

FULGURATION OF THE TRIGONE: Results in 92 female patients.
Poster Presentation USANZ Conference. 1 November 2024. Dirk Drent.

Introduction:

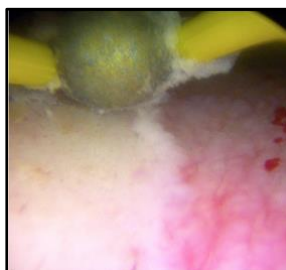
Recurrent urinary tract infections (RUTIs) have been associated with intracellular bacterial communities in the urinary tract. Research suggests that electrofulguration can destroy these bacterial reservoirs, and thereby reduce the incidence of RUTIs and avoid the side effects of long-term antibiotic prophylaxis.^{1,2}

Aim:

To evaluate **Patient Reported Outcome Measures** (PROMs) on the long-term effectiveness of fulguration of the trigone in females with RUTIs **and** other irritative and painful bladder and urethral symptoms.

Method:

Fulguration was performed with a roller ball at cutting and coagulation settings of 20/20. Most of the procedure was done with the cutting current.

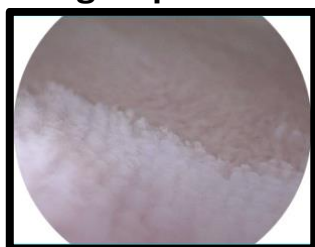


We conducted a retrospective study using SurveyMonkey to gather information from 150 patients who underwent fulguration of the trigone during a nine-year period from 2014 to 2023. A total of 92 women responded.

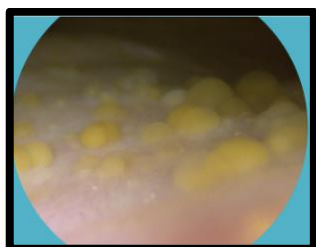
Nine of the 18 questions were based on the **Patients Global Impression of Improvement Questionnaires** (PGI-I). These compared the change in patients' symptoms before and after the procedure.

Results

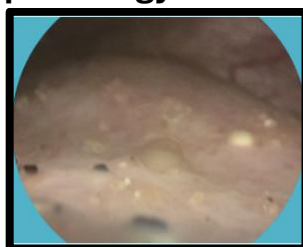
Four groups were identified based on the pathology of the trigone:



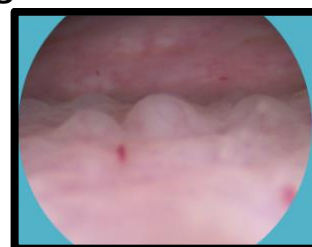
Squamous Metaplasia
(32 patients)



Cystitis Cystica
(29 patients)



Cystitis Glandularis
(16 patients)



Follicular Cystitis
(15 patients)

Questions were evaluated for each histological group and collectively for all 92 patients. Figures 1- 3 show the results of three out of the nine PGI-I questions for all 92 patients, compared to the results of 32 patients who had squamous metaplasia of the trigone.

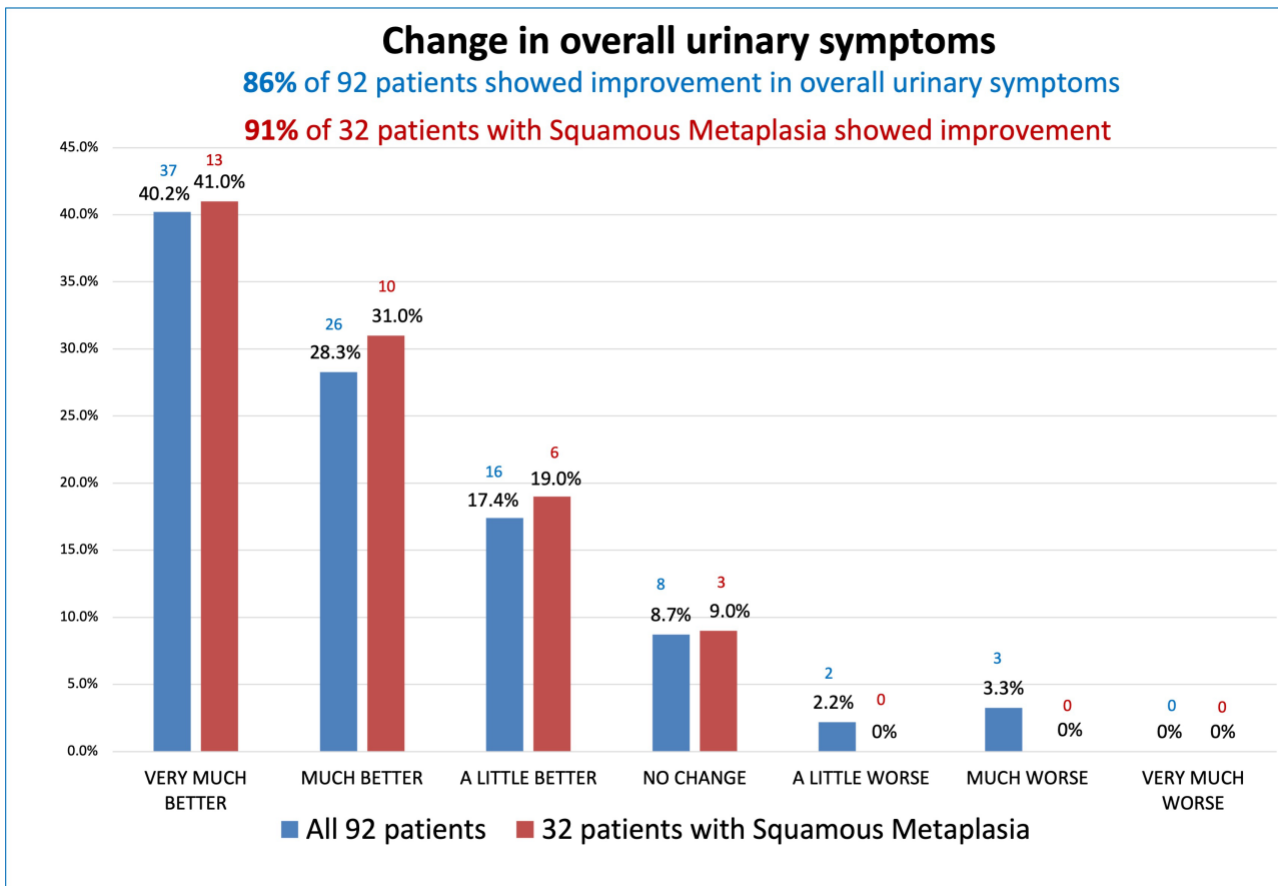


Fig. 1. Overall Urinary Symptoms

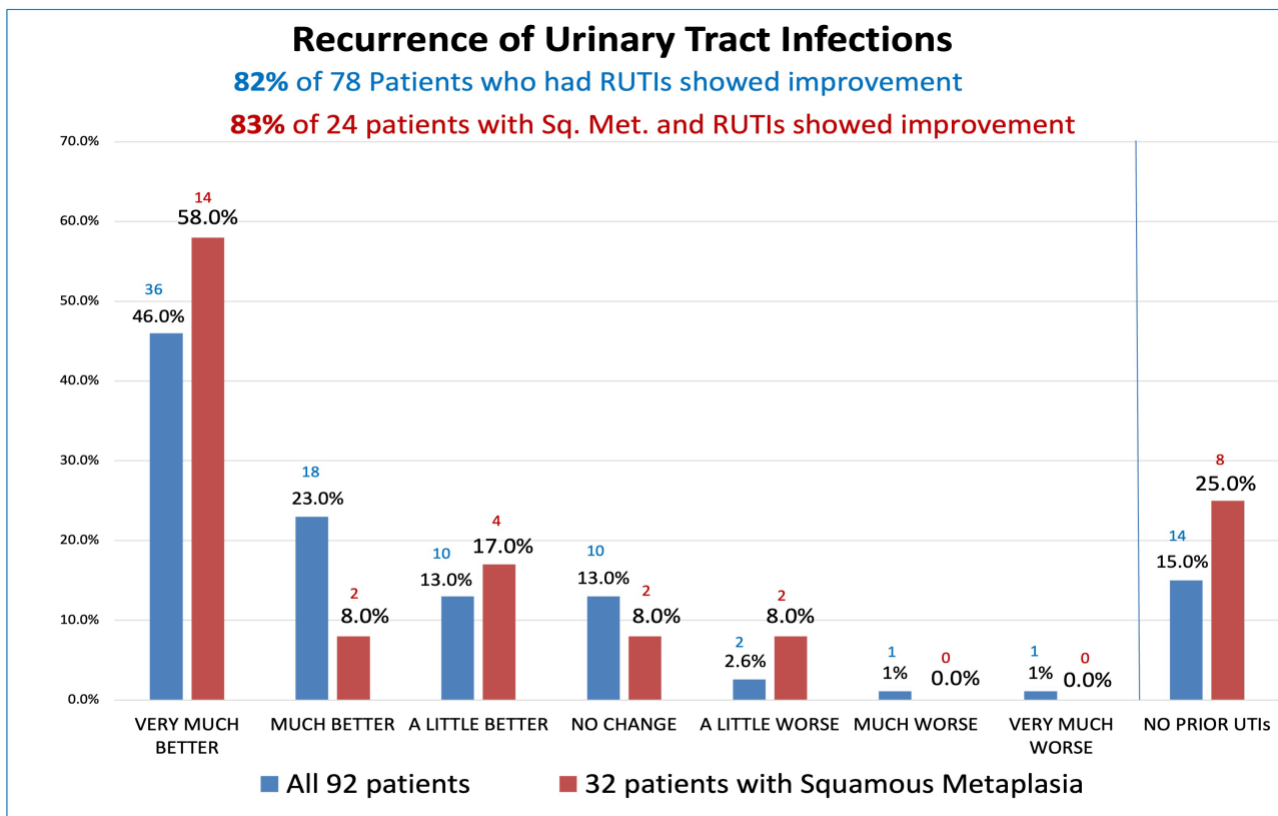


Fig. 2. Change in recurrence of UTIs

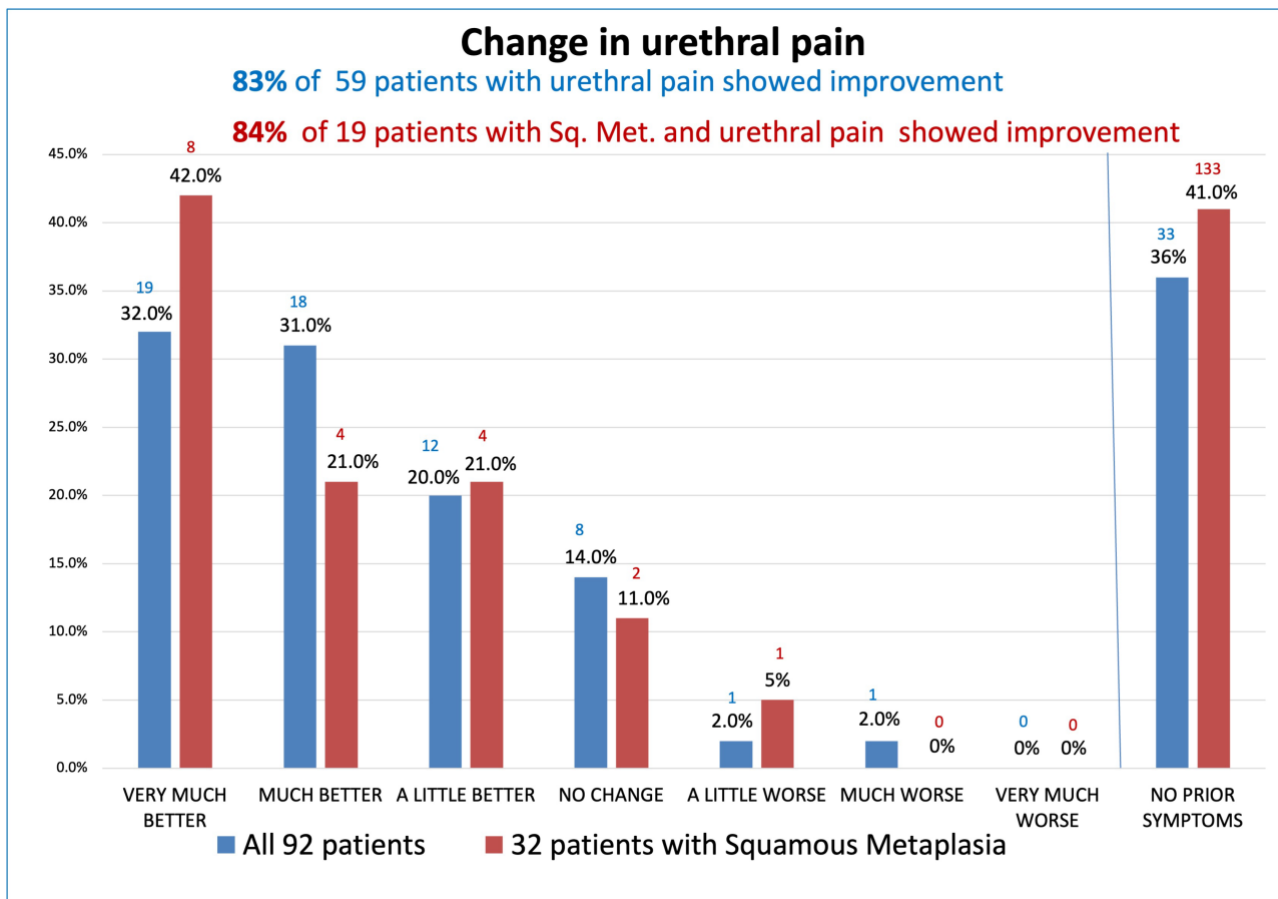


Fig. 3. Change in Urethral Pain

The results of the other six PGI-I questions for all 92 patients are summarised in Table 1.

SYMPTOM	NUMBER OF PATIENTS IMPROVED	% OF PATIENTS IMPROVED
URINARY URGENCY	58 OF 74	78%
URINARY FREQUENCY	53 OF 71	74%
NOCTURIA	42 OF 71	59%
SLOW URINARY FLOW	39 OF 65	60%
FEELING OF INCOMPLETE BLADDER EMPTYING	46 OF 66	69%
BLADDER PAIN	50 OF 63	79%

Table 1.

Figure 4 highlights the difference in the percentage of patients experiencing more than three UTIs per year before and after treatment.

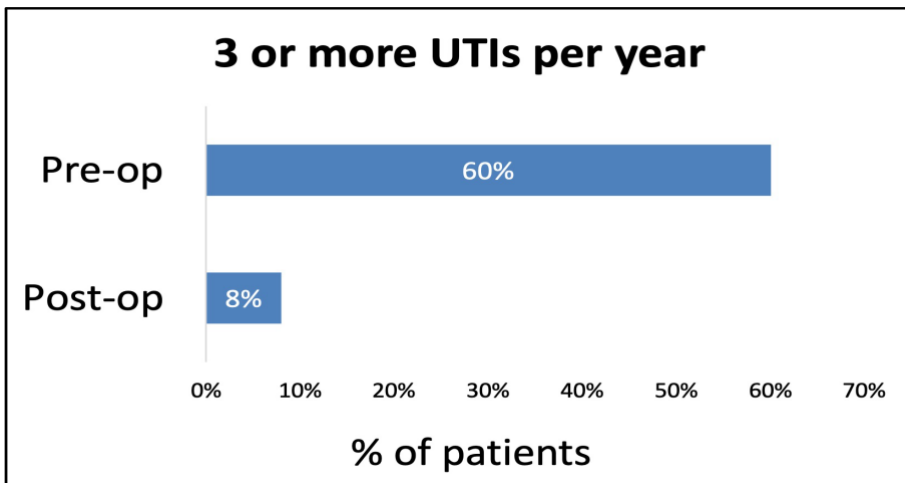


Fig.4. Change in UTIs per year

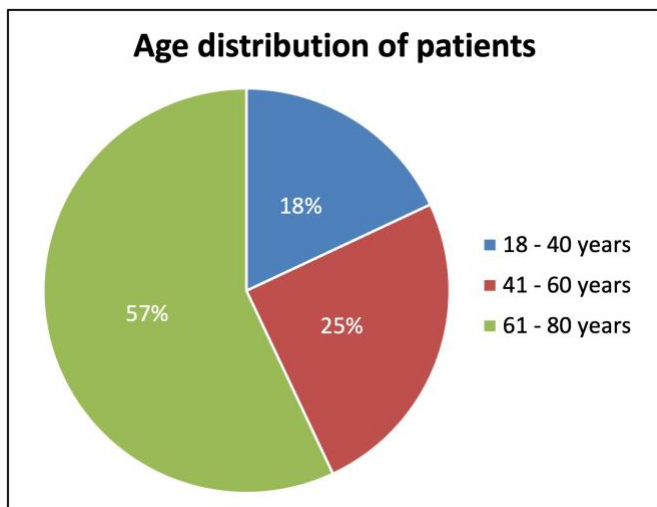


Fig 5.

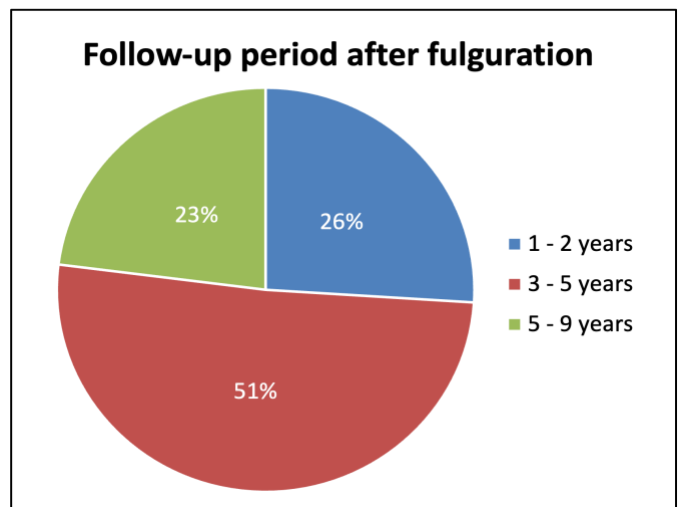


Fig 6

Conclusion:

As the trigone is the most sensitive region of the bladder, any inflammatory process of the trigone can cause significant irritative urinary symptoms. Fulguration and removal of these inflammatory conditions lead to **reconstitution with normal and more resistant urothelium**, and significant reduction in symptoms.

Our study showed that fulguration of the trigone resulted in an **82% reduction in recurrent UTIs** and an **86% improvement of overall urinary symptoms in all 92 women**

Furthermore, fulguration of **squamous metaplasia** of the trigone **resulted in a 91% improvement of overall urinary symptoms.**

Acknowledgements:

- Late Mr. Roger Chambers, the first person to make me aware of the significant advantages of fulguration of the trigone.
- Prof Philippe Zimmern for his research contributions and Website: Live UTI Free.

References:

1. Syed A. Hussain, et al. Long-term efficacy of fulguration of trigonitis for recurrent urinary tract infections in women. Urologic Science. 2015;26(3): 197-201
2. Shivani Gaitonde, et al. Very Long-term Outcomes after Electrofulguration for Antibiotic-refractory RUTIs. The Journal of Urology. 2023;210:649-658

Appendix:

*Results were evaluated for all 92 patients collectively and for each histological group:
SQ: Squamous metaplasia. CC: Cystitis Cystica. CG: Cystitis Glandularis. FC: Follicular Cystitis.*

Number and percentage of patients who showed improvement in pre-existing symptoms following fulguration of the trigone:

Q	Symptom	All 92	All 92 %	SQ Nr. 32	SQ %	CC Nr. 29	CC %	CG Nr. 16	CG %	FC Nr. 15	FC %
1	Urgency	58 of 74	78%	18 of 23	78%	21 of 25	84%	10 of 13	76%	9 of 13	69%
2	Frequency	53 of 71	74%	17 of 24	71%	20 of 23	86%	8 of 12	66%	8 of 12	66%
3	Nocturia	42 of 71	59%	18 of 25	72%	14 of 19	73%	3 of 14	21%	7 of 13	53%
4	Bladder pain	50 of 63	79%	18 of 22	82%	17 of 18	94%	7 of 10	70%	8 of 13	51%
5	Urethral pain	49 of 59	83%	16 of 19	84%	17 of 18	94%	6 of 8	75%	10 of 14	71%
6	UTI Change	64 of 78	82%	20 of 24	83%	22 of 27	81%	12 of 14	85%	10 of 13	77%
7	Overall symptoms	79 of 92	85%	29 of 32	91%	25 of 29	86%	15 of 16	93%	10 of 15	66%

Table2.