30 year old woman presents with urinary symptoms particularly increased frequency and urgency and low volume voids and some urge incontinence.

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Right hemi-pelvic lobulated T2 hypo-intense soft tissue mass measuring 3.9 x 5.6 x 7.2 cm. The mass arises from the urinary bladder wall.
Bladder leiomyoma

**Epidemiology:**
- Rare benign tumor predominantly found in women.
- Most common benign urinary bladder neoplasm but accounts for only 0.4% of all bladder tumors.

**Clinical presentation:**
- Most are small and asymptomatic and are discovered incidentally. Large tumors manifest with symptoms as:
  - Hesitancy, frequency, dribbling
  - Hematuria
  - Pressure from mass effect
  - Urinary obstruction

**Pathology:**
- Non-infiltrative smooth muscle tumor with low mitotic activity, cellular atypia and necrosis. Leiomyoma arises in the submucosa. Growth may be submucosal (7%), intra-vesical (63%) or extra-vesical (30%).
Bladder Leiomyoma

Radiographic features:

• Ultrasound:
  – Smooth-walled homogeneous hypoechoic solid mass in the bladder with thin echogenic surface.
  – Determine endo-vesical, intramural, or extra-vesical nature of lesion.
  – Reveal smooth-walled solid lesion with homogeneous echogenicity.

• CT:
  – Accurate detection and localization of these lesions by presenting it as hypo-dense mass.
  – Contrast-enhanced CT shows a moderately enhancing mass.

• MRI:
  – T1: Intermediate signal density
  – T2: Low signal density, Degenerated leiomyomas have more heterogeneous signal characteristics; cystic areas have high signal intensity.
  – T1 C+ (Gd): Contrast enhancement is variable; degenerated areas lack enhancement.
References:


