

The Role of Collagen Metabolism in the Formation and Relapse of Incisional Hernia

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Abstract

Despite the continuous development of synthetic prosthetic meshes and their wide use, recurrent incisional hernias still appear in 5 to 20% of cases, with a linear incidence curve over the years, suggesting a multifactorial process rather than a simple failing technical repair as the underlying cause. Recent molecularbiological research provide increasing evidence of connective tissue alterationssuch as a defective wound healing with impaired scarring process in patients withincisional hernia. Although there are some promising results, at present, in-depth understanding of the pathophysiological mechanisms and of the role that collagens play in the development and recurrence of incisional hernia is rather scarce.The aim of this systematic review is to summarize and evaluate the biochemical mechanisms involved in incisional hernia formation and recurrence, with a primary focus on collagen I to III ratio. Also, the consequences for surgical practice are discussed.

Key words: incisional hernias, metabolism, collagen

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