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Uterine Fibroids and Endometrial Abnormalities: An Ultrasound Study

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ABSTRACT

This retrospective study investigated the prevalence of uterine fibroids and endometrial abnormalities using ultrasound findings from patients at Kamla Nehru Hospital and Krsnaa Diagnostics Laboratory in Pune, India. Analysis of 100 ultrasound reports revealed a significant frequency of uterine fibroids (15%) and thickened endometrium (25%). These findings underscore the importance of routine gynecological checkups and further research into the clinical implications of these conditions in this population.

Keywords: Retrospective study, Uterine Abnormalities, Endometrial abnormalities, Ultrasound, Research, Analysis

INTRODUCTION

Uterine fibroids and endometrial abnormalities are common gynecological issues affecting women, particularly during their reproductive years. Uterine fibroids, benign smooth muscle growths within the uterus, are among the most prevalent pelvic tumors, affecting 20% to 50% of reproductive-aged women (Stewart & Lee, 2013).

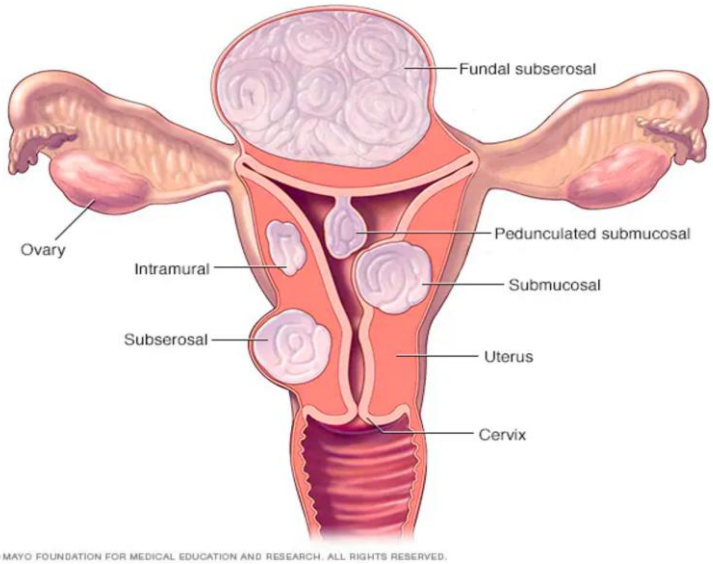


Image 1. Diagram illustrating different types of uterine fibroids (submucosal, intramural, subserosal)
Reference: Image sources from 'Mayo Foundation for Medical Education and Research, 2025

The exact cause of fibroids is unknown, but genetic predisposition, hormonal influences (especially estrogen), and growth factors are implicated (Borah & Bora, 2016). Endometrial abnormalities, including endometrial hyperplasia (excessive uterine lining growth) and endometrial polyps (benign growths protruding from the lining), represent a spectrum of conditions. Endometrial hyperplasia can sometimes progress to endometrial cancer, making early detection vital (Gambacciani et al., 2006).

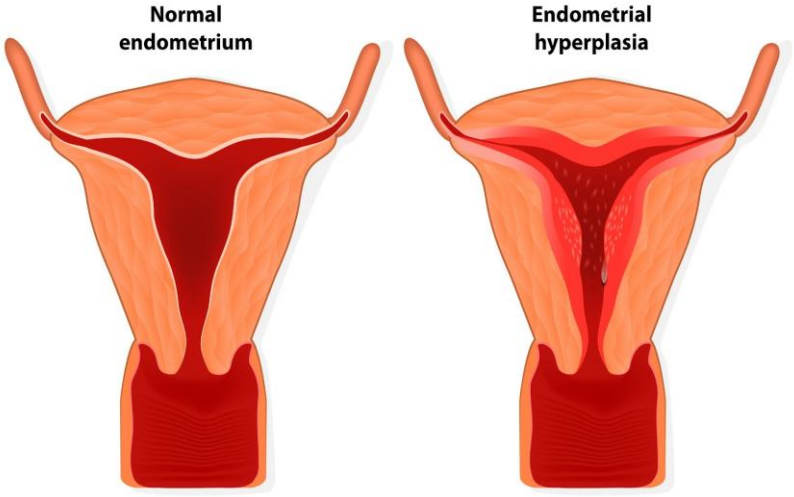


Image 2: Diagram of a normal uterus and a uterus with thickened endometrium.
Source: T. Amrillah et al.

These conditions can significantly affect women's health, causing heavy menstrual bleeding (menorrhagia), pelvic pain, pressure symptoms, painful intercourse (dyspareunia), and infertility (Gupta & Gupta, 2013; Munro et al., 2017).

METHODS

This retrospective study analyzed 100 ultrasound reports from patients at Kamla Nehru Hospital and Krsnaa Diagnostics Laboratory, Pune, India, between [Start Date] and [End Date]. Inclusion criteria were adult female patients undergoing abdominal and pelvic ultrasound. The presence of "Uterine Fibroids," "Thickened Endometrium," and "Endometrial Polyp" was recorded.

STATISTICAL ANALYSIS

Table 1: Prevalence of Uterine Fibroids

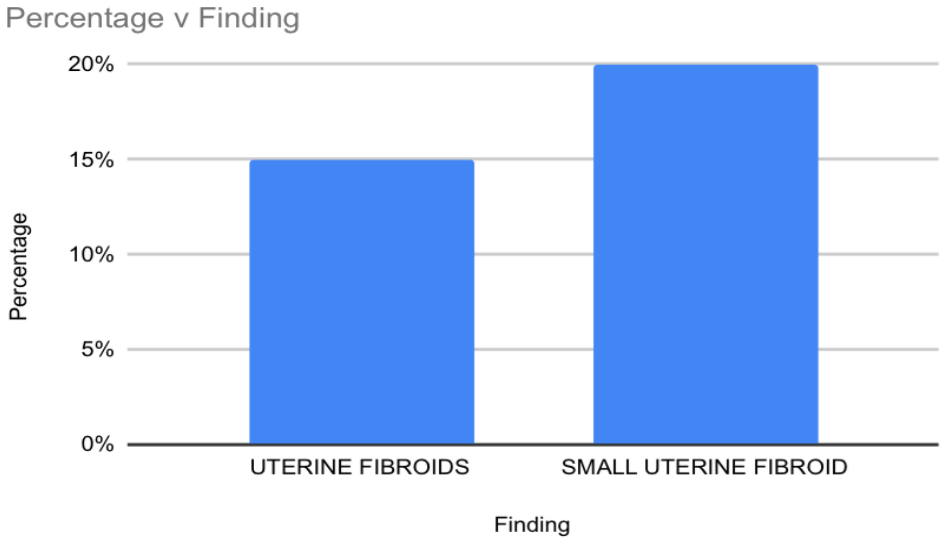
Finding	Count	Percentage
UTERINE FIBROIDS	15	15%
SMALL UTERINE FIBROID	20	20%

Table 2: Prevalence of Endometrial Abnormalities

Finding	Count	Percentage
THICKENED ENDOMETRIUM	25	25%
ENDOMETRIAL POLYP	1	1%

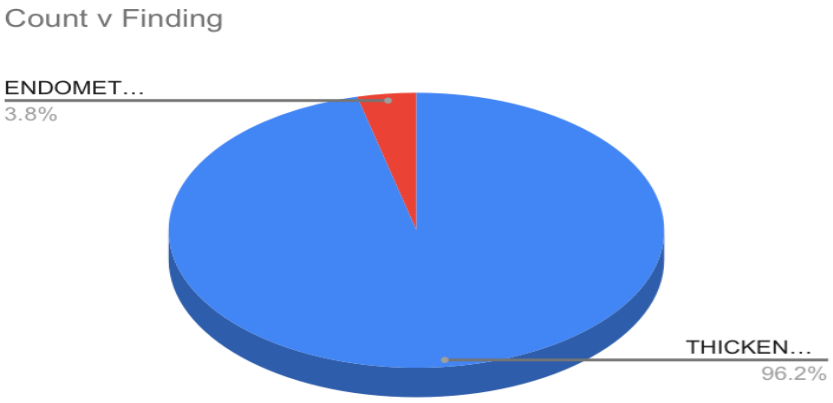
RESULT

Figure 3: Prevalence of Uterine Fibroids



- The height of each bar corresponds to the percentage for that finding.
  - X-axis: Finding (UTERINE FIBROIDS, SMALL UTERINE FIBROID)
  - Y-axis: Percentage]
- **Note:** This bar chart illustrates the frequency of each finding within the dataset.

Figure 4: Prevalence of Endometrial Abnormalities



- Slice 1: THICKENED ENDOMETRIUM (25/26) ≈ 96.2%
- Slice 2: ENDOMETRIAL POLYP (1/26) ≈ 3.8%]
- **Note:** This pie chart represents the proportion of each endometrial abnormality within the dataset.

The analysis found uterine fibroids in 15% of reports and thickened endometrium in 25%.

DISCUSSION

Uterine Fibroids: The observed fibroid prevalence is consistent with epidemiological data showing their common occurrence in reproductive-aged women (Stewart & Lee, 2013). Fibroid size and location influence clinical presentation and impact.

Endometrial Abnormalities: The 25% prevalence of thickened endometrium require further investigation. Endometrial thickening can precede conditions like endometrial hyperplasia and cancer.

Endometrial hyperplasia, marked by excessive endometrial tissue growth, is classified by cellular atypia and malignancy risk (Gambacciani et al., 2006). Atypical hyperplasia has a greater risk of progressing to endometrial cancer. Endometrial polyps, benign growths from the endometrial surface, are often asymptomatic but can cause abnormal bleeding, pain, and infertility (Munro et al., 2017).

CLINICAL IMPLICATIONS

- **Early Detection and Management:** Routine gynecological exams, including pelvic exams and transvaginal ultrasounds, are crucial for early detection.
- **Risk Factor Assessment:** Identifying high-risk women (family history of uterine cancer, obesity, prolonged estrogen exposure) is important (Borah & Bora, 2016).
- **Treatment Options:**
  - **Medical:** Progestins, GnRH agonists, oral contraceptives can manage symptoms and shrink fibroids.
  - **Minimally invasive:** Uterine artery embolization (UAE), myomectomy can treat symptomatic fibroids.
  - **Surgery:** Hysterectomy may be needed in severe cases or after childbearing.
  - Endometrial abnormality treatment varies (medication, ablation, hysterectomy).

CONCLUSION

This study provides preliminary evidence of the prevalence of uterine fibroids and endometrial abnormalities in this population. These findings emphasize the need for routine gynecological care for early detection and management. Further research is necessary for a better understanding and effective strategies for prevention and management.

Declaration by Authors

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Conflict of Interest: No conflicts of interest declared.

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