RENAL PHYSICIANS ASSOCIATION

2017 ANNUAL MEETING March 17-19

Nashville

RPA
Renal Physicians Associat

The Year in Nephrology: Key Papers in 2016

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Sunday, March 19, 2017, 11:00am

bers from 2016
h High Likelihood of Affecting Clinical Practice

pertension

ronic Kidney Disease

omerulonephritis

ute Kidney Injury

RD & Dialysis

ansplantation

Hypertension

PE-3

al to evaluate whether blood pressure reduction reduces the risk of CV events in patients
ermediate risk and lower blood pressure.

andomly assigned 12,705 subjects with intermediate risk, no CV dz to 2 groups: Candesa
mg/day + HCTZ 12.5mg/day vs. placebo

st coprimary outcome: death from CV causes, nonfatal MI, or nonfatal stroke. Second
primary outcome: also included cardiac arrest, heart failure, revascularization

e median follow-up was 5.6 years.

erapy with candesartan + HCTZ was not associated with a lower rate of major CV events t
cebo among persons at intermediate risk who did not have CV disease.

sult is different from SPRINT, perhaps b/ blood pressures were taken differently.

N Engl J Med 2016; 374: 2009-2020.

Chronic Kidney Disease

pagliflozin

MPA-REG OUTCOME trial [NEJM 2015; 373]

- Randomized >7000 type 2 diabetics to empagliflozin vs. placebo, in addition to standard treatment
- Empagliflozin significantly reduced all-cause mortality, CV mortality, and hospitalization from heart failure

OST HOC analysis in subset of patients with prevalent kidney disease from EMPA-REG UTCOME [NEJM 2016; 375]

- Studied long-term effects of empagliflozin on the progression of kidney disease
- Pts in the empagliflozin arm had a 39% reduction in new onset or worsening nephropathy
- Common adverse events were UTIs and genital infections

UMMARY:

- SGLT2 inhibitors have shown mortality benefit (both all-cause and CV mortality)
- SGLT2 inhibitors appear to be safe and tolerable in pts with CKD at baseline

erenone in Diabetic Nephropathy

generation highly selective nonsteroidal mineralocorticoid antagonist

ippatos Eur Heart Journal, 2016; 37]

- Randomized patients with CHF, Type 2DM, and CKD to finerenone vs. eplerenone
- Pts in the finerenone 10-20mg dose had the greatest reduction of the composite outcome [death fr any cause, CV hospitalization, or emergency presentation to a hospital]
- Incidence of hyperkalemia (serum potassium > 5.6 mmol/L) was 4.3%, and equally distributed betw the groups

UMMARY: Finerenone is a new MR antagonist that may treat proteinuria as well as improv outcomes in type 2 diabetics

tformin in Advanced CKD

sks of adverse outcomes in CKD remain controversial, particularly lactic acidosis

ril 8, 2016 Revised FDA warning

Metformin can be used safely in mild renal impairment as well as in some patients with moderate kidney dysfunction

se of metformin is contraindicated in pts with eGFR < 30 mL/min/1.73 m^2

RTUE-CKD Trial

al to study the individual and combined effects of paricalcitol and dietary sodium restriction
sidual albuminuria in CKD.

lticenter, randomized, placebo-controlled crossover tiral in which 45 patients with nondiab
KD stages 1-3 and albuminuria > 300 mg/24 hr despite ramipril at 10 mg/d and BP < 140/90
mHg were treated for 4 8-week periods with paricalcitol or placebo, each combined with a l
dium diet or a regualr sodium diet.

derate sodium restriction substantially reduced residual albuminuria, and the additional eff
paricalcitol was small and nonsignificant.

J Am Soc Nephrol. 2016

Glomerulonephritis

uximab in IgA nephropathy [Lafayette RA JASN 2016]

al of the trial is to determine whether depleting antibody-producing B cells with Retuximab
prove outcomes in AgA nephropathy.

is is an open label, multicenter study of 34 adult patients with biopsy-proven IgA nephropa
d proteinuria > 1gm/day, randomized to maintenance with an ACR-Inh or to rituximab.

mary outcome measures included change in proteinuria and cahnge in GFR.

1-year of follow-up, Rituximab did not alter the level of proteinuria compared to baseline or
e control group.

uximab therapy did not significantly improve renal function or proteinuria assessed over 1
ar.

J Am Soc Nephrol. 2016.

Acute Kidney Injury

iation of RRT in the ICU

al of the study was to compare early versus delayed renal-replacement initiation in patient
h severe acute kidney injury.

e trial assigned 620 patients with Stage 3 severe acute kidney injury who required mechan
ntilation, catecholamine infusion, or both, and did not have a potentially life-threatening
mplication directly related to renal failure to either an early or a delayed strategy of renal-
lacement therapy.

plan-Meier estimates of 60 day mortality did not differ significantly between early and dela
rapy strategies

otal of 151 patients in the delayed-strategy group did not receive renal-replacement therap

e rate of blood stream infections was higher in the early-strategy group than in the delayed
ategy group.

nclusion: a delayed strategy averted the need for renal-replacement therapy in an appreci
mber of patients.

N Engl J Med. 2016. 375:122-33.

l: Spironolactone and Cardiac Surgery

e goal of this study was to test whether short-term peri-operative administration of oral ronolactone could reduce the incidence of AKI in cardiac surgical patients.

ouble-blinded placebo-controlled trial of 233 pateitns randomized to spironolactone at a do 100mg 12-24 hours before surgery and 3 doses of spironolactone 25mg on postoperative 1, and 2, vs. placebo at each of those times.

mary Endpoint was AKI incidence defined by KDIGO criteria. Secondary endpoints include ed for RRT, ICU length of stay, and ICU mortality.

e incidence of AKI was higher for the spironolactone group. No significant differences were und for secondary endpoints.

Am J Kidney Dis. 2017. 69: 192-199

ESRD & Dialysis

iromer (Veltassa) in HD patients

rpose of this tusy was to examine the effect of Patiromer, a gastrointestinal potassium binc
serum K in HD patients.

hyperkalemia patients (5 anuric) were admitted to clinical research units for 15 days (1
etreatment week and 1 patiromer treatment week), where they received a controlled diet.

ean serum K+ levels decreased (maximum change 0.6 ± 0.2 mEq/l, and fecal K+ increase
% during the treatment week.

Patiromer, Phos decreased from 7.0 ± 0.5 to 6.2 ± 0.5 mg/dl.

patient discontinued patiromer because of adverse events, and there were no serious
verse events.

nclusion: In 6 hyperkalemic HD patients, patiromer decreased serum K and Phos levels ar
reased fecal K.

Am J Nephrol. 2016:44:404-410.

TES Central Venous Catheter Study

ndomly assigned a nontunnelled central venous catheter site in over 3000 adults treated i
ensive care units, in France.

e subclavian site was associated with a lower rate of short-term complications, including
theter-related bloodstream infection and deep venous thrombosis, compared to the femora
ernal jugular site.

plications for Nephrologists – need to be aware of this study, and the need to continue to
vocate for alternatives to subclavian vein catheter placement in patients with CKD who are
pected to require AV access for dialysis in the future.

N Engl J Med. 2015. 373:1220-1229.

emodiafiltration and Mortality in End-stage Kidney Disease ients

al of the study was to evaluate whether the additional clearance of larger toxins with HDF proved survival.

udy is a pooled individual participant data analysis of 2793 patients from four trials that mpared online HDF with HD.

er a median follow-up of 2.5 years, online HDF reduced the risk of all-cause mortality by 1 d cardiovascualr mortality by 23%.

Nephrol Dial Transplant. 2016. 31:978-984.

gocalciferol Supplementation in HD Patients with Vitamin D ficiency

al of the trial is to assess the effects of supplementation with ergocalciferol on epoetin ization and other secondary outcomes in patients on HD with serum 25(OH)D < 30 ng/ml.

double-blind. placebo-controlled, randomized clinical trial of 276 patients randomized to 6 nths of ergocalciferol or placebo.

ean serum 25(OH)D increased from 16.0 ± 5.9 ng/ml at baseline to 39 ± 14.9 ng/ml in the gocalciferol arm, with no change in the placebo arm.

ere was no significant change in epoetin dose over 6 months in either arm.

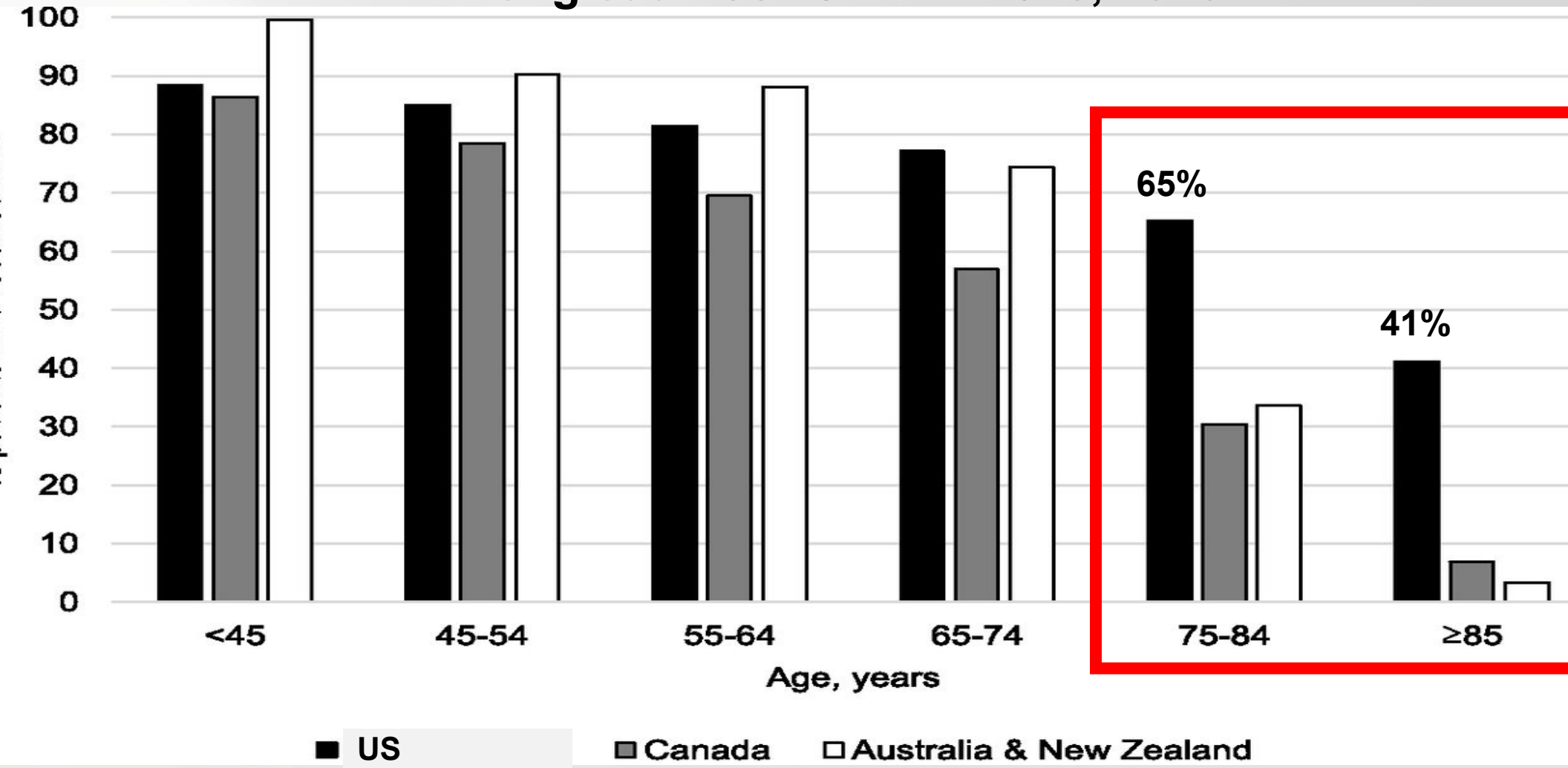
tes of all-cause, cardiovascular, and infection-related hospitalizations did not differ by stud m.

nclusion: 6 months of supplementation with ergocalciferol increased serum 25(OH)D level tients on hemodialysis with Vit D insufficiency ro deficiency, but had no effect on epoetin ization or secondary biochemical and clinnical outcomes.

J Am Soc Nephrol. 2016, 27:1801-10.

ernational differences in use of RRT among patients with advanced CK

Wong et al. CJASN 11: 1825, 2016



s not include VA patients who have private insurance or MA.

Transplantation

patitis C and Renal Transplant

ckground: HCV infection in kidney transplant patients reduces long-term patient and graft rvival.

e University of Utah developed a protocol to allow HCV-infected pts with ESRD to receive erferon-free direct acting antiviral therapy after transplantation.

mple of 12 HCV-positive pts listed for tranpslant, of those 7 received HCV-positive deceas nor kidney, and 1 received an HCV-negative organ.

ree to six months after transplant, 6 patients completed treatment and all achieved a susta al response, with one patient currently awaiting transplant.

7 patients have functioning kidney grafts.

nclusions:

- HCV-positive patients with ESRD can successfully receive an HCV-positive donor's kidney.
- Once transplanted, these patients can receive DAA therapy and achieve SVR.
- Use of HCV-positive organs reduced time on the waitlist by greater than three years and expanded donor organ pool.

Cureus. 2016 8(11):e890.

urces

opra T, Rosner M. Recent Advances in CKD and ESRD: A literature update. Hemodialysis ernational 2017; 21:11-18.

lleagues at Vanderbilt

Dr. Lewis, Dr. Burgner, Dr. Siew (AKI)

edScape emails: “Journal Articles read most by Nephrologists in 2016”

phMadness 2017: https://ajkdblog.org/tag/nephmadness2017/

Additional Slides

RINT Trial
nsive vs. Standard BP Control

udy population: SBP > 130mmHg, Age > 50

Excluded: diabetics, prior stroke, PKD, severe HTN

ndomly assigned 9362 pts to SBP target ≤ 120mmHg or ≤ 140mmHg

ervention stopped early (median 3.26 years) because of significantly lower rate of primary mposite outcome: MI, ACS, stroke, heart failure, CV death, in more intensive group

gher rate of serious adverse events in more intensive group: hypotension, syncope, electro normalities, AKI

NEJM 2015; 373: 2103-2116