

# Huge vaginal stone associated with vesicovaginal fistula, obstructive renal failure and VaIN

**Authors:** Z. Holwek, J.Lee

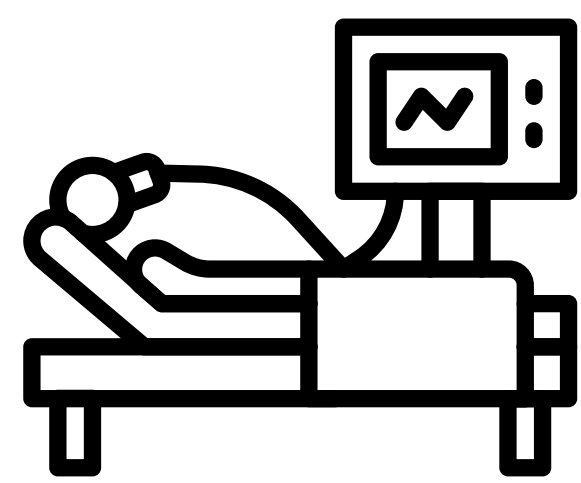
**Affiliations:** Gloucester Royal Hospitals  
NHS Trust

## Case report

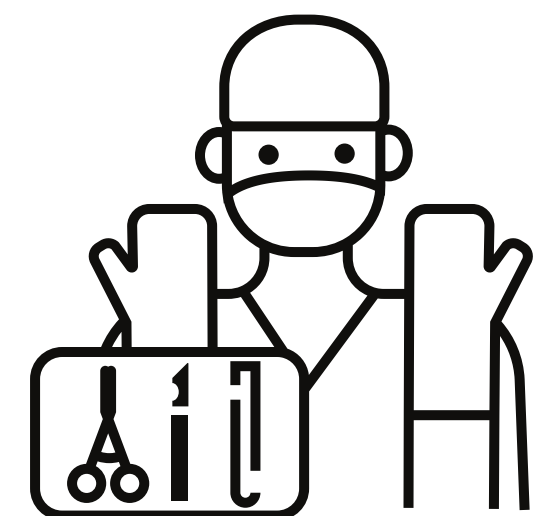
An 80-year-old woman presented with a 2-year history of worsening urinary incontinence, perineal discomfort, and buttock pain.



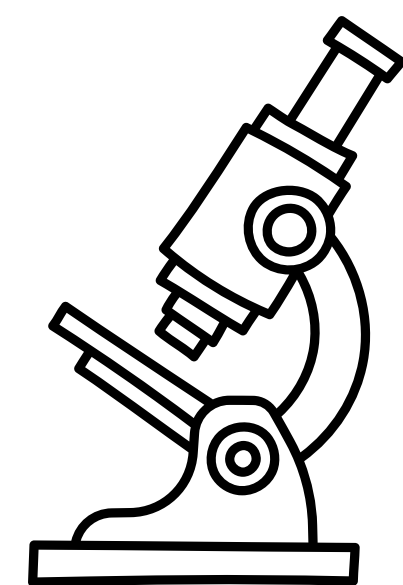
- Two uncomplicated vaginal deliveries
- A forgotten IUD inserted >20 years ago
- No history of pelvic surgery
- Normal BMI and active lifestyle



- O/E solid, gritty mass filling the vaginal canal; Pooling of urine, suggesting a fistula
- CT AP : 10 cm calcified vaginal stone; Severe bilateral hydronephrosis; Suspicion of a vesicovaginal fistula (VVF)



- Bilateral nephrostomies were placed urgently → Preserved renal function (partial recovery)
- Stone was removed transvaginally under anaesthesia
- Intraoperative findings confirmed a VVF and abnormal anterior vaginal wall tissue



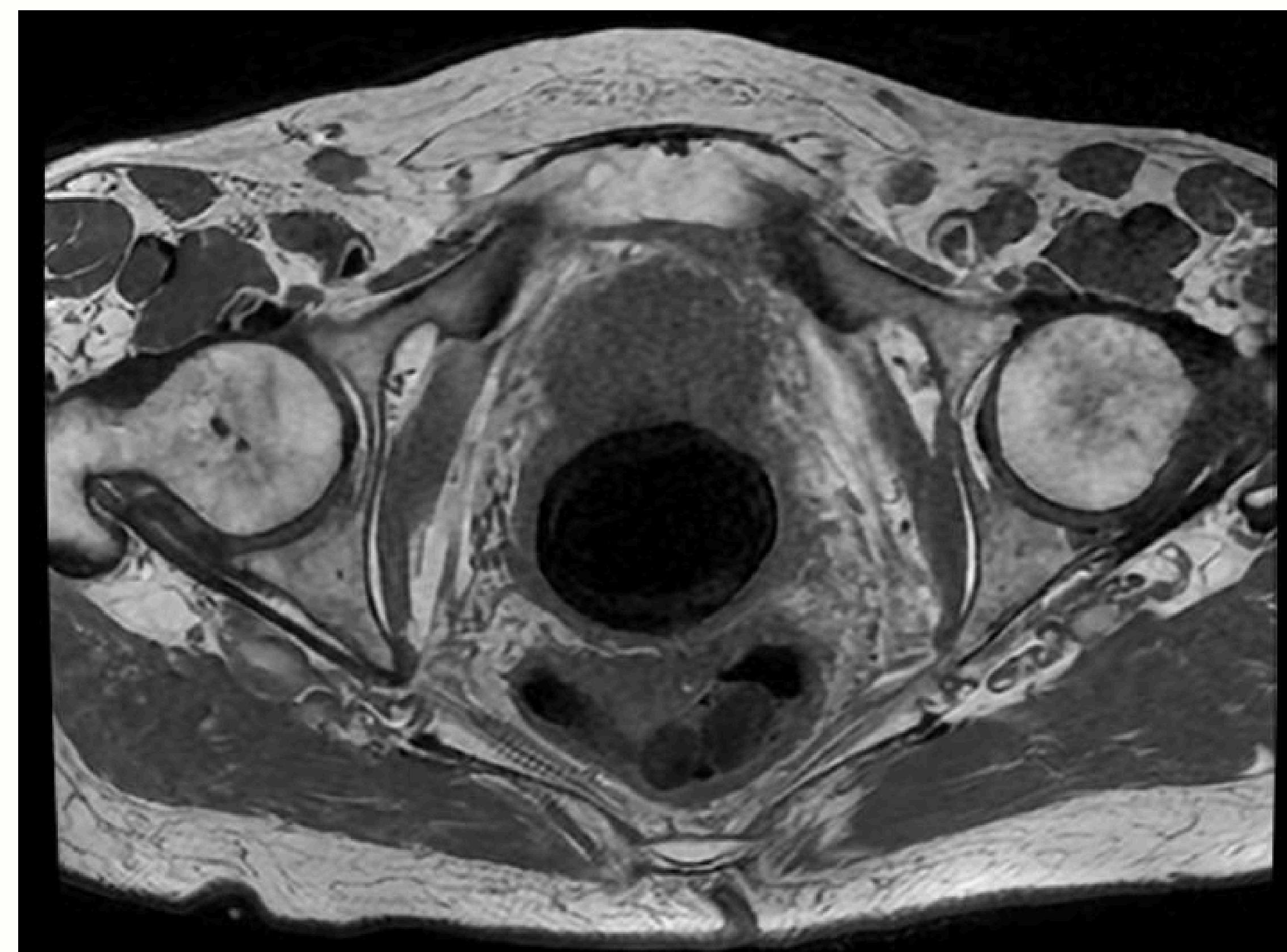
- Initial biopsies: Chronic inflammation, suspicious for squamous cell carcinoma
- Repeat biopsies: High-grade vaginal intraepithelial neoplasia (VaIN) → No invasion noted



- Patient declined further surgery
- Managed conservatively with urology and gynae-oncology follow-up and surveillance

## Background

- Vaginal stones are rare, often forming around foreign bodies like retained intrauterine devices (IUDs).
- Complications can include fistula formation, urinary obstruction, and neoplastic changes.
- This case presents a unique combination of a large vaginal stone, vesicovaginal fistula (VVF), obstructive renal failure, and high-grade vaginal intraepithelial neoplasia (VaIN).



## Discussion

- Pathogenesis: Chronic IUD retention can lead to mineral crystallization, forming a nidus for stone development. This can cause local pressure necrosis, resulting in VVF, and chronic inflammation, potentially leading to dysplastic changes such as VaIN.
- Diagnostic Challenges: The presentation can mimic malignancy, necessitating thorough histological evaluation to differentiate between chronic inflammatory changes and neoplastic processes.
- Management Considerations: Multidisciplinary collaboration is crucial in addressing the anatomical and functional complications. Patient-centered care, respecting the individual's quality-of-life priorities, is essential in guiding management decisions.
- Complications can include fistula formation, urinary obstruction, and neoplastic changes.
- This case presents a unique combination of a large vaginal stone, vesicovaginal fistula (VVF), obstructive renal failure, and high-grade vaginal intraepithelial neoplasia (VaIN).

## Conclusions

- Vaginal stones, though rare, should be considered in differential diagnoses for elderly women presenting with urinary incontinence and a history of foreign body insertion.
- Comprehensive evaluation and individualized care plans are paramount in managing complex presentations involving multiple complications.