

医薬品に含まれるコンドロイチン硫酸の品質評価

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Quality Evaluation of Chondroitin Sulfate in Commercially Available Pharmaceutical Products

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Summary

Chondroitin sulfate is widely distributed in animal tissues and is thought to play an important role in various metabolic reactions, as well as being a protective agent for joints, the internal walls of blood vessels, skin, bones, etc. Glycosaminoglycans also have a protective function in cartilage; for example, chondroitin sulfate (CS) stabilizes fibrous and cellular elements of the connective tissue and, at the same time, lubricates and protects the membranes in joints. Based on these facts, CS has been used as a medicine and a nutraceutical for chondroprotection and cartilage repair in patients with osteoarthritis. However, it is not yet known what structural features of CS are required for activity, and there is no quality control regulation of CS commercially produced for use as a medicinal material in Japan. Here, we report the results of analysis of commercially available CS samples distributed as a medicinal product both in Japan and overseas. We propose that analytical methods such as disaccharide compositional analysis and ¹H-NMR spectroscopy might be suitable to regulate the quality and safety of CS products.

Key words

Chondroitin sulfate, Glycosaminoglycan, Regulatory science, Medicine