; 5 = moderate pain; and 10 = excruciating pain. Since there was no perineometer in the department to objectively determine the strength of the pelvic floor muscles, the prolapse was subjectively rated.

RESULTS

The initial rating of the back pain was 9. The patient's pain reduced to 7 and the prolapse level remained unchanged in the second week. The back pain ceased completely during the 7th week. At this point, the patient reported that defaecation and coughing did not lead to protrusion of the uterus. She was discharged but instructed to continue the pelvic floor exercises at home. She was told to return to the clinic for treatment in the event of a relapse. The patient had not returned at the time of writing the report, i.e., 3 months after discharge.

DISCUSSION

Electrostimulation has been used successfully for strengthening normal enervated muscles as well as speeding up healing in non-union fracture, repair of nerve, tendons and ligaments.^{11,12} Faradic current coupled with exercise improved the pelvic floor muscles in this patient.

Women with any degree of uterine prolapse or recently delivered mothers with or without genuine stress incontinence are usually encouraged by their physicians to perform pelvic floor exercises at home. Most times, however, patients do not improve, either

because of poor understanding of the exercises or failure to continue. Furthermore, in severe cases of prolapse following parturition, sensory and motor nerve-damage often renders ineffective any voluntary effort to initiate the contraction of the pelvic muscles. Apart from initiating the healing process in damaged muscles and neurovascular structures following parturition, the use of Faradic current could also help the patient to understand what muscles should be contracted.¹³

In developing countries like Nigeria, where cases of prolonged second stage labour are common, faradic stimulation could be more suitable for reducing the burden of surgical intervention. Conservative management is preferred in view of the general fear and high cost of surgical treatment, which keep many prolapse sufferers away from the hospital. There is also a need to create awareness among physicians and other relevant skilled staff of the value of faradic stimulation so that those who need it can be referred early.

The findings in this study suggest that electrical stimulation is indicated in gynaecological practice. Electrical stimulation of the muscles is followed by contraction and relaxation of the pelvic floor muscles, leading to constriction and dilatation of the arterioles and capillaries and easy blood flow. The improved blood circulation enhances the presence of oxygen, tissue nutrients and phagocytic cells and the removal of metabolic waste products. Voluntary contraction of muscles during pelvic floor exercises helps to strengthen the muscles. The initial reduction in the level of pain at the lumbosacral region during the first week was probably due to the electroanalgesic effect of the stimulation. Otherwise, the disappearance of the pain in the 7th week after the prolapse had almost resolved, indicates that the pain might have been referred from the visceral organs. Uterine prolapse causing discomfort is usually treated surgically, however, conservative physiotherapy treatment would be more appropriate if the woman intends to have another baby in the near future.

CONCLUSION

A case report of a 30-year-old woman with a history of first-degree uterine prolapse was presented. After receiving a total of 14 sessions of electrostimulation and pelvic floor exercises, the uterine protrusion was completely resolved and the associated low back-pain subsequently ceased.

There is a need for more studies in this area using a larger sample size to sufficiently establish the efficacy of electrostimulation in the treatment of uterine prolapse.

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