



Atypical hemolytic uremic syndrome trigger lead to renal allograft failure

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Abstract:

Introduction:

After a week of commercial renal transplant, recipient reported to emergency without any details of donor recipient workup, HLA typing, cross matching & induction therapy or surgery, Underwent through a stormy course of events. Atypical haemolytic uremic syndrome (aHUS), acute cellular rejection (ACR), grafts failure despite aggressive management, with rATG and eculizumab.

Presentation & Past Medical History:

Asymptomatic, adequate urine output. PMHx: Was On hemodialysis (permacath) for one year. Renal failure was due to thrombotic microangiopathy (TMA) aHUS based on biopsy & molecular testing. Eculizumab started but she lost follow up till she appeared A&E post kidney transplant. BMI=36, BP 160/100mmHg. Surgical wound dehiscence (right iliac fossa) with pus discharge, (swab negative). Serum creatinine 115 mmol/l with low phosphate level. Hb 11.4 g/dl.

Evidence Based Management Plan:

Based on previous renal disease, suspicion of TMA was postulated. Renal allograft biopsy was performed. Consistent with borderline ACR and TMA. ACR treatment initiated with methyl- prednisolone and rATG (6 mg/kg total dose). Creatinine continued worsening with rising LDH. Blood films showed moderate schistocytes consistent with aHUS. aHUS screen and ADAMTS13 ordered. Eculizumab started [3], had meningitis vaccine. Flexible cystoscopy and DJ stent removed. 2nd week: Fever spike with burning micturition. UTI suspected with Infectious disease opinion vancomycin and meropenem started empirically along with oral fluconazole. Immunosuppression continued. Carbapenem resistant enterococci colonization of the central line (removed). Gallium scan was negative for any infective focus. Colistin was added for multi-drug resistant (MDR) bacteremia. Meropenem continued for 10 days and voriconazole for 1 month. Clinical improvement observed with resolution of sepsis. HRCT chest, bronchoscopy revealed no endobronchial lesion seen. Bronchoalveolar lavage (BAL) for gram stain, culture, viral PCRs and PJP turned out to be negative. Cr continued to deteriorate (peaked to 361 on day 46 of transplant). US Doppler showed no intra-renal blood flow due to thrombus. After multi-disciplinary team meeting (MDT) with nephrology, radiology, vascular surgery and urology, conventional renal angiography was decided in view to possible thrombolysis in an attempt to salvage. Risks explained to



the patient and family and MDT recommendations. Informed consent obtained. Right iliac angiogram showed complete thrombosis of right internal iliac and renal artery (as shown).

Biography:

Akbar Mahmood is a structurally trained physician in internal medicine from Heart's International Hospital, Pakistan. He had training in Nephrology Dialysis & Transplant from King Saud Medical City, a national referral centre, Saudi Arabia. Later he moved to Sultan Qaboos University Hospital, renal unit Oman, the largest research centre of the country. There he enriched his nephrology further career by joining a team of eminent nephrologists and enhanced skills by handling kidney transplant recipients, intensive care nephrology and renal vasculitis. Having natural flair towards research and teaching Dr. Akbar authored publications and participated actively in scientific meetings through abstract and poster presentations. He enjoys teaching various aspects of nephrology to under and post graduates. As learning is a continuous process he aims to improve his knowledge base and skills with continuous professional development in order to improve his patients care and welfare he opted the opportunity to serve Letterkenny University Hospital renal unit which is a good mixture of nephrology, medicine and regional dialysis unit where Dr. Akbar enjoys my practice of renal medicine and teaching.

Publication of speakers:

1. Laszik ZG, Kambham N, Silva FG. Thrombotic microangiopathies. In: Heptinstall's Pathology of the Kidney, Jennett JC, D'Agati VD, Olson JL, et al (Eds), Lippincott Williams & Wilkins, Philadelphia 2014.
2. George JN, Nester CM. Syndromes of thrombotic microangiopathy. *N Engl J Med* 2014; 371:654.
3. Nester C, Stewart Z, Myers D, et al. Pre-emptive eculizumab and plasmapheresis for renal transplant in atypical hemolytic uremic syndrome. *Clin J Am Soc Nephrol* 2011; 6:1488.

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