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Can pain and anxiety be reduced in cystoscopy?

Submission date
04/09/2025

Recruitment status
No longer recruiting

Registration date
05/09/2025

Overall study status
Completed

Last Edited
01/07/2026

Condition category
Urological and Genital Diseases

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Flexible cystoscopy is a routine outpatient procedure used to examine the bladder. Although it is generally safe, many patients feel anxious and experience discomfort during the procedure. This study is testing whether two simple, non-invasive methods, showing patients a short educational video before the procedure and using virtual reality (VR) distraction during the procedure, can make the experience less stressful and less painful.

Who can participate?
Adult patients who need flexible cystoscopy at Ümraniye Training and Research Hospital

What does the study involve?
Patients will be randomly assigned to one of four groups: (1) video only, (2) video + VR, (3) VR only, and (4) routine care without video or VR. The video explains the procedure in simple terms, while the VR headset shows calming 360° nature scenes.

The study will measure patients' long-term tendency to experience anxiety and their current state of anxiety using questionnaires before and immediately after the procedure. Pain intensity will be assessed during cystoscopy using a scale. All procedures will be performed by experienced urologists under local anaesthesia, and data will be collected by a second physician.

What are the possible benefits and risks of participating?
The results of this study will help determine whether video education and VR distraction are effective in reducing anxiety and pain during flexible cystoscopy, and may guide improvements in patient care.

No risks given at registration.

Where is the study run from?
Ümraniye Training and Research Hospital, Department of Urology.

When is the study starting and how long is it expected to run for?
October 2024 to January 2025

Who is funding the study?
Ümraniye Training and Research Hospital, Department of Urology. (no external funding)

Who is the main contact?
Dr Murat Beyatlı, muratbeyatli_90@hotmail.com

Contact information

Type(s)
Public, Scientific, Principal investigator

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Study information

Scientific Title
Effects of pre-procedural video education and intra-procedural virtual reality on anxiety and pain during flexible cystoscopy: a randomized controlled trial

Acronym
VR-CYSTO

Study objectives
To evaluate whether pre-procedural video education and intra-procedural virtual reality distraction reduce anxiety and pain compared to standard care in patients undergoing flexible cystoscopy.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 07/11/2024, Ümraniye Training and Research Hospital Ethics Committee (Elmalıkent Neighborhood Adem Yavuz Street No:1, Ümraniye/Istanbul, 34760, Türkiye; +90 (0216) 632 18 18 /11 64; not@available.com), ref: 370

Primary study design
Interventional

Study design
Interventional randomized controlled trial

Study type(s)
Efficacy, Quality of life

Health condition(s) or problem(s) studied
Procedural anxiety and pain in patients undergoing flexible cystoscopy

Interventions
Randomisation is 1:1:1:1 using computer-generated allocation.
Participants are randomised into four parallel arms:
1. Pre-procedural educational video + VR headset during cystoscopy;
2. Educational video only;
3. VR headset only;
4. Control group receiving standard care (no video, no VR).
The video lasts ~3 minutes and explains the cystoscopy procedure. The VR headset shows neutral, relaxing content during the procedure until completion (average 5–10 minutes).

Intervention Type
Behavioural

Primary outcome(s)
1. Pain intensity measured using the Visual Analogue Scale (VAS, 0–10) during the cystoscopy procedure
2. State anxiety measured using the State-Trait Anxiety Inventory – State (STAI-S) at baseline (before cystoscopy) and immediately after the procedure

Key secondary outcome(s)
1. Trait anxiety measured using the State-Trait Anxiety Inventory – Trait (STAI-T) at baseline only, before the procedure.
2. Adverse events, defined as any complications or side effects observed during or after cystoscopy (e.g., dizziness, nausea, vasovagal symptoms), measured using medical records at one timepoint

Completion date
30/01/2025

Eligibility

Key inclusion criteria
1. Age ≥18 years
2. Indication for flexible cystoscopy
3. Adequate cognitive function

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
100 Years

Sex
All

Total final enrolment
240

Key exclusion criteria
1. Current use of anxiolytics, antidepressants, or opioids
2. Prior history of cystoscopy
3. Significant cognitive or psychiatric disorders
4. Severe hearing/visual impairment preventing video or VR use
5. Active urinary tract infection or chronic bladder pain
6. History of severe allergic reaction to local anesthetics
7. Pregnancy

Date of first enrolment
08/11/2024

Date of final enrolment
30/01/2025

Locations

Countries of recruitment
Türkiye

Study participating centre
Ümraniye Training and Research Hospital, Department of Urology
Elmalıkent Mahallesi Adem Yavuz Cad. No:1 Ümraniye / İstanbul
Istanbul
Türkiye
34764

Sponsor information

Organisation
Ümraniye Training and Research Hospital

Funder(s)

Funder type
Hospital/treatment centre

Funder Name
Ümraniye Training and Research Hospital

Results and Publications

Individual participant data (IPD) sharing plan
De-identified or anonymised datasets of individual participant data (IPD) will be made available from the corresponding author (Murat Beyatlı, muratbeyatli_90@hotmail.com) on reasonable request after publication of the study results. Data will be shared for academic purposes only, in anonymised form, without any information that could identify individual participants.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		01/07/2026	01/07/2026	Yes	No