Maintenance Haemodialysis in the Edward Francis Small Teaching Hospital in the Gambia

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Keywords

Haemodialysis · Chronic kidney disease · End-stage renal failure

Abstract

Maintenance haemodialysis is the most common form of renal replacement therapy treatment in Sub-Saharan Africa. In spite of this, there is a general inadequacy for patients receiving this form of therapy due to lack of materials, human resources and funding from the governments. This form of treatment is relatively new in the Gambia compared to many West African countries, but there is also an enormous challenge on the part of the government to ensure that the citizens benefit from this form of therapy. Inadequate finances and human resources are making it difficult for the Gambia government to achieve this objective. It is therefore imperative for the state to invest more efforts on preventive strategies, which until today continue to remain inadequate.

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Introduction

The Gambia, as many other Sub-Saharan African countries, is faced with enormous challenges in the management of patients with end-stage renal disease (ESRD). The country is a low-income country according to the World Bank classification of countries based on the per capita gross national income, which stands at USD 2013 per capita. There is a huge problem of economic and manpower factors in many Sub-Saharan African countries, which always hampers the effective management of patients with ESRD [1]. Haemodialysis as a form of renal replacement therapy can be life saving for patients with ESRD, yet it is an expensive form of treatment [2]. This makes it very difficult for many patients in low-income countries to access this form of treatment as well as for governments to provide adequate facilities for the effective provision of haemodialysis services. The number of people on haemodialysis in Africa is quite low – 4.5% of the total dialysis patients – despite the increased risk of

Fig. 1. Map of the Gambia. Source: Lonely Planet. <https://www.lonelyplanet.com/maps/africa/gambia/>.

kidney failure among the black population [3]. This can be attributed to a limited number of haemodialysis centres in Sub-Saharan African countries, and some patients usually do not have access to haemodialysis treatment because the centres are fully occupied most of the time. Again, due to the high cost of treatment and considering the large prevalence of poverty in most of these countries, most of the patients cannot afford the treatment and therefore lack access to this method of treatment. However, it is the most common form of renal replacement therapy in Sub-Saharan Africa, with other forms such as peritoneal dialysis and kidney transplant being less common largely due to their high costs and lack of facilities and human resources [4]. This prevents many people in African countries from having other treatment choices when they develop ESRD [5]. Lack of access to haemodialysis treatment is also a major problem in Sub-Saharan Africa. For example, more than half of the patients diagnosed with ESRD in South Africa do not have access to dialysis or transplantation, in spite of South Africa being one of the most developed countries in Africa [6].

The Gambia is in West Africa and occupies an area of 11,365 km² and it is the smallest country in mainland Africa. It is surrounded by Senegal on 3 sides – the north,

south and east – and has an 80 km coast along the Atlantic Ocean to its west (Fig. 1). The Gambia has a high population density with a population of 2,039,000 inhabitants in 2016. The country is a low-income country with a gross national income per capita (PPP international of USD 1,620). The country comprises 5 administrative regions, which are mainly rural areas, and 2 municipalities, which are the urban areas.

Renal Replacement Therapy Situation

Compared to many West African countries, haemodialysis therapy started relatively late in the Gambia. It was in 2006 that the unit was opened with 2 machines and consumables donated by the Taiwanese government to the Gambia. Over the years, the number of beds in the centre was gradually increased to 14 due to an increased demand for renal replacement therapy. Before the advent of haemodialysis treatment in 2006, Gambians requiring haemodialysis treatment went to Senegal for their treatment if they could afford it. There is currently one haemodialysis centre in the Gambia, which is located at the Edward Francis Small Teaching hospital in Banjul. This is similar to the situation in many Sub-Saharan Africa

countries where haemodialysis centres are predominantly situated in cities and patients from rural areas have to travel a long distance to access treatment. This places an extra burden on them financially [7]. The haemodialysis treatment is completely free for ESRD patients in the Gambia. However, due to the country's status as a low-income country, the government is sometimes unable to provide adequate financial resources to ensure the smooth operation of the department. There is an occasional/frequent shortage of consumables, and this sometimes causes rationing of haemodialysis to patients resulting in them being under-dialyzed. Sometimes during the shortages of consumables, the patients usually buy their own consumables so that they do not miss their scheduled treatment. However, for low-income patients who cannot afford to buy their own consumables, their treatment has to be rationed or, in some cases, they totally miss the scheduled treatment.

The number of ESRD patients the dialysis centre can enrol at any given time is 56. The centre operates 12 h a day, with 4 hourly sessions for each bed. The patients are dialyzed for 4 h 3 times per week.

This is in line with the recommendation of the National Kidney Foundation, which recommends that patients be dialyzed 3 times a week for about 4 h at a time [8]. However, due to a lack of adequate finances, there is sustained unavailability of supplementary therapeutic agents such as human recumbent erythropoietin, iron supplements and phosphate binders. This usually causes a lot of problems for patients, especially those with chronic anaemia. Furthermore, there are intermittent shortages of laboratory services to adequately measure the effectiveness of the dialysis treatment.

Human Resources

There is a limited number of nephrologists in many parts of Sub-Saharan Africa, as many countries do not have the required number to serve their populations [7]. The Gambia is having a serious problem recruiting well-trained medical doctors and so has to seek assistance from Cuba. Currently, there is only one nephrologist serving the entire population of 2 million. The centre depends just on one nephrologist and 2 trained nephrology nurses. The remaining nurses working in the centre do not have specialized training in nephrology nursing, as they were trained on the job to support the nephrology nurses. Furthermore, the department lacks other professionals, such as a vascular surgeon, nutritionist and a social worker, needed to provide essential support for the dialysis department.

Conclusion

Haemodialysis treatment in the Gambia is challenging. The lack of adequate financial resources and human resources makes the treatment inadequate. The nephrologist is currently facing enormous challenges to manage all the patients with kidney diseases alone and under conditions where materials and financial support are generally lacking.

It is high time the government invests adequate resources into preventive strategies to curb the menace of chronic kidney disease, since the centre by itself does not have the capacity to provide adequate treatment for patients with ESRD.

Disclosure Statement

The authors declare that they have no conflicts of interest to disclose.

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