



ACUTE KIDNEY INJURY IN AFRICA: A REVIEW OF THE LITERATURE



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BACKGROUND

Acute kidney injury (AKI) is the term used to describe the sudden loss of kidney function. The pattern of AKI in Africa is vastly different from that of more developed countries. This study reviewed literature published on AKI in the African setting aiming at risk factors, major causes, and identify factors that could reduce AKI in Africa

METHODS

Search engines Pubmed and google scholar was used to search for keywords such as Kidney, acute, injury, risk factors and Africa. Boolean search AND /OR were used to identify articles containing keywords. The search was limited to last the last ten (10) years. Articles generated had their abstracts reviewed. Those relevant to study and could be accessed for free was whole article read and key findings summarized

RESULTS

Risk factors include lack of access to clean drinking water and poor sanitation, inadequate control of infection-carrying vectors, tropical infections, and dehydration. Causes of AKI In sub-Saharan Africa included: 23% infections, 21% glomerular diseases, and 16% nephrotoxins. In Africa, causes of mortality in children due to AKI were hemolytic uremic syndrome (HUS), gastroenteritis, malaria and Haematology/

Oncologic conditions. Countries varied in their causes of mortality. In Ghana, some of the causes of death (mortality) among children with AKI were: Overwhelming sepsis (8%), Respiratory failure (7%), Multiorgan failure (6%), Cerebral malaria (5%), and Pulmonary oedema (6%).

Factors that could help mitigate the situation were:

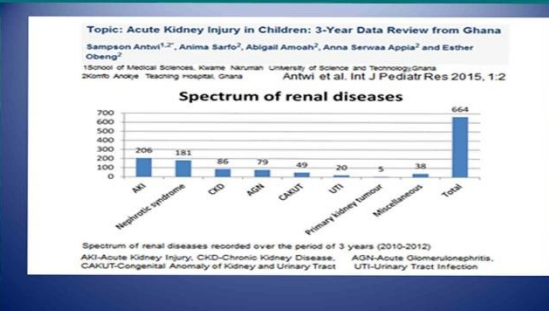
improve the awareness about AKI through advocacy, increase the evidence about AKI and develop interventions that will improve detection and care of AKI in low resource settings.

MAJOR CAUSES OF AKI BY REGION

Country	Causes of AKI
North Africa	
Algeria	Toxins, trauma/surgery, urologic
Egypt	Surgical, toxins, obstructive
Morocco	Hemodynamic, sepsis, obstructive
West Africa	
Cameroon	Malaria, obstetric, toxins
Cote d'Ivoire	Malaria, HIV, toxins
Nigeria	Sepsis, obstetric, toxins
Senegal	Obstetric, malaria, herbal toxins
	Infections (especially malaria), hypovolemia, toxins
Democratic Republic of Congo	
East Africa	
Kenya	Infection, obstetric, surgical
Burundi	Malaria, dehydration (HIV, diarrhea)
Rwanda	Infections, trauma, toxins
Ethiopia	Malaria, surgical, acute glomerulonephritis
Eritrea	Infection
Sudan	Infection, toxins
Southern Africa	
South Africa	Infections (including HIV), toxins, pregnancy
Mozambique	Malaria, dehydration, HIV
Zimbabwe	Prerenal (HIV), malaria, obstetric
Zambia	Malaria, obstetric
Malawi	Diarrheal diseases, malaria, sepsis

CONCLUSION

It is obvious AKI is a serious but underestimated condition in Africa. More resources must be channeled into improving detection and management of AKI in Africa



Topic: Acute Kidney Injury in Children: 3-Year Data Review from Ghana
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AKI IN SUB SAHARAN AFRICA

	Children (n=1643)*	Adults (n=993)†
Infection	380(23%)	274(28%)
Septicaemia	370	232
HIV	6	0
Tetanus	4	1
Pyelonephritis	0	12
Typhoid	0	7
Cholera	0	22
Glomerular disease	350(21%)	76(8%)
Acute glomerulonephritis	183	57
Nephrotic syndrome	115	10
Rapidly progressive acute glomerulonephritis	46	4
Lupus nephritis	5	5
Membranoproliferative acute glomerulonephritis	1	0
Nephrotoxin	270(16%)	182(18%)
Haemoglobinuria from:		
Plasmodium falciparum malaria haemolysis	198	34
G6PD deficiency haemolysis	18	0
Infection	0	41
Transfusion reaction	0	2
Autoimmune haemolytic anaemia	2	0
Herbal remedies ingestion	6	8

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