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Resumo	Alterations in iron homeostasis are well described in obese patients. The effects of iron chelators on adipose tissue and other organs affected by obesity have been the interest of experimental studies, both *in vivo* and *in vitro*. The aim of this review was to update the available information indicating the potential of iron chelators as adjuvant drugs in the management of obesity and its comorbidities. The pharmacological actions of iron chelators, mainly deferoxamine, deferasirox, and deferiprone, on adipose tissue and liver alterations associated with obesity, were reviewed. Renal and other organ modifications observed in experimental obesity models (endotoxemia, β-cell function, and systemic inflammation) were included, as well as data from clinical studies that were relevant to this review. The experimental results obtained with iron chelators showed their potential in the control of obesity-induced alterations in the adipose tissue and liver. However, knowledge about the possible systemic effects on endotoxemia and low-grade inflammation in obesity models is still lacking. In endotoxemia in humans, data obtained did not corroborate the anti-inflammatory effect described in experimental models. Clinical and experimental data reveal renal, β-cell protection and inhibition of advanced glycation end products, which have long-term benefits in obesity. Experimental models of obesity demonstrated the beneficial effects of iron chelators on the adipose tissue, liver, kidneys, and β-cells. Hence, clinical studies could be designed to evaluate the potential of iron chelators as a therapeutic option in the management of obesity.
Fomento	