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| Título | The role of autophagy in prostate cancer and prostatic diseases: a new therapeutic strategy |
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| Resumo | Background: Autophagy is a well-conserved catabolic process that plays a key role in cell homeostasis. In the prostate, defective autophagy has been implicated in the genesis and progression of several pathological conditions. Aim: The present review explored the autophagy pathway in prostate-related dysfunctions, focusing on prostate cancer (PCa), benign prostatic hyperplasia (BPH) and prostatitis. Results: Impaired autophagy activity has been shown in animal models of BPH and prostatitis. Moreover, autophagy activation by specific and non-specific drugs improved both conditions in pre-clinical studies. Conversely, the efficacy of autophagy inducers in PCa remains controversial, depending on intrinsic PCa characteristics and stage of progression. Intriguingly, autophagy inhibitors have shown beneficial effects in PCa suppression or even to overcome chemotherapy resistance. However, there are still open questions regarding the upstream mechanisms by which autophagy is deregulated in the prostate and the exact role of autophagy in PCa. The lack of specificity and increased toxicity associated with the currently autophagy inhibitors limits its use clinically, reflecting in reduced number of clinical data. Conclusion: New therapeutic strategies to treat prostatic diseases involving new autophagy modulators, combination therapy and new drug formulations should be explored. Understanding the autophagy signaling in each prostatic disease is crucial to determine the best pharmacological approach. |
| Fomento | FAPESP |