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Refractory Radiation Proctitis Bleeding and Post-Renal AKI in Metastatic Prostate Cancer: Multidisciplinary Stabilisation with Sequential Endoscopic Therapy

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Abstract

Background: Radiation proctitis is a recognised complication of pelvic radiotherapy for prostate cancer. When chronic rectal bleeding is refractory to first-line argon plasma coagulation (APC), limited evidence guides the selection of rescue endoscopic strategies. Concurrent malignant ureteric obstruction with post-renal acute kidney injury (AKI) and severe anaemia further complicate management by restricting oncological treatment eligibility. We present a case of multidisciplinary stabilisation of a frail elderly patient with progressive metastatic prostate cancer despite androgen receptor pathway inhibitor therapy, complicated by clinically documented radiation proctitis (ICD-10: K62.7), refractory lower gastrointestinal bleeding despite two prior APC sessions, left malignant ureteric obstruction with post-renal AKI, and severe dimorphic anaemia. **Case Presentation:** A 79-year-old man with metastatic prostate cancer (diagnosed 2020), prior pelvic radiotherapy, and ^{68}Ga-PSMA PET/CT-confirmed progressive nodal and skeletal metastases presented with persistent per rectal bleeding, severe anaemia (haemoglobin 7.7 g/dL), and left malignant ureteric obstruction with hydronephrosis and post-renal AKI (creatinine 230.5 μmol/L). Left antegrade double-J stenting was performed for malignant left ureteric obstruction with hydronephrosis and post-renal AKI, with subsequent renal recovery (creatinine 146 μmol/L; eGFR 42 mL/min/1.73 m^2) and avoidance of dialysis. **Interventions:** Two APC sessions were performed at Kenyatta University Teaching and Referral Hospital (KUTRH): APC #1 (28/03/2025, argon flow 2 L/min and 30 kV as documented) achieved initial haemostasis, and APC #2 (11/07/2025) treated recurrent sigmoid and rectal telangiectasia. Despite two sessions, bleeding recurred. A third colonoscopy at Mt Elgon Endos-

copy Center (27/04/2026) using a water-assisted technique employed adrenaline injection and N-butyl-2-cyanoacrylate (Histoacryl) glue injection; APC was not performed during this third procedure. Rectal sucralfate suppositories were prescribed for 14 days. A clinician-supervised real-time colonoscopy mapping interface was used as a documentation and planning aid. **Outcome:** Per rectal bleeding was markedly reduced in the short term with no further immediate large-volume haemorrhage. Post-transfusion haemoglobin improved to 9.0 g/dL. The patient was clinically stabilised and optimised for oncology handover. Follow-up at reporting was 3 days post-procedure; long-term haemostasis durability is not established. Prognosis remained guarded. **Conclusion:** In this case, cyanoacrylate glue injection under water-assisted colonoscopy was associated with short-term bleeding control after recurrent bleeding following two APC sessions for clinically documented radiation proctitis. Concurrent double-J stenting improved post-renal AKI and avoided dialysis, while transfusion improved haemoglobin to 9.0 g/dL. Coordinated multidisciplinary management stabilised the patient for oncology handover. The durability and safety of cyanoacrylate glue for this indication require further study.

Keywords

Radiation Proctitis, Argon Plasma Coagulation, Cyanoacrylate Glue, Water-Assisted Colonoscopy, Malignant Ureteric Obstruction, Post-Renal Acute Kidney Injury

1. Introduction

Radiation proctitis—also termed radiation proctopathy—is a recognised complication of pelvic radiotherapy for prostate and other pelvic malignancies, occurring in 5% - 20% of patients who receive therapeutic pelvic irradiation [1] [2]. The chronic form, which may manifest months to years after radiotherapy completion, is characterised by progressive obliterative endarteritis of submucosal vessels, mucosal ischaemia, telangiectasia formation, and diffuse mucosal friability [2]. Clinically, this manifests as chronic per rectal bleeding that may be insidious or severe, contributing to progressive iron deficiency anaemia and transfusion dependence. When bleeding is diffuse—arising from the entire irradiated mucosal surface rather than from a single identifiable vessel—endoscopic haemostasis becomes technically challenging.

Argon plasma coagulation (APC) is established as the first-line endoscopic therapy for chronic radiation proctopathy, achieving initial haemostasis in 80% - 90% of cases through non-contact superficial thermal coagulation of telangiectatic vessels [3] [4]. However, 10% - 30% of patients experience bleeding recurrence after single-session APC, and published protocols typically recommend 2 - 3 sessions at 4 - 6 week intervals for diffuse disease [3] [4]. When APC fails to achieve durable haemostasis despite multiple sessions, limited evidence guides the selection of rescue strategies. Formalin application, radiofrequency ablation, and hyperbaric

oxygen therapy have been described as second-line options, but each carries specific limitations in terms of availability, safety profile, and applicability in frail patients with advanced malignancy [2] [5].

Cyanoacrylate tissue adhesives are well established for gastric variceal haemorrhage, where they achieve haemostasis rates exceeding 90% through rapid polymerisation upon contact with blood, forming a solid cast that mechanically seals the bleeding surface [6]. However, their use in non-variceal lower gastrointestinal bleeding has been rarely reported, and their application as a rescue strategy following APC failure in radiation proctopathy has been infrequently described in the literature.

Concurrent malignant ureteric obstruction—present in up to 7% - 10% of patients with advanced pelvic malignancies—adds further complexity by producing post-renal acute kidney injury (AKI) that restricts chemotherapy eligibility, impairs erythropoietin production, and compounds anaemia through chronic kidney disease-associated mechanisms [7]. The interaction between renal dysfunction, chronic gastrointestinal blood loss, and impaired haemostatic reserve creates a vicious cycle of worsening anaemia that demands coordinated multidisciplinary intervention.

The case is clinically relevant because it illustrates how refractory radiation proctopathy bleeding in a frail oncology patient may require sequential haemostatic escalation while renal obstruction and anaemia are simultaneously corrected to preserve eligibility for systemic cancer therapy. We report a 79-year-old man with advanced progressive metastatic prostate cancer despite androgen receptor pathway inhibitor therapy and clinically documented radiation proctitis (ICD-10: K62.7) who underwent two APC sessions followed by rescue cyanoacrylate glue injection under water-assisted colonoscopy, with concurrent double-J ureteric stenting for malignant ureteric obstruction.

2. Case Presentation

2.1. Patient Background and Oncology History

A 79-year-old man had a diagnosis of carcinoma of the prostate established in 2020. He had received pelvic radiotherapy as part of his oncological management. The radiotherapy modality (external beam vs brachytherapy), total dose, fractionation schedule, and interval from radiotherapy completion to onset of rectal bleeding were documented in the oncology treatment record but were not available for reproduction in this report. He had been treated with abiraterone, subsequently switched to enzalutamide 160 mg daily due to biochemical progression. Serial prostate-specific antigen monitoring demonstrated rapid biochemical progression: PSA 30.47 ng/mL (10/11/2025), 53.84 ng/mL (23/01/2026), 127.4 ng/mL (22/02/2026), and 227.4 ng/mL (02/04/2026)—a seven-fold rise over five months despite antiandrogen therapy (**Table 1**). Disease progression was confirmed on ^{68}Ga-PSMA PET/CT (18/04/2026), which demonstrated interval appearance of extensive PSMA-avid distant nodal and skeletal metastases compared with a prior

scan (16/06/2025) (Table 2). He presented with severe anaemia (haemoglobin 7.7 g/dL), left malignant ureteric obstruction with post-renal AKI (creatinine 230.5 μmol/L), and persistent per rectal bleeding (Table 3). Two prior argon plasma coagulation (APC) sessions at KUTRH had achieved initial haemostasis but bleeding recurred (Table 4). A chronological timeline of multidisciplinary management is provided (Table 5).

Table 1. Pre-stenting comprehensive laboratory values (02/04/2026).

Parameter	Result	Flag	Ref.
Creatinine (μmol/L)	230.5	H	44 - 116
Urea (mmol/L)	9.41	H	2.2 - 7.8
Potassium (mmol/L)	5.50	H	3.5 - 5.5
Calcium (mmol/L)	2.06	L	2.11 - 2.98
Haemoglobin (g/dL)	7.7	L	12 - 16
MCV (fL)	78.8	L	80 - 100
PSA (ng/mL)	227.4	H	0 - 4.0
ALT (U/L)	1.9	—	0 - 51
AST (U/L)	18.8	—	0 - 51
Albumin (g/L)	36.2	—	28 - 54

Table 2. ^{68}Ga-PSMA PET/CT summary (18/04/2026).

Domain	Findings
Prostate	5.1 × 3.9 × 3.7 cm; physiologic PSMA (SUVmax 2.59); no local recurrence
Nodal	Extensive: supraclavicular (SUVmax 9.27), paratracheal (9.66), subcarinal (13.8), hilar (11.53), para-aortic (18.1), celiac, left gastric
Skeletal	C2 (32.21), T10 (24.66), L1 (12.05), right iliac (14.37), multiple ribs; lytic/sclerotic
Viscera/Rectum	No pathological visceral uptake. No rectal PSMA uptake reported
Overall	Disease progression vs. 16/06/2025. Interval extensive nodal + skeletal metastases

Table 3. Serial laboratory trend.

Parameter	Pre-DJ	07/04	Post-DJ	Latest	Ref.
Creatinine (μmol/L)	230.5	175	148	146	44 - 116
eGFR CKD-EPI (mL/min/1.73 m^2)	—	34	~41	42	>59
Urea (mmol/L)	9.41	—	—	5.81	2.2 - 7.8
Haemoglobin (g/dL)	7.7	—	—	9.0*	12 - 16

Continued

WBC ($\times 10^3/\mu L$)	4.58	—	3.77	4.21	4.0 - 11
Platelets ($\times 10^3/\mu L$)	416	—	359	333	150 - 450
Sodium (mmol/L)	134.6	—	—	133.1	134 - 146
Potassium (mmol/L)	5.50	—	—	4.44	3.5 - 5.5
PSA (ng/mL)	227.4	—	—	—	0 - 4.0

Table 4. Sequential endoscopic interventions.

Parameter	APC #1 (28/03/25)	APC #2 (11/07/25)	Colonoscopy #3 (27/04/26)
Institution	KUTRH	KUTRH	Mt Elgon Endoscopy Center
Indication	Radiation proctitis	Recurrent telangiectasia	Recurrent bleeding after 2 APC
Technique	Standard colonoscopy	Standard colonoscopy	Water-assisted (underwater)
Findings	Rectum: friable, bleeding	Sigmoid + rectum: telangiectasia	Diffuse friable mucosa; oozing
Agent	APC (2 L/min, 30 kV as documented)	APC	Adrenaline + cyanoacrylate
APC Performed	Yes	Yes	No
Outcome	Haemostasis achieved	Recurred	Short-term bleeding reduction
Post-Procedure	—	Repeat APC 6 - 8 weeks	Sucralfate PR × 14 days

Table 5. Chronological multidisciplinary management timeline.

Date	Event	Outcome
2020	Prostate cancer diagnosed; pelvic radiotherapy administered	Initial oncological management
28/03/2025	APC #1 at KUTRH	Rectum: friable mucosa; APC at 2 L/min, 30 kV (as documented); haemostasis achieved
11/07/2025	APC #2 at KUTRH	Sigmoid + rectum: telangiectasia with bleeding; APC both areas; recurred
10/11/2025	PSA 30.47 ng/mL	Biochemical progression on enzalutamide
23/01/2026	PSA 53.84 ng/mL	Continued biochemical rise
22/02/2026	PSA 127.4 ng/mL	Rapid PSA doubling

Continued

02/04/2026	PSA 227.4 ng/mL; Cr 230.5 μmol/L; Hb 7.7 g/dL	Pre-stenting comprehensive labs
07/04/2026	Left antegrade Double-J ureteric stenting at Male Wellness & Urology Clinic for malignant left ureteric obstruction with hydronephrosis and post-renal AKI	Restored urinary drainage; creatinine improved 230.5 → 146 μmol/L; potassium normalised; dialysis avoided
07/04/2026	Post-stenting renal follow-up	Cr 175 μmol/L; eGFR 34 mL/min/1.73 m^2
12/04/2026	Echocardiography	LVEF 58.2%; low CO 3.4 L/min; HFpEF physiology
18/04/2026	^{68}Ga-PSMA PET/CT	Interval nodal + skeletal metastases vs. 16/06/2025
27/04/2026	Third colonoscopy at Mt Elgon Endoscopy Center	Water-assisted; adrenaline + cyanoacrylate glue; APC not performed
30/04/2026	Post-transfusion CBC	Hb 9.0 g/dL
Latest	Renal function stabilised	Cr 146 μmol/L; eGFR 42; dialysis avoided
Disposition	Clinical stabilisation	Optimised for oncology handover; prognosis guarded

Oncology discussion identified potential treatment pathways including Lutetium-177 (^{177}Lu) PSMA-targeted radioligand therapy and systemic chemotherapy, both requiring adequate renal function, correction of severe anaemia, and control of active haemorrhage prior to initiation. The patient was therefore referred for multidisciplinary stabilisation (Table 5) before oncological treatment could be considered.

Diagnostic Note: Radiation proctitis was clinically documented at Kenyatta University Teaching and Referral Hospital (KUTRH) with a discharge diagnosis of radiation proctitis, ICD-10: K62.7. Histological confirmation was not obtained. The original radiotherapy dose, fractionation schedule, and rectal dose were not available for reproduction. The differential diagnosis includes malignant mucosal infiltration, ischaemic colitis, and malignancy-associated vascular ectasia. The documented clinical diagnosis at a tertiary referral centre, the characteristic endoscopic pattern confined to the irradiated rectal field with normal proximal colon, and the absence of pathological PSMA uptake in the rectum on PET/CT (which makes PSMA-avid malignant infiltration less likely, but does not exclude non-PSMA-avid microscopic disease or non-malignant causes) collectively support radiation proctitis as the primary working diagnosis.

2.2. Renal and Urological Presentation

The patient developed progressive left flank discomfort with biochemical evidence of renal dysfunction. Imaging confirmed left-sided hydronephrosis secondary to malignant ureteric obstruction from locally advanced prostatic disease and/or metastatic nodal compression. Serum creatinine at presentation was 230.5 μmol/L (Table 1), consistent with post-renal AKI superimposed on age-related baseline renal impairment, with serial laboratory trends from presentation to latest follow-up shown (Table 3). Serum electrolytes demonstrated mild hyponatraemia (sodium 134.6 mmol/L), borderline elevated potassium (5.50 mmol/L), and hypocalcaemia (calcium 2.06 mmol/L). Clinical assessment determined that malignant ureteric obstruction required urgent decompression. Haematuria was not present before any intervention.

2.3. Gastrointestinal Bleeding Presentation

The patient had persistent per rectal bleeding manifesting as frank blood per rectum, contributing to a haemoglobin of 7.7 g/dL with microcytic indices (MCV 78.8 fL, MCH 26.6 pg). Peripheral blood film demonstrated dimorphic anaemia with moderate anisocytosis, mixed normocytic normochromic and microcytic hypochromic populations, occasional ovalocytes, and polychromasia (3+), consistent with concurrent iron deficiency from chronic gastrointestinal blood loss and anaemia of chronic disease and/or chronic kidney disease contribution [8]. Possible marrow involvement is a differential consideration given the extensive skeletal metastases, but was not confirmed by bone marrow biopsy. Platelet count was adequate (416×10^9/L). Packed red blood cell transfusion was recommended with a target of 9 - 10 g/dL to optimise physiological reserve prior to any oncological intervention.

2.4. Baseline Functional Status and Medications

The patient's baseline functional status and medication list were not comprehensively documented in the reviewed records. Specifically, the Eastern Cooperative Oncology Group (ECOG) performance status, detailed comorbidity history, and current medication list—including any antiplatelet agents, anticoagulants, non-steroidal anti-inflammatory drugs, or iron supplementation—were not available for reproduction. Whether enzalutamide was held peri-procedurally was not documented. This is acknowledged as a limitation when interpreting bleeding risk and treatment selection.

Baseline echocardiography on 12/04/2026 demonstrated a preserved left ventricular ejection fraction of 58.2% but reduced stroke volume of 49.3 mL and low cardiac output of 3.4 L/min, with mildly reduced global longitudinal strain of −18.9% and features of heart failure with preserved ejection fraction physiology. Right ventricular function was preserved, and no pulmonary hypertension was documented. These findings supported cautious transfusion, fluid management, and cardiology-aware oncology planning.

3. Investigations

3.1. Prior Endoscopic Documentation

Prior endoscopic documentation from KUTRH on 28/03/2025 recorded a clinical diagnosis of radiation proctitis (ICD-10: K62.7). Colonoscopy under sedation demonstrated a normal proximal colon, while the anus/rectum showed widespread friable mucosa that bled easily. These findings were consistent with radiation proctopathy confined to the irradiated field. Histological confirmation was not obtained. The original radiotherapy dose, fractionation schedule, and rectal dose were not available for reproduction.

3.2. Third Colonoscopy—Endoscopic Findings (27/04/2026)

A third colonoscopy was performed at Mt Elgon Endoscopy Center on 27/04/2026 using a water-assisted (underwater) technique for persistent recurrent bleeding after two prior APC sessions. Endoscopic findings included diffuse radiation proctopathy with circumferential rectal erythema, petechiae, telangiectatic vessels, and active oozing haemorrhage. No focal mass or ulceration was identified. The bleeding was diffuse across the irradiated mucosal field, consistent with the established clinical diagnosis of radiation proctitis (Figure 1).

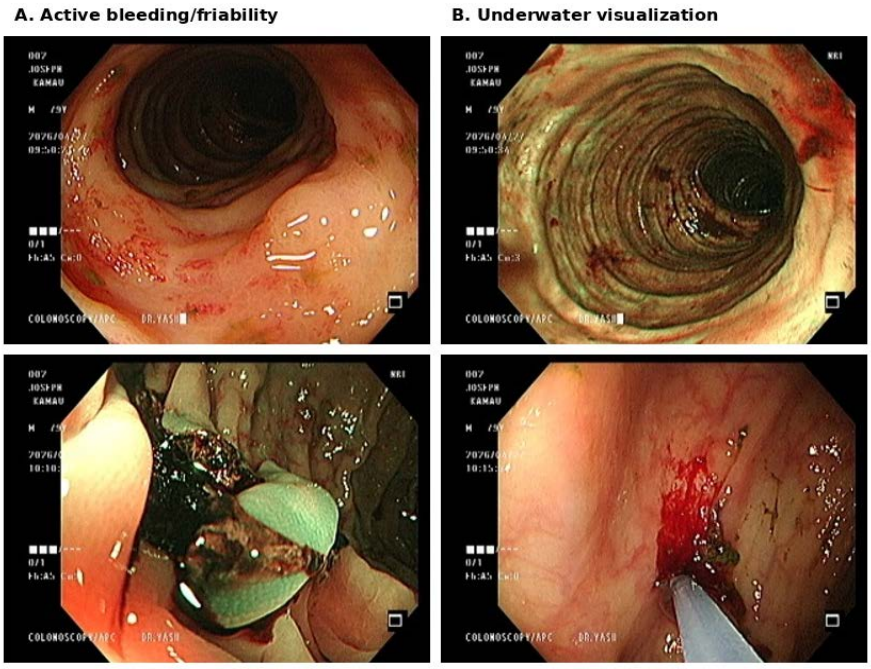

Figure 1. Third colonoscopy at Mt Elgon Endoscopy Center (27/04/2026) using water-assisted technique. (A) Active bleeding and mucosal friability. (B) Underwater visualisation. (C) Cyanoacrylate glue cast achieving mechanical haemostasis. (D) Post-haemostasis assessment with reduced active bleeding.

3.3. AI-Assisted Real-Time Colonoscopy Mapping

A clinician-supervised real-time colonoscopy mapping interface was used before

and during the third colonoscopy to review previously APC-treated segments and map current mucosal abnormalities by colonic segment (Figure 2, Figure 3). The clinician-supervised mapping interface helped document and visually correlate recurrent bleeding with previously APC-treated segments. The mapping system did not make autonomous diagnostic or therapeutic decisions; all interpretation and treatment decisions were made by the treating clinician. APC was not performed during the third colonoscopy; mapping was used in case a repeat APC became necessary.

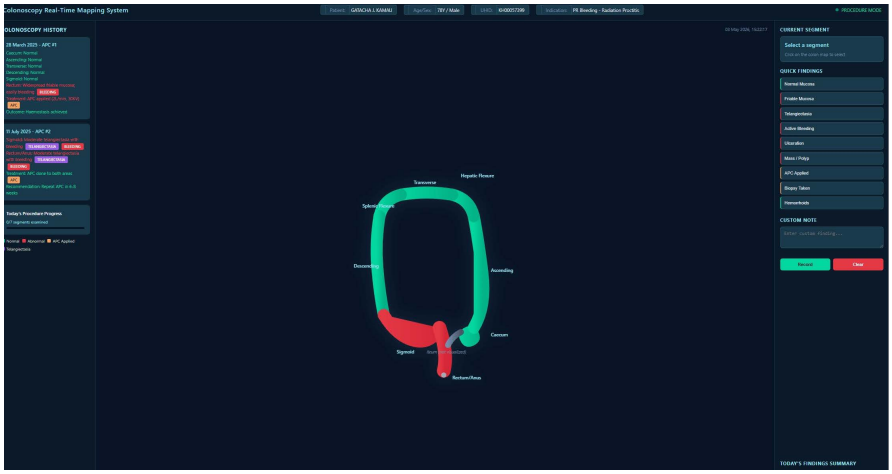

Figure 2. AI-assisted real-time colonoscopy mapping interface. Colour-coded colon map with APC session history. Green = normal; red = abnormal. Clinician-supervised documentation and planning aid only. All patient identifiers should be redacted before submission.

Figure 3. Procedural sequence during water-assisted colonoscopy at Mt Elgon Endoscopy Center (27/04/2026). (A) Adrenaline (1:10,000) submucosal injection producing a visible wheal around the bleeding site. (B) N-butyl-2-cyanoacrylate (Histoacryl) glue injection via catheter, demonstrating targeted delivery to the bleeding mucosa. (C) Post-haemostasis assessment showing no active oozing and restored fine vascular pattern. All patient identifiers should be redacted before submission.

3.4. ^{68}Ga-PSMA PET/CT

A non-contrast ^{68}Ga-PSMA PET/CT performed on 18/04/2026 for biochemical recurrence demonstrated interval progression compared with the prior PSMA PET/CT from 16/06/2025. The prostate measured approximately 74 mL and showed only low-grade physiological PSMA uptake without PSMA-avid local re-

currence or residual disease. However, there were extensive PSMA-avid distant nodal metastases involving supraclavicular, infraclavicular, mediastinal, hilar, para-aortic, celiac, and left gastric nodal stations, as well as multiple PSMA-avid lytic/sclerotic skeletal metastases involving the cervical, thoracic, and lumbar spine, ribs, and right iliac bone. No pathological visceral PSMA uptake was reported; low-grade PSMA-avid bilateral lower lung zone opacities were interpreted as possibly post-infectious. Overall, the scan confirmed metastatic disease progression and supported urgent oncology reassessment after renal, haematologic, and gastrointestinal stabilisation. No pathological rectal PSMA uptake was reported; this makes PSMA-avid prostate cancer infiltration less likely, but does not exclude non-PSMA-avid microscopic disease or non-malignant inflammatory/ischemic causes.

4. Treatment and Interventions

4.1. Left Antegrade Double-J Stenting

On 07/04/2026, the patient underwent left antegrade Double-J ureteric stenting at Male Wellness & Urology Clinic for malignant left ureteric obstruction causing hydronephrosis and post-renal acute kidney injury (Table 5). The indication was therapeutic urinary decompression to restore renal drainage, improve renal function, avoid dialysis, correct metabolic risk, and preserve eligibility for systemic oncological therapy. Following stenting, serum creatinine improved from 230.5 μmol/L to 146 μmol/L (Table 3), potassium normalised, and dialysis was avoided.

Post-stenting KUB radiography confirmed satisfactory stent positioning (Figure 4). Urinary drainage was restored; transient macroscopic haematuria was observed as an expected post-procedural finding (Figure 5), which resolved spontaneously. Renal recovery was demonstrated by serial improvement in creatinine and potassium rather than by imaging alone. Bedside bladder ultrasonography demonstrated an echogenic curvilinear structure within the urinary bladder, consistent with the distal coil of the Double-J stent (Figure 6). This supported distal stent positioning but did not by itself prove complete resolution of obstruction.

Figure 4. KUB radiograph confirming left-sided double-J ureteric stent in situ. Nephrostomy catheter visible along the left flank.

Figure 5. Urinary drainage bag (Bardia) post-double-J stenting showing transient macroscopic haematuria (~500 - 600 mL), confirming restored urinary drainage from the obstructed left collecting system. Haematuria was a post-procedural observation, not the indication for stenting.

Figure 6. Bedside bladder ultrasonography demonstrating an echogenic curvilinear structure within the urinary bladder, consistent with the distal coil of the Double-J stent. This supported distal stent positioning but did not by itself prove complete resolution of obstruction.

4.2. APC Sessions #1 and #2 (KUTRH)

APC #1 was performed at KUTRH on 28/03/2025 as a day-case procedure. APC was applied to the rectum at argon flow 2 L/min and 30 kV, as documented in the source report. Haemostasis was achieved. APC #2 was performed at KUTRH on 11/07/2025, identifying moderate telangiectasia with active bleeding in the sigmoid colon and rectum/anus; APC was applied to both areas, with a recommendation to repeat APC in 6 - 8 weeks. Despite two APC sessions over approximately four months, per rectal bleeding continued to recur. This is consistent with published recurrence rates [4]. Two of the recommended 2 - 3 APC sessions [3] were performed before escalation (Table 4).

4.3. Third Colonoscopy—Underwater Cyanoacrylate (27/04/2026)

Given recurrence despite two APC sessions, a third colonoscopy was performed at Mt Elgon Endoscopy Center using a water-assisted technique [9] (Table 4). Adrenaline (1:10,000) was injected submucosally at the bleeding sites to achieve

initial vasoconstriction. N-butyl-2-cyanoacrylate (Histoacryl) was then mixed with Lipiodol (~1:1) and injected in 0.5 - 1.0 mL aliquots via a standard injection catheter into the submucosal plane at multiple sites across the bleeding field. The exact total injected volume, needle gauge, and number of injection sites were not fully captured in the retrospective procedural record. APC was not performed during this third procedure.

No immediate complications were observed. The procedure was associated with marked short-term bleeding reduction: no further large-volume per rectal bleeding was documented during the 3-day post-procedure observation period.

Potential risks of lower gastrointestinal cyanoacrylate include tissue necrosis beneath the cast, embolisation (low risk in capillary beds vs variceal shunts), interference with future endoscopic assessment, and unknown fate of retained rectal glue casts [6] [10].

4.4. Post-Endoscopy Management

Rectal sucralfate suppositories were prescribed for 14 days [11]. Packed red blood cell transfusion was administered; haemoglobin improved from 7.7 g/dL (Table 1) to 9.0 g/dL (Table 6).

Table 6. Post-transfusion complete blood count (30/04/2026).

Parameter	Result	Flag	Ref.
Haemoglobin (g/dL)	9.0	L	12 - 16
HCT (%)	28.3	L	37 - 47
MCV (fL)	83.5	—	81 - 99
MCH (pg)	26.5	L	27 - 31
RDW-CV (%)	17.0	H	11.5 - 14
WBC ($\times 10^3/\mu L$)	4.21	L	4.8 - 10.8
Neutrophils (%)	88.1	H	40 - 75
Lymphocytes abs ($\times 10^3/\mu L$)	0.32	L	1 - 3.7
Platelets ($\times 10^{3/}\mu L$)	333	—	140 - 450

5. Outcome and Follow-Up

Renal: Double-J stenting for malignant left ureteric obstruction with hydronephrosis and post-renal AKI achieved creatinine reduction from 230.5 to 146 μmol/L (eGFR 42 mL/min/1.73 m^2, CKD stage 3b) (Table 3). Dialysis was avoided. Potassium normalised. Transient macroscopic haematuria occurred post-procedurally as a drainage finding and resolved spontaneously. The renal recovery preserved eligibility for systemic chemotherapy.

Gastrointestinal: Cyanoacrylate glue after two APC failures was associated with short-term bleeding reduction. No further large-volume per rectal bleeding was documented in the 3-day post-procedure observation period. Sucralfate was completed. The patient was monitored for early complications, including abdominal

pain, fever, mucosal ulceration, and embolic symptoms; none were documented during the observation period. Long-term haemostasis durability is not established.

Haematology: Pre-transfusion haemoglobin was 7.7 g/dL (Table 1). Post-transfusion haemoglobin improved to 9.0 g/dL (Table 6). The number of packed red blood cell units transfused and the transfusion rate were not fully captured in the retrospective record. No transfusion reactions were documented. Severe lymphopenia (absolute 0.32) was noted—stress response pattern; possible marrow involvement not biopsy-confirmed (Table 6).

Disposition: Clinically stabilised and optimised for oncology handover for chemotherapy decision-making (Table 5). Prognosis remained guarded due to extensive metastatic disease and risk of recurrent bleeding. Follow-up at reporting was 3 days post-third colonoscopy.

6. Discussion

6.1. Diagnostic Reasoning for Radiation Proctitis

Radiation proctitis was favoured as the working diagnosis for three reasons. First, the clinical diagnosis was established at a tertiary referral centre (KUTRH) with ICD-10 coding (K62.7) and documented endoscopic findings of widespread friable mucosa confined to the irradiated rectal field with normal proximal colon [1] [2]. Second, the patient had a history of pelvic radiotherapy for prostate cancer, and the endoscopic appearance (telangiectasia, diffuse friability, contact bleeding) is characteristic of chronic radiation proctopathy. Third, ^{68}Ga-PSMA PET/CT showed no pathological PSMA uptake in the rectum, making PSMA-avid malignant infiltration less likely, although it does not exclude non-PSMA-avid microscopic disease [2]. Histological confirmation was not pursued because the endoscopic pattern was classic for radiation proctopathy in the context of documented prior pelvic irradiation, and biopsy of friable post-radiation mucosa carries an increased bleeding risk in a patient with severe anaemia. Ischaemic colitis was considered unlikely because the presentation was chronic rather than acute, confined to the irradiated field, and not segmental. The original radiotherapy modality, total dose, fractionation schedule, and interval from radiotherapy to onset of rectal bleeding were not available for reproduction in this report.

6.2. Sequential APC Failure and Escalation Rationale

APC is the first-line endoscopic therapy for radiation proctopathy [3,4]. Current guidelines recommend APC, bipolar electrocoagulation, heater probe, or radiofrequency ablation as effective endoscopic options for bleeding from chronic radiation proctopathy, with formalin reserved for select cases due to higher adverse event rates [12]. In this case, two APC sessions were performed at KUTRH (28/03/2025 and 11/07/2025) (Table 4). APC #1 treated the rectum; APC #2 identified extension to the sigmoid with ongoing telangiectasia and active bleeding. Despite two sessions over four months, bleeding recurred—consistent with pub-

lished recurrence rates [4]. The clinician-supervised mapping interface helped document and visually correlate recurrent bleeding with previously APC-treated segments, supporting the decision to escalate to an alternative modality rather than pursuing a third APC session, particularly given concurrent anaemia severity and renal dysfunction.

6.3. Cyanoacrylate Glue as a Rescue Option

Cyanoacrylate achieves mechanical haemostasis through rapid polymerisation [6] [10]. In this case, it was associated with short-term bleeding control after two APC failures. It may represent a selected rescue option when standard endoscopic therapies have been exhausted, but durability and safety for chronic radiation proctopathy specifically require further study [12]. Risks include tissue necrosis, embolisation (low in capillary beds), interference with future assessment, and the unknown fate of retained rectal casts. Erythropoiesis-stimulating agents were considered as an adjunct, but the acute anaemia severity mandated immediate transfusion [13].

6.4. Water-Assisted Colonoscopy and Visualisation

Water-assisted colonoscopy improves mucosal visualisation during active bleeding [9] [14] [15]. In this case, the water-assisted technique at Mt Elgon Endoscopy Center allowed better assessment of the diffuse bleeding field and guided targeted adrenaline and cyanoacrylate injection. The AI-assisted mapping interface provided clinician-supervised documentation of prior APC-treated segments and facilitated procedural planning, although all therapeutic decisions were made by the treating clinician.

6.5. Multidisciplinary Imperative

Renal decompression was essential because malignant ureteric obstruction can cause progressive renal dysfunction and may limit the delivery of systemic cancer therapy [16]. In this patient, Double-J stenting restored urinary drainage, improved renal function, avoided dialysis, and supported oncology handover. Urinary diversion in malignant obstruction requires individualised decision-making that balances renal preservation against procedural burden and quality-of-life considerations [16]. Oncological treatment could not proceed without renal stabilisation and gastrointestinal bleeding control. Coordinated gastroenterology, urology, nephrology, haematology, and oncology management was essential [7] [17] [18].

6.6. Limitations

Radiation proctitis is clinically documented (ICD-10: K62.7) but not histologically confirmed. The original radiotherapy modality, total dose, fractionation schedule, rectal dose, and interval from radiotherapy to onset of rectal bleeding were unavailable for reproduction in the reviewed record. Baseline functional status (ECOG),

detailed comorbidity history, and complete medication list were not documented. Follow-up was 3 days post-procedure; long-term cyanoacrylate durability is unknown. Total glue volume, needle gauge, and exact number of injection sites were not fully captured in the retrospective procedural record. The number of PRBC units transfused and the transfusion rate were not documented. This is a single-case observation. Formal coronary artery disease workup (coronary CT angiography or stress testing) and transthyretin amyloid cardiomyopathy exclusion (technetium pyrophosphate scintigraphy) were not performed during this admission and remain outstanding before cardiotoxic chemotherapy.

7. Conclusion

This case describes multidisciplinary stabilisation of a patient with progressive metastatic prostate cancer complicated by clinically documented radiation proctitis, refractory lower gastrointestinal bleeding, severe anaemia, and malignant left ureteric obstruction with post-renal AKI. Two APC sessions at KUTRH achieved initial procedural haemostasis but bleeding recurred. Subsequent water-assisted colonoscopy at Mt Elgon Endoscopy Center with adrenaline and cyanoacrylate glue was associated with short-term bleeding control, while left antegrade double-J stenting at Male Wellness & Urology Clinic improved creatinine from 230.5 to 146 μmol/L and avoided dialysis. Cyanoacrylate glue may represent a selected rescue option after APC failure, but longer follow-up and additional cases are required before broader conclusions can be drawn.

8. Learning Points

Cyanoacrylate glue: Cyanoacrylate glue injection under water-assisted colonoscopy was associated with short-term bleeding control after two APC failures.

Water-assisted colonoscopy: Water-assisted colonoscopy may improve visualization during active lower gastrointestinal bleeding.

Sequential escalation: Sequential escalation from APC to rescue therapy may be useful in selected refractory radiation proctopathy cases.

Urological decompression: Urological decompression of malignant ureteric obstruction can preserve renal function and systemic therapy eligibility.

Multidisciplinary coordination: Multidisciplinary coordination is essential in frail oncology patients with competing gastrointestinal, renal, urologic, hematologic, and oncologic priorities.

Patient Perspective

A formal written patient-perspective statement was not collected; however, consent for publication of anonymised clinical details and images was obtained. The patient and family expressed concern about recurrent rectal bleeding, transfusion requirements, renal dysfunction, and readiness for further cancer treatment. Following renal decompression, transfusion, and endoscopic haemostasis, the patient agreed to proceed with oncology reassessment for systemic therapy planning.

Patient Consent

Written informed consent for publication of anonymised clinical details and images was obtained from the patient. Source-document images containing identifiers will be redacted before submission. Consent form retained in the medical record.

Ethics Approval

The case was reviewed locally for publication as a single-patient case report; no formal approval number was assigned. All investigations and interventions were performed in accordance with the Declaration of Helsinki (2013). Cyanoacrylate was off-label rescue therapy; rationale and risks were discussed with the patient.

Author's Contributions

The author was involved in clinical management, care coordination, data collection, manuscript drafting, and revision.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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