Early Genital Reconstruction After Debridement of Fournier's Gangrene is Safe and Effective

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Disclosures

- I have no relevant conflicts of interest to disclose

Summary

- Introduction & Objective
- Methods
- Results
- Commentary
- Conclusions

Introduction & Objective

- Fournier's gangrene is classically managed with aggressive excision and drainage at the time of presentation follow by delayed reconstruction

- Delaying reconstruction imposes morbidity on patients:
  - Pain
  - Long-term wound management requiring third-party care
  - Missed time at work
  - Decreased mobility and deconditioning

Introduction & Objective

- Hypothesis: Early wound closure and reconstruction affords equivalent, if not improved surgical outcomes

Introduction & Objective

Presentation

POD6 after Recon

6 months post-op

Final Debridement

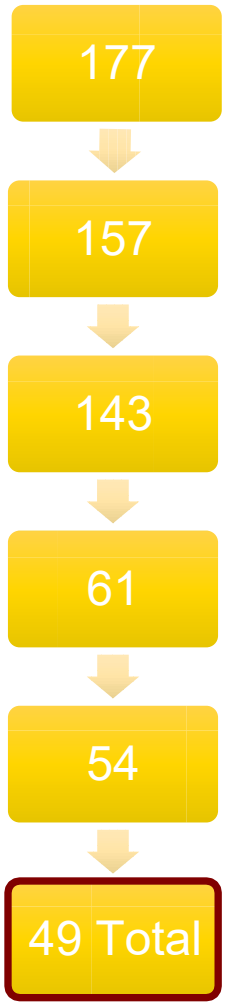
Methods

- IRB-approved database from our institution was queried for adult male patients and CPT codes related to Fournier's Gangrene from July 2009 – June 2019
  - "Debridement of skin, muscle, and fascia for necrotizing soft tissue infection…
    - - external genitalia and perineum (11004)" OR
    - - abdominal wall (11005)" OR
    - - external genitalia, perineum, and abdominal wall (11006)."

  OR
  - "Incision and Drainage of epididymis, testis and/or scrotal space (54700)."

  OR
  - "Drainage of scrotal wall abscess (55100)."

Methods



Subjects excluded

-20 subjects represented a post-procedural complication

-14 subjects were incorrectly coded

-82 subjects has simple scrotal abscess requiring I&D without reconstruction

-7 subjects died prior to reconstruction

-5 subjects had inadequate records to include

Methods

- Subjects were divided into Early (within 10 days of final debridement) and Late reconstruction (greater than 10 days) groups.

- Groups were compared for
  - Baseline characteristics
  - Site and extent of debridement
  - Type of closure
  - 90-day post-reconstruction complications
  - 90-day post-reconstruction mortality rate

- The standard t-test and chi-squared/Fisher' exact tests were used to compare the groups, significance $p<0.05$

Results

Baseline characteristics

	Early (n = 28)	Late (n = 21)	p-value
Age (yrs)	53.0 ± 16.7	52.1 ± 10.2	p = 0.81
Smoker	14, 50.0%	10, 47.6%	p < 0.87
BMI	33.3 ± 10.1	39.5 ± 11.0	p = 0.04*
Charlson Comorbidity Index	3.0 ± 2.4	2.7 ± 1.8	p = 0.61
APACHE II	7.4 ± 4.7	8.0 ± 4.7	p = 0.45
Time between final debridement & reconstruction (hrs)	131.1 ± 48.3	674.7 ± 415.7	p < 0.001*

Results

Area of resection and reconstruction

	Early (n = 28) *n, %*	Late (n = 21) *n, %*	p-value
Scrotum	26, 92.9%	19, 90.5%	p = 1
Penis	9, 32.1%	5, 23.8%	p = 0.52
Suprapubic/ Inguinal	15, 53.6%	7, 33.3%	p = 0.16
Perineum	18, 64.3%	11, 52.4%	p = 0.40

Results

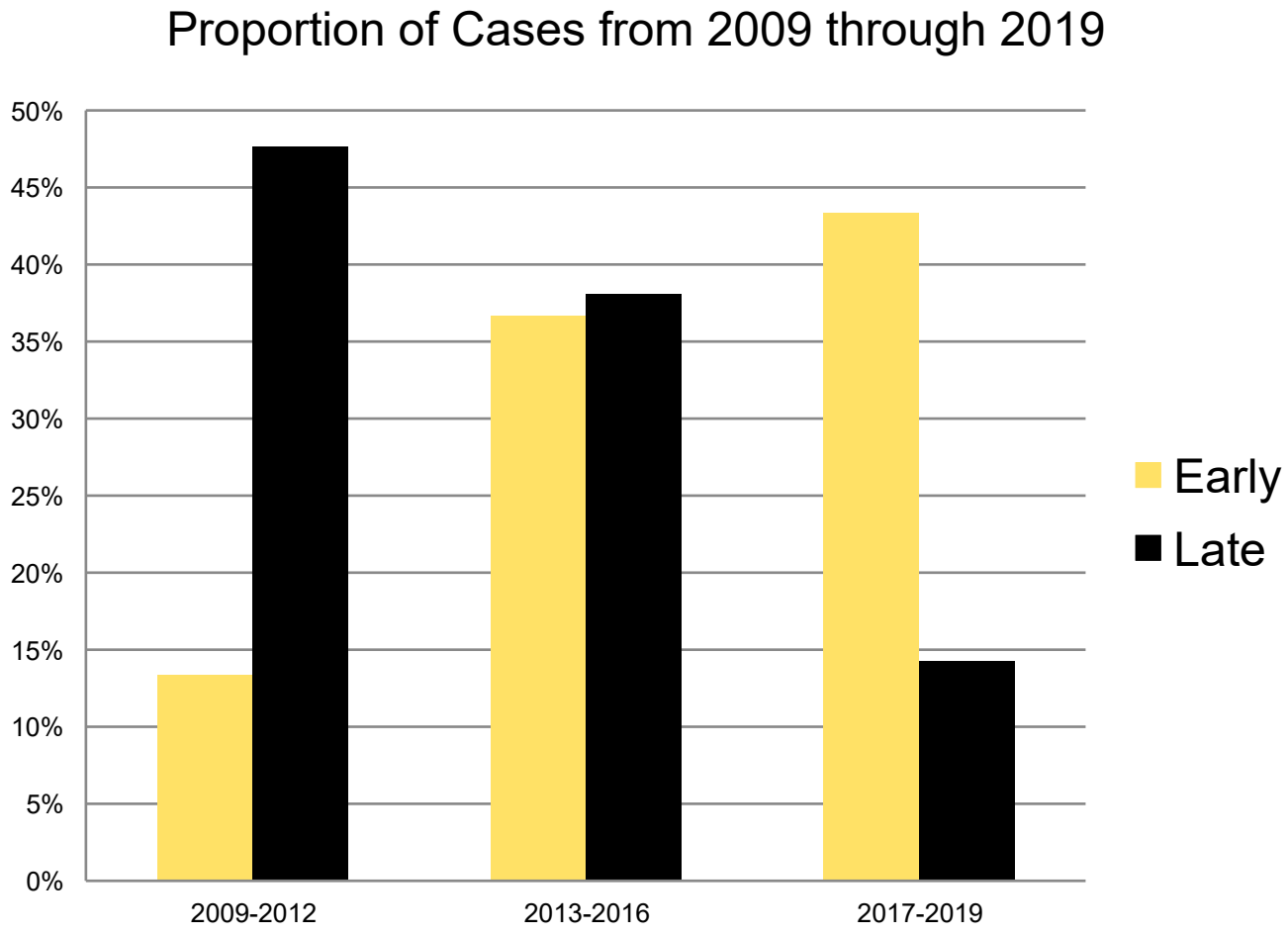
Perioperative Outcomes

	Early (n = 28) *n*, %	Late (n = 21) *n*, %	p-value
Closure Type Primary – Grafting –	 12, 42.9% 16, 57.1%	 10, 47.6% 11, 52.4%	 p = 0.74
Reconstructed during initial hospital day	28, 100%	7, 33.3%	p < 0.001*
Minor wound breakdown	9, 32.1%	4, 19.0%	p = 0.30
Wound Infection	2, 7.1%	2, 9.5%	p = 1
Re-operation for infection or wound complication	1, 3.6%	4, 19.0%	p = 0.36
90-day mortality following reconstruction	2, 7.1%	0, 0.0%	p = 0.51

Commentary

- Single institution, retrospective cohort
- Patient identification via CPT codes
- Antibiotic therapy and culture data forthcoming
- Are patients in the Late group sicker at baseline?
- Our data already represents a shift in management

Commentary


Proportion of Cases from 2009 through 2019
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
2009-2012
2013-2016
2017-2019
Early
Late

Conclusions

- Early genital reconstruction following surgical excision and drainage in the treatment of Fournier's gangrene provides safe and fastidious wound closure
- Reconstruction may be performed during the patient's initial hospital stay

Thank you

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