

Crosslinking enters public health armamentarium in Brazil

Crosslink torna-se disponível no sistema de saúde pública do Brasil

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Brazilian health system, named SUS (*Sistema Único de Saúde* or Unique Health System) was created in 1990, based on constitutional principles set in 1988 and, in its basic values, states that health is a fundamental human right, and the State must provide the necessary conditions for it⁽¹⁾. Six years after being cleared by Brazilian government as a valid medical treatment⁽²⁾, crosslinking (CXL) became available to all Brazilian citizens or residents, as well as foreigners, regardless their visa status⁽³⁻⁵⁾. Other agencies, such as Ontario Health Technology Advisory Committee (OHTAC), have made similar suggestions a few years ago⁽⁶⁾.

The rationale for this new approval is the cost of the treatment and its efficacy in avoiding keratoplasties⁽⁷⁾, considering that one-third of keratoplasties is consequent to keratoconus in Brazil^(3,8-10). Brazilian public health system spent US\$ 2,738,869 in 4,234 keratoplasties for keratoconus, in 2014; an average of US\$ 647,00 per procedure. The estimated cost for CXL is US\$ 92,00 and the estimate total expenditure in CXL for the next five years is US\$ 1,113,251 (US\$ 1.00 = R\$ 3.20, October 29, 2106)⁽³⁾.

Brazilian SUS has still a lot to improve in order to accomplish its mission. Therefore, supplementary private health providers are mainstream for almost one third of the population. Surprisingly, CXL is not yet provided by health insurances or health maintenance organizations, which do not offer nor reimburse the procedure⁽¹¹⁾.

Although the real prevalence of keratoconus using newer diagnostic tools is yet to be determined, it should be at least 54:100,000⁽¹²⁾ which would lead to approximately 110,400 patients with keratoconus and 4,000 new cases per year, in Brazil. We still don't know the natural history of keratoconus in order to determine what percentage of patients will undergo keratoplasty, but with a failure rate between 8 to 10%, CXL will prevent at least 90% of the keratoplasties in keratoconus patients, if patients are diagnosed early enough⁽¹³⁾. Crosslinking isn't a risk-free procedure but so far it has been shown to present fewer and less severe complications compared to keratoplasty.

Early diagnosis became the most important link in the chain to prevent keratoplasties in patients with keratoconus. Careful follow-up of early diagnosed patients will allow preventive measures to halt its progression, such as orientation about eye rubbing and, if progression is detected, CXL. It is our medical duty to inform the society of the existence of treatment for keratoconus that may halt its progression and, therefore, avoid the need of keratoplasty.

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