

A COMPREHENSIVE REVIEW ON LIVER REGENERATION TERMINATION – A NON-NEGLECTABLE PHASE

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As the most important organ of detoxification in the body, the liver also has the strong regenerative ability itself. The liver can regenerate after partial hepatectomy (PH) and completely restore to its original mass. Liver regeneration (LR) has become one of research hotspots in the field of regenerative biology. Previous basic studies have predominantly concentrated on the initial and proliferative phases of regenerative response, while a relatively little attention has been paid to the mechanism of proper termination of liver regeneration. In recent years, along with the increasing recognition of the significance of LR termination, the growing researches have been carried out and some achievement has been made in a certain extent. The successful completion of LR is considered to involve many cells, growth factors, signaling pathways, metabolites and other extrahepatic factors. This article will review the progression of research on the mechanism of LR termination after PH in recent years.

Key words: liver regeneration termination; cell involvement; cytokines; signaling pathways; gut microbiota; microRNA.

ВСЕСТОРОННІЙ ОГЛЯД ПРИПИНЕННЯ РЕГЕНЕРАЦІЇ ПЕЧІНКИ – ФАЗИ, ЯКОЮ НЕ МОЖНА НЕХТУВАТИ

Печінка як орган, найважливіший для детоксикації тіла, також має сильну регенеративну здатність. Печінка може регенеруватись після часткової гепатектомії (ЧГ) і повністю відновити свою первинну масу. Регенерація печінки (РП) стала однією з гарячих точок дослідження у сфері регенеративної біології. Попередні фундаментальні дослідження в основному зосереджувались на первинній і проліферативній фазах регенеративної відповіді, тоді як механізму належної термінації регенерації печінки приділяли досить мало уваги. В останні роки значимість термінації регенерації печінки здобуває все більше визнання, проводиться дедалі більше досліджень цього питання і вже було досягнуто певних успіхів. Вважається, що до успішного завершення регенерації печінки залучено багато клітин,

факторів росту, сигнальних шляхів, метаболітів та інших позапечінкових факторів. У цій статті розглядається розвиток нещодавніх досліджень механізму термінації регенерації печінки після часткової гепатектомії.

Ключові слова: термінація регенерації печінки; участь клітин; цитокіни; сигнальні шляхи; мікробіота кишківника; мікроРНК.

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