International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

Wonder of the Diagnostics: Endometriosis in Canal of Nuck

Prerna Chhabra[1], Ritu Priya Chowdhury[2]

[1]Senior Resident, Department of Obstetrics and Gynaecology, Jawaharlal Nehru Medical College (JNMC), Wardha
Email: *prerna258[at]gmail.com*

[2]Senior Resident, Department of Pathology, Noida International Institute of Medical Sciences (NIIMS), Noida International University, Greater Noida

Abstract: ***Endometriosis in the Canal of Nuck is an extremely rare phenomenon that can be difficult to diagnose because of its unusual location and wide range of clinical manifestations. This paper describes the case of a 31 - year - old female patient who initially complained of groin edema followed by suprapubic pain that persisted for two years. A cystic lesion seen in the Canal of Nuck using magnetic resonance imaging (MRI) raised the possibility of endometriosis. The initial radiological findings were supported by surgical investigation, which established the existence of endometrial implants. This specific case highlights how important imaging methods are for identifying endometriosis in uncommon places, which allows for prompt treatment and improves patient outcomes. It also emphasizes how important a diverse approach is to guarantee comprehensive care to the patient.***

Keywords: Canal of Nuck, Endometriosis, Groin swelling.

1. Introduction

The occurrence of endometriosis in the canal of Nuck is a rare medical condition initially described by Cullen in 1896 (1). Endometriosis is a common gynecological condition that affects 6–10% of women who are fertile (2). It is typified by the implantation of functioning endometrial tissue outside of the uterine cavity, often found in the peritoneum and ovaries (3). However, with an estimated prevalence of 0.8%, cases of endometriosis in extrapelvic locales mostly affect extraperitoneal structures such the integument, round ligament, and hernia sac. The vulva, cervix, perineum, inguinal canal, urinary tract, gastrointestinal tract, lung structures, extremities, integument, and central nervous system are a few other places. In females, the parietal peritoneum extends embryologically into the inguinal canal and the labium majus along the uterine round ligament; however, it usually undergoes total obliteration during the first year of life (4). The canal of Nuck, named for Anton Nuck, is formed as a result of this structure's persistence (5). Various entities, including hydrocele, hernias, and cysts, can be found in the canal of Nuck. Endometriosis, on the other hand, is not as common in this area and can present as a generic soft tissue mass in the groin, which may require consultation with a plastic surgeon or general surgeon.

2. Case Report

A 31 - year - old woman presented to gynaecology clinic complaining of a slight soreness and swelling in her right groin. As the patient's symptoms worsened over time, she became aware of an unusual lump almost nine months before seeking medical assistance. When she was running, she had an initial round of dull, excruciating pain that was so bad she had to stop exercising. She occasionally felt a little, reducible bump in her right suprapubic area. She disclosed a history of abnormal menstrual periods and cyclical pain that changed in tandem with the mass's growth during her menstrual cycle. A 2.5 cm subcutaneous thickening to the right of the midline covering the patient's right pubis was found during a physical examination, and palpation revealed tenderness. Normal bowel habits were recorded, and no concurrent pelvic problems were seen. There was no documentation of any trauma, and the patient's medical history was ordinary, without any concomitant symptoms. At the time of the examination, the patient denied having catamenial pain and had no prior history of UTIs. A pelvic magnetic resonance imaging (MRI) scan was then performed, and the results showed the presence of a well - defined, round mass that measured about 2.4 x 2.4 x 2.2 cm and extended from the right inferior canal to the subcutaneous plane of the right lateral pubic area (Figure 1).

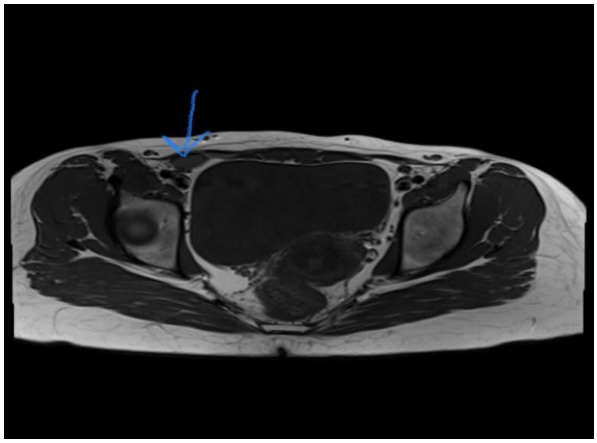

Figure 1: MRI image (Axial plane) showing Hypointense mass on T2 weighted imaging

Imaging features suggested an inflammatory illness diagnosis as a possible. The existence of endometriosis within the Nuck canal was suspected based on the clinical presentation, anatomical placement of the mass, and MRI results. The mass had to be removed in order to proceed with a final excisional biopsy of the lesion for definitive therapy. After surgery, a brownish mass measuring 2 by 2 cm and encased in a sac - like structure was found near the round ligament. The specimen's pathological examination supported the surgical

and histological findings that endometriosis was present (Figure 2).

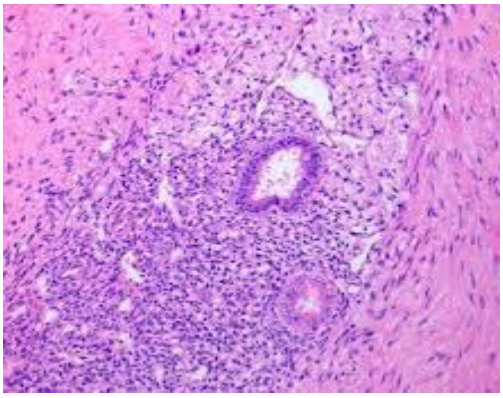

Figure 2: Histopathology image showing presence of endometrial glands

3. Discussion

A non - specific soft tissue mass in the groin area and periodic menstrual pain are the symptoms of endometriosis affecting the canal of Nuck. This phenomenon is explained by the lesion's sensitivity to changes in hormone levels at the the start of the menstrual cycle, which causes an inflammatory response. It is also hypothesized that extra - pelvic endometriosis may not have any hormone receptors, which could lead to a presentation without periodic symptoms (6).

4. Conclusion

This case illustrates the challenges that arise with identifying rare symptoms of well - known diseases. It is non - specific to find a discernible mass in the subcutaneous layers of the pelvic region. However, given the extraordinary imaging results in our patient who has extrapelvic endometriosis in the canal of Nuck, we contend that in females at risk for endometriosis, the traditional view that atypical manifestations of a common disorder should be taken into consideration during the diagnostic process.

Conflict of Interest- None

References

[1] Malec - Milewska M, Horosz B, Kolęda I, Sękowska A, Kucia H, Kosson D, Jakiel G. Neurolytic block of ganglion of Walther for the management of chronic pelvic pain. Wideochir Inne Tech Maloinwazyjne.2014 Sep; 9 (3): 458 - 62. doi: 10.5114/wiitm.2014.43079. Epub 2014 May 29. PMID: 25337174; PMCID: PMC4198636.

[2] Burney RO, Giudice LC. Pathogenesis and pathophysiology of endometriosis. Fertil Steril.2012 Sep; 98 (3): 511 - 9. doi: 10.1016/j. fertnstert.2012.06.029. Epub 2012 Jul 20. PMID: 22819144; PMCID: PMC3836682.

[3] Iwanoff NS. IV. Drüsiges cystenhaltiges Uterusfibromyom complicirt durch Sarcom und Carcinom. (Adenofibromyoma cysticum sarcomatodes carcinomatosum). Gynecologic and Obstetric Investigation.1898 Jan 28; 7 (3): 295 - 300.

[4] Massé J, Watrin T, Laurent A, Deschamps S, Guerrier D, Pellerin I. The developing female genital tract: from genetics to epigenetics. Int J Dev Biol.2009; 53 (2 - 3): 411 - 24. doi: 10.1387/ijdb.082680jm. PMID: 19412895.

[5] Kohlhauser M, Pirsch JV, Maier T, Viertler C, Fegerl R. The Cyst of the Canal of Nuck: Anatomy, Diagnostic and Treatment of a Very Rare Diagnosis - A Case Report of an Adult Woman and Narrative Review of the Literature. Medicina (Kaunas).2022 Sep 27; 58 (10): 1353. doi: 10.3390/medicina58101353. PMID: 36295514; PMCID: PMC9609622.

[6] Hirata T, Koga K, Osuga Y. Extra - pelvic endometriosis: A review. Reprod Med Biol.2020 Jul 16; 19 (4): 323 - 333. doi: 10.1002/rmb2.12340. PMID: 33071634; PMCID: PMC7542014.