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Radiation cystitis is a common complication of pelvic radiotherapy with incidence rates ranging from 23% to 80%. Radiation treatment causes endothelial cell damage and perivascular fibrosis, resulting in ischaemia and obliterative endarteritis. Haematuria is more pronounced than that seen in BPS/IC. The end stage is a small, fibrotic bladder with poor compliance and a risk of upper tract compromise, as for other chronic inflammatory bladder diseases. Emergency admission with haematuria requires resuscitation, catheterisation and bladder washout and blood transfusion as required. Cystoscopic management with fulguration or laser to bleeding vessels should be performed initially to stop bleeding. Intravesical GAG layer replacement therapies can be considered, and hyperbaric oxygen therapy has shown benefit in severe, refractory cases of haemorrhagic cystitis. Radiological arterial embolisation can also be considered for refractory cases, but ischaemic complications occur in 10–63% (e.g. skin or bladder necrosis, gluteal paresis, perineal or buttock pain). Finally, urinary diversion with or without cystectomy can be performed for end-stage cases, but perioperative morbidity is almost 50% and mortality is 16%.

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