

## EDITORIAL

### HAEMODIALYSIS TREATMENT FOR END STAGE CHRONIC KIDNEY DISEASE AND ACUTE KIDNEY INJURY IN AFRICA

In this issue of the journal Okunola and colleagues (page 4) report their experience of haemodialysis management of 180 patients with chronic kidney failure and 45 patients with acute kidney injury (formerly called acute renal failure) in Ladoke Akintola University Teaching Hospital (LAUTECH), Osogbo, Nigeria.

Chronic kidney disease (CKD) is the progressive loss of kidney function occurring over months to years.<sup>1</sup> CKD is common in Africa but there are few data on prevalence. Several studies from Africa report a prevalence of CKD of about 10%.<sup>2,3</sup> Once the glomerular filtration rate (GFR) falls below 10ml/minutes/1.73m<sup>2</sup> the accumulation of uraemic toxins (measured as serum urea and creatinine), hydrogen ions and potassium among others lead to progressive illness and if untreated by dialysis to death. The major causes of CKD in the study of Okunola et al. were hypertension (38.8%), glomerulonephritis (28.8%) and Diabetic nephropathy (22.2%). These were similar to previous reports from Africa but the prevalence of Diabetic nephropathy is higher than that previously reported.<sup>4-6</sup> Once patients with CKD have been started on haemodialysis then in order to stay alive on going treatment is required. The only exception is when patients have a kidney transplant. However haemodialysis is expensive, in this study at \$155 per session and patients need at least two and preferably three haemodialyses per week. Clearly this cost is out of the reach of most individuals in Sub Saharan Africa and in the present study 63.3% of patients had less than 5 sessions of dialysis. Only three of the 180 patients were able to afford dialysis for more than three months. These figures reflect the experience in most parts of Sub Saharan Africa where haemodialysis is either unavailable or unaffordable. This is particularly tragic as most of the patients reported in this study were young with a mean age of 49 years. It is unlikely that African governments will be able to afford funding for chronic haemodialysis in the foreseeable future. This means that our efforts should be directed at identifying CKD early as good blood pressure treatment and angiotensin blockade with angiotensin converting enzyme inhibitors and angiotensin receptor blockers slow the progression of CKD and can buy patients years of survival.<sup>7</sup>

The present study also reported on the treatment of 45 patients with acute kidney injury (AKI). The major causes of AKI were sepsis (35.5%), pregnancy related

events (22.2%) and toxic nephropathy (13.3%) and this is similar to the aetiologies reported elsewhere in Africa.<sup>8,9</sup> It is likely that these patients presented late as 10 (22%) died after their first haemodialysis. Overall 13 of the 45 patients with AKI died (28.8%). Provision of facilities for the treatment of AKI in Africa would save many lives. The current initiative by the International Society of Africa, the International Society of Peritoneal Dialysis and the Sustainable Kidney Care Foundation to develop peritoneal dialysis for the treatment of AKI in Sub Saharan Africa should help in this regard.<sup>10</sup>

#### REFERENCES

1. K/DOQI clinical practice guidelines for chronic kidney disease: evaluation, classification, and stratification. *Am J Kidney Dis.* 2002;39(2 Suppl 1):S1-266.
2. Afolabi MO, Abioye-Kuteyi EA, Arogundade FA, Bello IS. Prevalence of chronic kidney disease in a Nigerian family practice population. *South African Family Practice.* 2009;51:132-7.
3. Sumaili EK, Krzesinski JM, Zinga CV, Cohen EP, Delanaye P, Munyanga SM, et al. Prevalence of chronic kidney disease in Kinshasa: results of a pilot study from the Democratic Republic of Congo. *Nephrol Dial Transplant.* 2009;24(1):117-22.
4. Ojo OS, Akinsola AA, Nwosu SO, Odesanmi WO. The pathological basis of chronic renal failure in Nigerians. An autopsy study. *Trop Geogr Med.* 1992;44(1-2):42-6.
5. Naicker S. End-stage renal disease in sub-Saharan Africa. *Ethn Dis.* 2009;19(1 Suppl 1):S1-13-5.
6. Matekole M, Affram K, Lee SJ, Howie AJ, Michael J, Adu D. Hypertension and end-stage renal failure in tropical Africa. *J Hum Hypertens.* 1993;7(5):443-6.
7. K/DOQI clinical practice guidelines on hypertension and antihypertensive agents in chronic kidney disease. *Am J Kidney Dis.* 2004;43(5 Suppl 1):S1-290.
8. Bamgboye EL, Mabayoje MO, Odutola TA, Mabadeje AF. Acute renal failure at the Lagos University Teaching Hospital: a 10-year review. *Renal failure* 1993;15(1):77-80.
9. Mate-Kole MO, Yeboah ED, Affram RK, Ofori-Adjei D, Adu D. Hemodialysis in the treatment of acute renal failure in tropical Africa: a 20-year review at the Korle Bu Teaching Hospital, Accra. *Renal failure* 1996;18(3):517-24

10. Callegari JG, Kilonzo KG, Yeates KE, Handelman GJ, Finkelstein FO, Kotanko P, et al. Peritoneal dialysis for acute kidney injury in sub-Saharan Africa: challenges faced and lessons learned at Kili-manjaro Christian Medical Centre. *Kidney Int.* 2012;81(4):331-3.

**Dr Dwomoa Adu MD FGCP**

**Department of Medicine and Therapeutics,  
Korle Bu Teaching Hospital, Accra, Ghana**

***E-mail: [dwoms15@gmail.com](mailto:dwoms15@gmail.com)***

***Conflict of interest: None declared*** ☺

## REVIEWERS FOR 2012

Reviewer Name	Country	Reviewer Name	Country
Abdulai, Alhassan Emil	Ghana	Baffoe, Peter	Ghana
Aboagye, Anthony Q. Q.	Ghana	Bannerman, Cynthia	Ghana
Ackuaku-Dogbe, Edith M.	Ghana	Biritwum, Richard	Ghana
Acquaah-Arhin, Rebecca M.	Ghana	Bosu, William K	Ghana
Adabayeri, Victoria May	Ghana	Brieger, William	United States
Adageba, Rudolph Kantum	Ghana	Clegg-Lampsey, Joe Nat A	Ghana
Adanu, Richard	Ghana	Dakubo, Jonathan C. B	Ghana
Adeyemi, Adewale Samson	Nigeria	Darko, Rudolph	Ghana
Adjei, Ernest	Ghana	Desalu, Olufemi Olumuyiwa	Nigeria
Adu-Ababio, Francis	Ghana	Doku, Alfred	Ghana
Adu-Aryee, Nii-Armah	Ghana	Doku, Victor	United Kingdom
Adu, Emmanuel Kwaku	Ghana	Donkor, Peter	Ghana
Agbenyega, Tsiri	Ghana	Dovlo, Dela	Rwanda
Agyepong, Irene	Ghana	Eboreime-Oikeh, I. O	Nigeria
Aikins, Moses	Ghana	Edwin, Frank	Ghana
Ajayi, Akinola Benjamin	Nigeria	Ekem, Ivy	Ghana
Akpalu, Albert	Ghana	Enweronu-Laryea, Christabel	Ghana
Akpalu, Josephine	Ghana	Enyindah, Cosmos Ezemonye	Nigeria
Amoaku, Winfried Mawutor	United Kingdom	Fasunla, Ayotunde James	Nigeria
Amoateng, Patrick	Ghana	Fofie, Chris Opoku	Ghana
Ampofo, William	Ghana	Forson, Audrey	Ghana
Anim, J Tei	Ghana	Frimpong, Enock Henebeng	Ghana
Ankrah, Nii Ayi	Ghana	Gardiner, Charlotte	Ghana
Annan, Anthony	United Kingdom	Gumanga, Solomon Kwabena	Ghana
Antwi, Sampson	Ghana	Gyasi, Michael Ekuoba	Ghana
Anyanechi, C. Ezechukwu	Nigeria	Hassan, Mustapha B	Nigeria
Appiah-Kusi, Jim	Ghana	Hill, Allan	United States
Appiah-Opong, Regina	Ghana	Isara, Alphonsus Rukevwe	Nigeria
Archampong, Timothy	Ghana	Kalu, Collins Agbeze	Nigeria
Aremu, Ademola Adegoke	Nigeria	Kitcher, Emmanuel	Ghana
Atuahene, Margaret	Ghana	Koram, Kwadwo	Ghana
Badu-Peprah, Augustina	Ghana	Kuwornoo, Ida	Ghana

Reviewer Name	Country	Reviewer Name	Country
Kwame-Aryee, Robert A	Ghana	Omogbai, Eric	Nigeria
Kyei, Mathew Yamoah	Ghana	Onakewhor, Joseph	Nigeria
Lartey, Anna	Ghana	Owusu, Isaac Kofi	Ghana
Lartey, Margaret	Ghana	Oyedeji, Olusola A.	Nigeria
Lartey, Seth Yaw	Ghana	Parkins, Grace E	Ghana
Lawson, Henry	Ghana	Plange-Rhule, Jacob	Ghana
Mante, Sunny Doodu	Ghana	Quansah, Robert	Ghana
Ofori-Adjei, Imelda	Ghana	Renner, Lorna Awo	Ghana
Mensah, James Edward	Ghana	Sackey, Samuel	Ghana
Micah, Frank Botsi	Ghana	Sackeyfio, Arthur	Ghana
Naa Gandau, Barnabas B.	Ghana	Saheeb, Birch D	Nigeria
Newman, Mercy	Ghana	Seffah, Joseph D	Ghana
Nkyekyer, Kobina	Ghana	Snow, Robert	Kenya
Norman, Ishmael Dilnos	Ghana	Sodzi-Tettey, Sodzi F.K	Ghana
Odoi-Agyarko, Henrietta	Ghana	Songsore, Jacob	Ghana
Odoi-Agyarko, Kwesi	Ghana	Tanko, Naanlep Matthew	Botswana
Odoi, Alexander Tawiah	Ghana	Tsiri, Agbenyega	Ghana
Ofori-Adjei, David	Ghana	Twum-Danso, Kingsley	Ghana
Ofori-Atta, Angela	Ghana	Ubah, Josephine Nonye	Nigeria
Ofori, Cyril	United States	Umeora, O.U.J.	Nigeria
Ohene-Yeboah, Michael K.	Ghana	Woode, Eric	Ghana
Ohene, Sally-Ann	Ghana	Yorke, Ernest	Ghana
OLA, Samuel Olawale	Nigeria		