

## Commentary

# Sexual function of males with chronic liver disease

## Introduction

The current study examines an interesting and important area in urology practice. There is a paucity of literature in this field in Africa, in particular, and all over the world, in general. It has been recognized recently that in patients with liver disease, there is a high prevalence of erectile dysfunction up to as much as 50%.<sup>[1]</sup> The physiological basis of this, other than a general decline in health, may be related to a fall in protein production, which binds and transports the male hormone testosterone. The level of circulating testosterone in men with liver disease is found to be lower than in other men.<sup>[2]</sup>

The African setting is peculiar in having a high risk for liver disease because of high levels of infections (viral hepatitis), high alcohol intake (alcoholic cirrhosis), and poor food storage leading to hepatocellular carcinoma.<sup>[3]</sup> In addition, a high burden of HIV infection is associated with hepatitis B co-infection.<sup>[4]</sup>

There is also an increased evidence of declining sexual function, which is compounded by the dual epidemic of communicable and non-communicable diseases in Africa.<sup>[5]</sup> The extent to which liver disease has affected this decline may be an area of study for the future.

## Sexual function

In years gone by, it was difficult to measure erectile function objectively. The International Index of Erectile Function (IIEF) has been shown as a good measure of sexual performance. The IIEF was first proposed in 1997 by Pfizer in their evaluation of Sildenafil Citrate as a drug for treating erectile dysfunction. The IIEF score was subsequently modified by a panel of experts and approved for use by the World Health Organization. It has been shown to have a high sensitivity and specificity. It has also shown wide comparability across cultures. The current IIEF-5 measures five parameters of sexual function, namely, frequency of erection, quality of erection, efficiency of penetration, efficiency maintenance, and sexual satisfaction. The minimum score is 5 and the maximum score is 25.<sup>[6]</sup>

## Liver disease

With an increase in liver transplant surgery in 1980s, there was an increase in the interest in assessing objectively the status of liver function in chronic liver disease. The Child Pugh score was developed in 1964 by Child and Turcotte in 1964 at the University of Michigan in the USA. It was modified by Pugh in 1972. They replaced the nutritional status measure with a more objective clotting time measure, thereby making the score more robust.

The score measures five parameters of liver function which are bilirubin levels, albumin levels, INR (clotting factor measure), and the presence of two complications, namely, ascites and encephalopathy. The lowest score is 5 and the highest score is 15. These are then classified as a mild score (Class A, 5-6), moderate score (Class B, 7-9), and severe score (Class C, 10-15). The mortality and morbidity rates are increased with higher score.<sup>[7]</sup>

## Discussion

The comparison of liver function using the Child-Pugh score and the IIEF score provides an entirely justifiable and scientifically sound way of evaluating the impact of liver disease on sexual function.

The prevalence of liver disease in Africa is high. Hepatocellular carcinoma is one of the leading causes of cancer in Africa. Viral hepatitis is also high in the absence of immunization programs against Hepatitis B virus in many African countries. In addition, the low socioeconomic status of the large majority of people in Africa, HIV co-infection, poor processing of stored foods (aflatoxin in groundnuts), high unemployment rates, and the availability of low-cost, locally brewed community beers with high alcohol content compound this problem further.

## Conclusion

The current study helps to confirm the findings of many international studies about the relationship

between erectile dysfunction and declining liver function. It is one of the very few studies in this area conducted in Africa. Both liver disease and erectile dysfunction are an increasing problem among men in Africa. In bringing this association to the fore, the authors provide yet another avenue for advocacy for men's health in Africa. The prevention of liver disease is an important area in which health groups and governments can impact the sexual health of men. The areas of alcohol regulation, viral hepatitis immunization, occupational health provision for health care workers, male circumcision for HIV prevention, and food storage are the areas of deficiency in many African countries. There is a marked decline in the fertility rates in Africa, part of which is attributable to erectile dysfunction.

Perhaps we should now add prevention of liver disease to the key interventions in promoting sexual health of men in Africa.

### Kasonde Bowa

Department of Surgery, School of Medicine,  
Copperbelt University, Ndola, Zambia

**Correspondence to:** Prof. Kasonde Bowa,  
School of Medicine, Copperbelt University,  
Ndola, Zambia.  
E-mail: kbowa@yahoo.com

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