Admission Rates, Healthcare Utilization, and Economic Burden of Radiation Cystitis (RC) in the United States

Sohrab Arora  
*Henry Ford Health System*, sarora3@hfhs.org

Chandler Bronkema  
*Henry Ford Health System*, cbronke1@hfhs.org

Akshay Sood  
*Henry Ford Health System*, ASOOD1@hfhs.org

Deepansh Dalela  
*Henry Ford Health System*, ddalela1@hfhs.org

Alex Borchert  
*Henry Ford Health System*, aborche1@hfhs.org

See next page for additional authors

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Authors
Sohrab Arora, Chandler Bronkema, Akshay Sood, Deepansh Dalela, Alex Borchert, Lee Baumgarten, Quoc-Dien Trinh, Craig G. Rogers, James O Peabody, Mani Menon, and Firas Abdollah

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Sohrab Arora*, Chandler Bronkema, Akshay Sood, Deepansh Dalela, Alex Borchert, Lee Baumgarten, Detroit, MI, Quoc-Dien Trinh, Boston, MA, Craig G. Rogers, James O. Peabody, Mani Menon, Firas Abdollah, Detroit, MI
Introduction

• Radiation cystitis
  • Major cause of morbidity after radiotherapy for pelvic cancers.
  • might be a more frequent problem than previously thought,
    • Consisting of 1.4% of all elective admissions to a Urology;
    • Many patients never admitted to urology
    • Presentation beyond the follow up of clinical trials
    • actual prevalence not known.

• No definitive cure
• Repeated admission to inpatient care, often undergoing multiple urological procedures for management of hematuria.
• Intractable cases may require morbid procedures like cystectomy!!
• Scanty funding for research
Methods
• Included: 21,157 records of adult patients with a diagnosis of RC within the NIS from 2003-2014.
• Excluded: Concurrent diagnosis of bladder cancer, CIS, or tuberculosis of bladder (n=1,422), leaving 19,613 records for analysis (population estimate 94,434 per NIS survey weights).
Methods

- Outcomes studied:
  - Receipt of any inpatient procedure during admission,
  - number of inpatient procedures received (0, 1, 2, >2),
  - length of stay,
  - disposition of patient at discharge,
  - total inflation-adjusted total cost of admission, and
  - high total cost (upper quartile of inflation-adjusted cost).

- Cost for each admission and cumulative annual cost of RC-associated admissions were calculated for the study period.
Results

- Median age 75.7 years.
- The inflation-adjusted cost per admission was 9207 US dollars (IQR 5275 -17,573)
- 90% of the admissions were in hospitals located in urban areas.
- 61.2% patients received at least one inpatient procedure. 43% of admissions recorded more than one RC-directed procedure code.
- Median length of stay 4.5 days
- The cumulative cost of inpatient treatment of radiation cystitis was 63.5 million US dollars per year, amounting to a total of 952.2 million over the study period.
- Radical cystectomy was done in 1.3% of the admissions.
Conclusion

- Disease of the elderly
- RC associated admissions are costly. About $2/3^{rd}$ of the patients require procedures, 43% requiring more than one procedure.
- Major economic burden to US healthcare.
- No definitive treatment available
- Funding implications.