

# Distortion of the Cervico-Vaginal Angle— A Cause of Secondary Infertility

Gloria E. Archibong<sup>1\*</sup>, Ayi E. Archibong<sup>2</sup>, Jacob J. Udo<sup>3</sup>

<sup>1</sup>Faith Foundation Specialist Clinic, Calabar, Nigeria

<sup>2</sup>Department of Surgery, University of Calabar Teaching Hospital, Calabar, Nigeria

<sup>3</sup>Department of Paediatrics, University of Calabar Teaching Hospital, Calabar, Nigeria

Email: [\\*faithfoundationclinic57@yahoo.com](mailto:faithfoundationclinic57@yahoo.com)

Received 19 August 2014; revised 18 September 2014; accepted 8 October 2014

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## Abstract

**Background:** A case of a 27-year-old G<sub>1</sub>P<sub>0</sub> Education graduate who became secondarily infertile because of the distortion of the cervico-vaginal angle as a result of adherence of the body of the uterus to the anterior abdominal wall. **Aim:** The aim of this article is to raise awareness and a high index of suspicion in patients who earlier had a classical caesarian section that presented with secondary infertility. **Case Presentation:** A 27-year-old G<sub>1</sub>P<sub>0</sub> graduate presented at the Faith Foundation Specialist Clinic, Calabar with secondary infertility. She previously had an emergency classical Caesarian Section for an obstructed labour in an apparent attempt to serve the baby's life. The body of the uterus became adherent to the anterior abdominal wall thus distorting the angulation of the cervix and vagina. Available investigation that was done revealed no abnormality with the husband, but in the cause of further investigations she developed signs and symptoms of acute appendicitis for which she was operated. The access was through the midline incision in the anterior abdominal wall where it was discovered that the uterine body was adherence to the anterior abdominal wall. This was released and placed in the pelvis. Subsequently, she became pregnant and was delivered. **Conclusion:** Classical approaches in Caesarian Sections are rarely used nowadays. The Surgeon/Gynaecologist should be conscious of the possibility of the uterine body adherence to the anterior abdominal wall when cases involving secondary infertility present.

## Keywords

Infertility, Adhesions, Distortion

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\*Corresponding author.

## 1. Introduction

Infertility is a serious cause of concern for married couples and several aetiological factors have been highlighted in the literatures. Infertility is the inability to conceive after 1 year of unprotected intercourse [1]. In the female pelvis, chronic pelvic inflammatory diseases causing adhesions with blockage of the tubes are a common cause, thus necessitating laparoscopic adhesiolysis that is available and hydrotubation to “free” and keep the tubes patent. Anatomically the cervix is positioned such that it perpetually “dips” into the vaginal fornix thus allowing sperm cells during coitus to migrate cephalid into the uterine cavity and then to the fallopian tubes. Distortion of this cervico-vaginal angulation may prevent this phenomenon from happening. This article therefore is presented to arouse a high index of suspicion in such patients who had classical caesarian section but subsequently complain of infertility.

## 2. Case Report

A 27-year-old G<sub>1</sub>P<sub>0</sub> Education graduate Hospital No. 1441/09 whose husband is a staff of the Power Holding Company of Nigeria in Calabar have been attending the Faith Foundation Specialist Clinic, Calabar for medical attention. She in April 2009 had an emergency caesarian section for an “apparent obstructed labour” (in her own words for a very big baby) in a government hospital in Enugu city. A classical caesarian incision was used for the extraction of this “big” baby. Recovery was uneventful however the baby died. The family relocated to Calabar in 2010 and they started attending the Faith Foundation Specialist Clinic for their medical needs, including that of infertility.

Various investigations for this infertility commenced starting with the husband whose seminal fluid analysis was within normal range. The woman was scheduled for hysterosalpingography (HSG) but the pelvic ultrasonography revealed no abnormality. In 2011 in the cause of preparations for this HSG, she developed severe pains in the right iliac fossa (RIF). Clinical assessment with pelvic ultrasonography confirmed the diagnosis of acute appendicitis. She had appendectomy done and for this operation the midline scar from the previous caesarian section was used for the access. The intra-abdominally findings was that the fundus and the body of the uterus was adherent to the anterior abdominal wall scar. The appendectomy was affected and adhesiolysis of the uterus effected thus releasing the uterus back into the pelvis. Post-operative period was uneventful with the patient discharged on the seventh day post operative period. Three month thereafter, the patient who was still awaiting HSG investigation reported in the clinic complaining of amenorrhea of two months duration. Laboratory investigation was positive for pregnancy which developed to term. She had a caesarian section for this pregnancy with the delivery of a male infant. She has further delivered a second child (female) in August, 2013.

## 3. Discussion

Several aetiological factors have been highlighted in the literature as causing infertility in women but none to the knowledge of the authors who have attributed post-operative cervico-vaginal angle distortion as a possible cause apparently because now lower segment caesarian sections (LSCS) are routinely carried out. It is known that post-operative adhesions blocking the fallopian tubes are a common cause of infertility. This therefore necessitated the common use of laparoscopes in the separation of these adhesions either in combination with hydrotubation or alone as the treatment of infertility caused by adhesions. Gynaecological technological advances in adhesiolysis led by Semm [2] expanded the horizon of abdominal adhesiolysis and this further has extended to several other abdominal surgical procedures [3] [4]. Now laparoscopy is a common place procedure in several aspects of general surgery such as laparoscopic cholecystectomy, appendectomy, etc.

However as is general practise in any branch of medicine, it is essential that the logical clinical approach to diagnosis should be applied in cases of infertility. A detailed history, careful clinical examination and selected investigations can be used to determine aetiological factors [5].

Perhaps the emergency situation of the first operation with the usage of a classical incision in the uterus, all in an effort to save the mother and child formed the adhesions which “glued” the uterus to the anterior abdominal wall and thus dragging the uterus up from the pelvis—its place of normal abode. The releasing of these adhesions allowed the uterus to fall back into the pelvis thus restoring the normal cervico-vaginal angulation. This therefore allowed the implantation of the fertilized egg into the now “quiet” uterus (pregnancy). It is imperative for Gynaecologist who undertakes classical caesarian section to ensure that the involuting uterus is within the

pelvis. The Gynaecologist investigating for secondary infertility in such a patient should take into cognizance the possibility of an adherent uterine body to the anterior abdominal wall.

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