

Initial Experience Of Setting Up Trans-Urethral Laser Ablation (TULA) Service During The COVID-19 Pandemic



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Introduction

Bladder cancers are relatively common. Non-muscle invasive bladder cancer (NMIBC) is often recurrent. 5-10% of patients will have recurrences that are small and few. Treating these recurrences causes morbidity to patients because of the frequent resections under general anaesthesia (GA) that are needed to control the disease. These factors also contribute to the high cost burden of treatments. The majority of these patients are elderly with major co-morbidities and as such do not fill the criteria for day surgery.

Transurethral Laser Ablation (TULA) is a new service set up in our department during the COVID-19 pandemic. It uses diode laser energy to ablate recurrent bladder cancers, avoiding the need for GA, hospital stay and it's inherent risks. The TULA service at WWL Urology Department started in October 2020. We prospectively collected data and present our initial experience.

TULA uses a compact and portable laser machine. Laser vaporisation of small bladder tumours have several advantages over standard electrocautery techniques. The lack of electrical conduction reduces discomfort to patients, bleeding is almost absent and even patients on anticoagulation therapy can be treated. The European Association of Urology and NICE Guidelines recognise the use of lasers for treatment of non-muscle invasive bladder cancers particularly in co-morbid patients.



Methods

Having identified a need for a TULA service at WWL, we arranged the necessary measures. This included training, gaining funding for equipment, and ensuring LASER safety measures were in place. WWL Urology Governance discussions followed and suitable patients were identified i.e. recurrent bladder tumours at high risk for GA. Company representatives supported our first 3 sessions.

We restricted initial cases to <3cm tumours with low to intermediate grade recurrences, and maintain a prospective dataset of patients receiving TULA treatments since starting the service. Parameters recorded include number of patients/procedures, age, co-morbidities, procedure time, pain perception, complications, readmission rates and patient satisfaction

Patient Feedback

Amazing, if given the choice would never want to have any other treatment than TULA in the future...

Fantastic, completely painless I would definitely recommend TULA to any patients in the future...

I had no pain, bleeding or discomfort during or overnight following the procedure...would definitely want this treatment if given the choice again

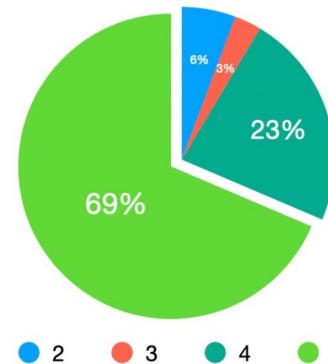
So convenient for me and my family, normally I have to arrange to stay overnight after being in hospital but with TULA I could come straight home and was absolutely fine

Can't believe I was able to have the treatment and be home within a couple of hours...amazing!

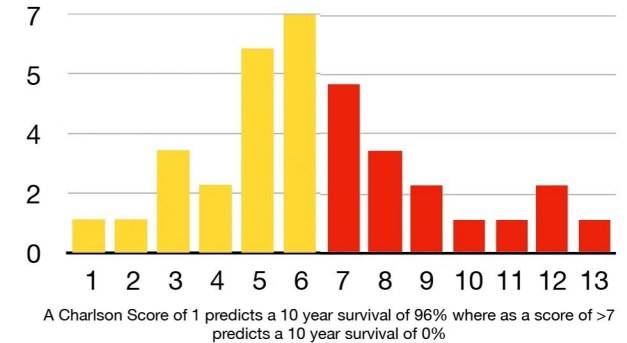
Results

35 patients were treated with TULA between Oct 2020 - April 2021. Mean age 79 years, with median performance status 2. 34% had bladder tumours >2cm and 60% of patients had multiple tumours. In total 73 lesions were treated. TULA was well tolerated, with the majority of patient reporting visual analogue pain scores of ≤ 2 out of 10. Nearly all recommend TULA treatment, and would chose to have it again instead of the standard surgery under general anaesthetic.

Patient Satisfaction (5/5)



Charlson Comorbidity Index



Staff Feedback

We were apprehensive about setting up a new service but the clinics have gone really well and we've been really surprised how well the patients have tolerated it...

We thought with all the safety risks involved with the laser it was going to be complicated but it was really streamlined

Discussion

We have demonstrated that it is possible to set up a novel cancer service during the COVID pandemic. There are clear benefits of TULA to treat recurrent bladder cancers:

- Avoid GA and associated risks
- Quick and well tolerated cancer treatment under local anaesthetic
- Proven equivocal cancer treatment effect when compared to contemporary surgery
- High patient satisfaction

We already have a high demand for TULA at WWL (we have needed to quadruple our TULA clinics to accommodate!) and during this short period we have been able to 'free up' over 15 operating lists using this service. We have successfully performed selected out of protocol cases all discussed at MDT (cystoscopy and biopsy cases and high grade bladder tumour recurrences). We are setting up a multi-centre UK randomised controlled TULA trial to provide robust data so other patients can benefit from this excellent technology.