

## Traumatic spinal cord injury in sub-Saharan Africa: a grim picture

La lesión traumática de la médula espinal en el África subsahariana: un panorama sombrío

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Spinal cord injuries are lesions with terrible consequences on the functional performance of patients and a challenge for medical personnel and health systems. In recent decades, major changes have occurred in their treatment protocols, with notable influence on their prognosis. Unfortunately, these changes have not shown a geographically uniform scope, with sub-Saharan Africa being one of the most disadvantaged regions.<sup>(1)</sup> The management of these injuries in a context of low resources has its own characteristics and difficulties, which make it difficult to apply current guidelines and recommendations.<sup>(2)</sup>

As a starting point, the great deficit of information on the incidence, prevalence and etiology of injuries makes it very difficult to plan prevention

programs by local governments and international organizations. Limited access to the Internet, deficient data collection systems, and editorial difficulties imposed on researchers from developing countries are just a few related factors.<sup>(3)</sup> However, some authors highlight the great etiological polarity. In developed countries, falls are the main cause of spinal cord injuries; however, violence and traffic accidents show higher rates in African nations.<sup>(1)</sup> It is clear that an exponential increase in automobile circulation, without clear road regulations, is an added burden to an already deficient health infrastructure.

Initial care for a spinal cord injury should begin at the accident site, by trained personnel who guarantee the stability of vital functions and referral to hospitals.<sup>(4)</sup> These recommendations are far from reality on the African continent, where the specialized transfer is only available in some urban areas. In more remote locations, it is performed in precarious conditions, without immobilization, which aggravates primary injuries and increases immediate mortality.

On the other hand, the number of centers specialized in the diagnosis and surgical treatment of spinal cord injuries is very small in all African countries.<sup>(5,6,7)</sup> In our case, Niger, a country of more than 20 million inhabitants, only has with three centers with the capacity to provide care to this group of patients. The same situation is exhibited by other nations in the area.<sup>(7,8)</sup>

Surgery within 48 hours is associated with a shorter hospital stay, and enables early mobilization of these patients, with the consequent decrease in the incidence of complications.<sup>(4)</sup> In a context with limited resources, this goal is practically impossible.

The availability of implants is very limited. Most of the health systems are unable to provide them, delegating this responsibility to the private sector, which is accompanied by delays in surgery and a high number of patients who do not receive stabilization. A study in Addis Ababa, the Ethiopian capital, showed that non-surgical treatment of complete spinal cord injuries is superior to surgical treatment.<sup>(6)</sup> However, other researchers show that even delayed surgical treatment has a beneficial effect.<sup>(5,9)</sup> Both results must be carefully interpreted, regarding the quality of the data collected and the low number of patients in the sample.

In developed countries, most people survive the first year after injury; however, there is a large overall discrepancy in mortality in low-income nations.<sup>(10)</sup> Pressure ulcers and infections are a major cause of morbidity and mortality in these settings.<sup>(11)</sup>

The absence of rehabilitation programs for this group of patients influences

the results, to which are added social beliefs, and the expectation of family members to care for the person with disabilities too. Psychological support services, so essential in these cases, are non-existent. Social reintegration is a challenge. The patient is unable to contribute to family support, assuming total dependence on those around him. <sup>(12)</sup>

The treatment of a traumatic spinal cord injury and its rehabilitation, with social reintegration as the primary objective, undoubtedly requires great resources. The support of the international community to local governments is a necessity. Adapting current approaches to the African reality is only the beginning to face such challenges.

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### Conflict of interests

The authors declare that there is no conflict of interest.