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(CASE REPORT)

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Rare case of an unsual para rectal mass: Ectopic seminal vesicle

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Abstract

Seminal vesicles are accessory glands of the male genitourinary system and contribute substantially to ejaculate volume, playing a key role in sperm motility and fertility. Congenital abnormalities—most commonly agenesis, fusion, and cystic malformations—are uncommon but well described on imaging, whereas ectopic seminal vesicles are exceedingly rare. We report a 79-year-old man with a history of squamous cell carcinoma of the larynx in whom a right pararectal mass was detected on staging CT and initially suspected to represent lymphadenopathy. CT-guided biopsy and histopathological analysis demonstrated seminal vesicle–type tissue, consistent with an ectopic seminal vesicle. To our knowledge, this represents only the second reported case of an ectopic seminal vesicle, the first case having described an inguinal location.

Keywords: Seminal vesicle; Ectopic seminal vesicle; Congenital anomaly; Pararectal mass; Computed tomography (CT); Image-guided biopsy

1 Introduction

Seminal vesicles are paired accessory glands of the male genitourinary tract that contribute the majority of ejaculate volume and play a crucial role in sperm motility and fertility. Congenital malformations of the seminal vesicles, encompassing maturation, canalization, and numerical or positional irregularities, are rare and frequently identified accidentally using cross-sectional imaging. Agenesis, hypoplasia, cysts, duplication, and fusion are well-documented, however ectopic seminal vesicle tissue is an exceedingly unusual phenomenon. In oncologic patients, such anomalies may closely resemble lymphadenopathy or soft-tissue metastases, potentially resulting in mis-staging and improper therapy. We report an uncommon case of an ectopic seminal vesicle presenting as a right pararectal nodule in an elderly patient being staged for laryngeal carcinoma, highlighting the necessity of identifying this atypical diagnosis and the significance of image-guided biopsy for histopathological verification.

2 Case presentation

A 79-year-old male, previously treated for squamous cell carcinoma of the larynx, underwent thoraco-abdomino-pelvic CT for oncologic staging. The scan demonstrated a small, well-defined right pararectal soft-tissue lesion measuring 12 mm, isodense to soft tissue and without obvious fat or calcification, initially interpreted as a possible metastatic lymph node.

Given the patient's oncologic history and the atypical location, a CT-guided percutaneous biopsy was performed. Under CT guidance, a 17G coaxial needle was advanced to the right pararectal lesion, and three core samples were obtained using an 18G biopsy trocar. Histopathological examination revealed glandular structures lined by pseudostratified

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columnar epithelium with features characteristic of seminal vesicle tissue, confirming the diagnosis of an ectopic seminal vesicle.

A review of the available literature identified only one prior case of an ectopic seminal vesicle, located in the inguinal region, underscoring the exceptional rarity of this entity and its potential to mimic nodal or soft-tissue metastasis on imaging.

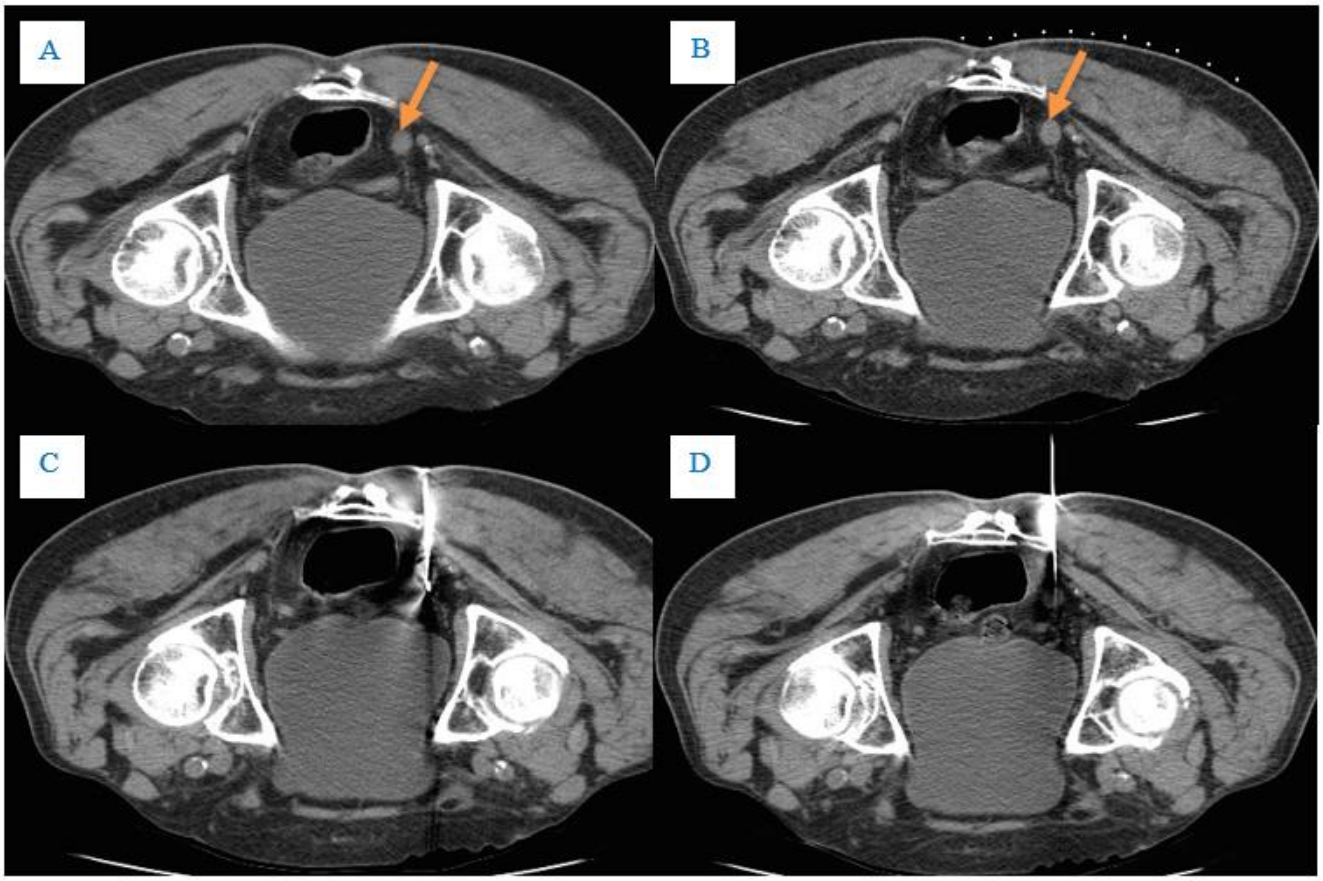

Figure 1 Axial and coronal contrast-enhanced CT images show a 12-mm right pararectal soft-tissue nodule adjacent to the rectal wall (arrow) (A, B). CT-guided biopsy was performed using a 17G coaxial introducer needle with three passes of an 18G core biopsy needle (C, D)

3 Discussion

Seminal vesicles are paired retrovesical glands that contribute the majority of ejaculate volume and play an important role in sperm motility. Despite their functional significance, primary seminal vesicle disorders are rare and often under-recognized on imaging, particularly in oncologic patients where attention is focused on staging and metastasis.

Congenital seminal vesicle anomalies are classically grouped into three categories: (1) maturation anomalies such as hypoplasia or aplasia, (2) canalization anomalies such as cysts, and (3) numerical or positional anomalies including agenesis, duplication, fusion, and ectopia [2,3]. These abnormalities are frequently detected incidentally but may be associated with pelvic pain, lower urinary tract symptoms, hematospermia, or infertility.

From a radiologic standpoint, accurate recognition of seminal vesicle anatomy and variants is essential to avoid misinterpretation. Transrectal ultrasound is commonly used as an initial modality in symptomatic patients, whereas CT and MRI provide a comprehensive evaluation of the pelvis and are superior for characterizing congenital anomalies and associated genitourinary malformations [2,3]. MRI, in particular, offers excellent soft-tissue contrast and allows detailed assessment of seminal vesicle morphology, internal architecture, and signal characteristics.

Ectopic seminal vesicle tissue is exceptionally rare. To date, only one case of an ectopic seminal vesicle in the inguinal region has been reported in the literature [1]. Our case describes an ectopic seminal vesicle presenting as a right

pararectal soft-tissue nodule in an elderly patient undergoing oncologic staging for laryngeal carcinoma. On CT, the lesion mimicked nodal metastasis due to its size, shape, and location. Definitive diagnosis required CT-guided biopsy and histopathological confirmation of seminal vesicle–type tissue.

This case highlights several important teaching points for radiologists: (1) small, well-defined pelvic or pararectal nodules in atypical locations may represent rare congenital anomalies rather than metastases; (2) ectopic seminal vesicle tissue, although extremely uncommon, should be included in the differential diagnosis of unusual pelvic soft-tissue lesions; and (3) image-guided biopsy remains crucial when imaging findings are non-specific and may alter staging or management.

Awareness of the full spectrum of seminal vesicle anomalies, including ectopic locations, can help prevent misdiagnosis, inappropriate upstaging, and unnecessary treatment in oncologic patients.

4 Conclusion

Ectopic seminal vesicle tissue is an extremely rare congenital anomaly that can mimic lymphadenopathy or soft-tissue metastasis on CT. Radiologists should be aware of the spectrum of seminal vesicle anomalies—including maturation, canalization, and numerical/positional abnormalities—and recognize that unusual pelvic or inguinal masses may represent ectopic seminal vesicle tissue. In equivocal cases, cross-sectional imaging with MRI and, when necessary, image-guided biopsy are essential for accurate diagnosis and appropriate management.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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