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Green tea polyphenol, epigallocatechin-3-gallate, possesses the antiviral activity necessary to fight against the hepatitis B virus replication *in vitro*

Key words: epigallocatechin-3- gallate, hepatitis B virus, anti-viral, HepG2 2.2.15, lamivudine

- Although several antiviral drugs and vaccines are available for use against hepatitis B virus (HBV), hepatitis caused by HBV remains a major public health problem worldwide that has not yet been resolved, and new anti-HBV drugs are in great demand.
- In this paper, we reported epigallocatechin-3- gallate (EGCG) had anti- HBV effect in HepG2 2.2.15 cells for the first time.
- The results showed that EGCG and lamivudine (the positive control) had different action pattern on HBV replication. The anti-HBV effect of lamivudine was significant on DNA, while the activity of EGCG against HBsAg and HBeAg was more effective than the positive control drug.
- Generally, different activity patterns may indicate different targets. Combining 3TC with another target drug may increase the therapeutic effect of 3TC or decrease its side effects.
- The study suggested the potential of EGCG as an effective anti-HBV agent with low toxicity and possessed different anti-HBV manner compared to lamivudine.