Chitosan dan aplikasi klinisnya sebagai biomaterial

Abstrak

The development of new materials with both organic and inorganic structures is of great interest to obtain special material properties. Chitosan [2-amino-2-deoxy-D-glucan] can be obtained by N-deacetylation of chitin. Chitin is the second most abundant biopolymer in nature and the supporting material of crustaceans, insects, fungi etc. Chitosan is a unique polysaccharide and has been widely used in various biomedical application due to its biocompatibility, low toxicity, biodegradability, non-immunogenic and non-carcinogenic character. In the past years, chitosan and some of its modifications have been reported for use in biomedical applications such as artificial skin, wound dressing, anticoagulant, suture, drug delivery, vaccine carrier and dietary fibers. Recently, the use of chitosan and its derivatives has received much attention as temporary scaffolding to promotie mineralization or stimulate endochondral ossification. This article aims to give a broad overview of chitosan and its clinical applications as biomaterial.