CLINICAL PROFILE OF AKI IN PATIENTS WITH MALIGNANCY A SINGLE CENTER EXPERIENCE

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AIMS & OBJECTIVES

To study the incidence, causes ,staging and outcomes of AKI (acute kidney injury) in patients suffering from malignancy

MATERIALS AND METHODS

A total of 200 cancer patients with AKI admitted in Basavatarakam Indo American Cancer hospital, Hyderabad, India were studied.

INCLUSION CRITERIA:

All the with AKI admitted in Basavatarakam Indo American Cancer hospital included in the study

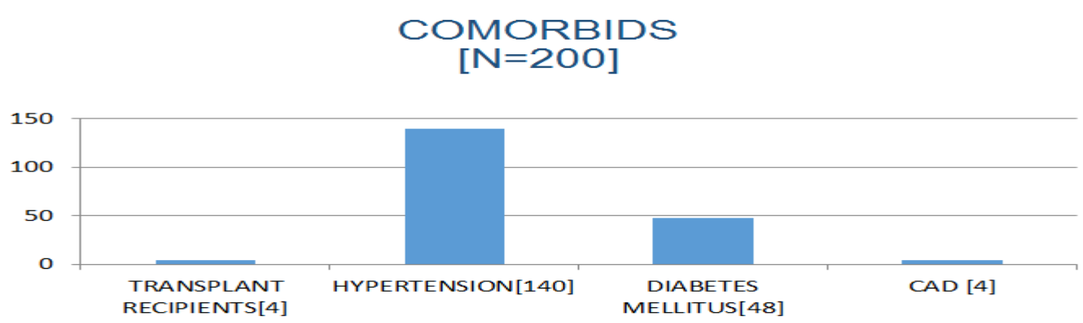
EXCLUSION CRITERIA:

Patients not giving consent
Patients with ESRD.

RESULTS

GENDER DISTRIBUTION
[N=200]

Out of 200 patients in the study, 124 were males and 76 were females.
Most of the patients are in 51 to 60 years age group(80 patients) and the mean age of the patients was 54.76 years.



Hypertension was the common comorbid illness seen in 140 patients followed by diabetes mellitus seen in 48 patients.

RENAL BIOPSIES IN PATIENTS WITH MALIGNANCY

Renal biopsy was done in 9 patients, where cast nephropathy was seen in patients with multiple myeloma, chronic tubulointerstitial nephritis was seen in amyloidosis, ATIN(acute tubule interstitial nephritis) and ATN(acute tubular necrosis) was seen in lung cancer, membranous nephropathy and acute interstitial nephritis was seen in renal cell carcinoma and thrombotic microangiopathy was seen in a patient with AKI who underwent bone marrow transplantation for aplastic anemia.

STAGES OF AKI

Out of 200 patients in the study group, AKI of AKIN I was seen in 64 members, AKIN II was seen in 68 members and AKIN III was seen in 68 members.

MALIGNANCY TYPES (N=200)

- MULTIPLE MYELOMA-16
- AMYLOIDOSIS-4
- BLADDER CANCER-24
- PERITONEAL CANCER-8
- BREAST CANCER-20
- NHL-12
- SYNOVIAL SARCOMA-4
- LUNG CANCER-20
- DLBCL-4
- LEOMYOSARCOMA-4
- LIP CANCER-4
- EPIGLOTTIS CANCER-4
- RENAL CELL CANCER-12
- AML-20
- HAIRY CELL LEUKEMIA-4
- APLASTIC ANEMIA-8
- VOCAL CORD CANCER-4
- GIST-8
- CERVICAL CANCER-16
- VAGINAL CANCER-4

Bladder cancer was common malignancy seen in 24 patients, followed by breast cancer, lung cancer and AML seen in 20 patients.

CAUSES OF AKI IN PATIENTS WITH MALIGNANCY

- MULTIPLE MYELOMA-CAST-13/SEPSIS-2/NSAIDS-1
- AMYLOIDOSIS-PRO CKD-1/NEPHROTIC SYN-2/SEPSIS-1
- BLADDER CANCER-OBSSTRUCTIVE-8/SEPSIS-4/OBSTRUCTIVE+SEPSIS-4/PRE RENAL-4/PERIOPERATIVE-4
- PERITONEAL CANCER-SEPSIS-4/DIRI+PRE RENAL-4
- BREAST CANCER-SEPSIS-7/NSAIDS-3/CT-5/PRE RENAL-5
- NHL-SEPSIS-2/OBSTRUCTIVE-6/CT-1/PRE RENAL-3
- SYNOVIAL SARCOMA-SEPSIS-3/CT-1
- LUNG CANCER-CT-16/SEPSIS-4
- DLBCL-TLS-2/CT-1/SEPSIS-1
- LEOMYOSARCOMA-DIRI-2/UROSEPSIS-1/NSAIDS-1
- LIP CANCER-NSAIDS-2/PRE RENAL-2
- EPIGLOTTIS CANCER-4
- RENAL CELL CANCER-CT-4/PERIOPERATIVE-6/PRO CKD-2
- AML-TLS-4/SEPSIS-4/MTX-8/LEUCASTASIS-4
- HAIRY CELL LEUKEMIA-SEPSIS-1/SEPSIS+TMA-2/TMA-1
- APLASTIC ANEMIA-TMA-4/TMA+SEPSIS-4
- VOCAL CORD CANCER-CI AKI-2/PRE RENAL-2
- GIST-NSAIDS-2/PRE RENAL-5/SEPSIS-1
- CERVICAL CANCER-PRE RENAL-9/OBSTRUCTIVE-3/DIRI-4
- VAGINAL CANCER-DIRI-1/CT-1/UTI-1/OBSTRUCTIVE-1

Multifactorial AKI was seen in 44 patients ,though each and every variant of malignancy has specific cause of AKI, sepsis was commonly seen in all types of malignancies.

TYPES OF EXTRA CORPOREAL THERAPIES OFFERED

Hemoperfusion-hemoadsorption

HA-230 for MTX toxicity[4]- All of them completely recovered

Hemofiltration-hemoadsorption
Oxiris-Four patients[1 recovered but dialysis dependent & 3 expired]
PMMA filter-Four patients[2 recovered & 2 expired]

Plasmapheresis-bilirubin adsorbtion
Plasma filter with BS330 bilirubin adsorber-Two patients[one recovered but expired after 90 days/one expired]
Plasma filter with BS330 & HA330 hemoperfusion-One patient[expired]

Medium cutoff membrane-Theranova filter[12]
8 recovered/4 dialysis dependent

OUT COMES OF THE STUDY

140 patients underwent conservative management for AKI without dialysis had complete recovery from AKI.
60 patients received dialysis for AKI, of which 4 patients received hemoperfusion with HA-230 filter for methotrexate has completely recovered,8 patients with multiple myeloma underwent dialysis with theranova filter got completely recovered ,4 patients with multiple myeloma underwent dialysis with theranova was dialysis dependent.
Four patients who underwent SLED for AKI has completely recovered,12 patients who underwent SLED for AKI were dialysis dependent and 4 patients who underwent SLED has expired.
Twenty patients received CRRT for AKI and among them Oxiris filter was used in 4 members. Only 1 patient who received CRRT had complete renal recovery,4 patients were dialysis dependent and 15 patients who was on CRRT expired during hospital stay.

CONCLUSIONS

Sepsis was the common cause of AKI in many cancer variants.

More the severity of AKI was associated with more adverse out comes.

All types of AKI like pre-renal, intrinsic renal and obstructive element was seen in patients with AKI in the background of malignancy.

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