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## Effect of postoperative administration of nafamostat mesilate on posthepatectomy liver failure

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**Background**: To investigate whether the administration of nafamostat mesilate (NM) reduces the risk of posthepatectomy liver failure (PHLF) in patients undergoing hepatectomy for hepatocellular carcinoma (HCC).

**Methods**: We retrospectively reviewed the 1114 patients who underwent hepatectomy for HCC between 2004 and 2020. NM was selectively administered to patients undergoing major hepatectomy with an estimated blood loss of >500 mL. NM group was administered via intravenous of 20 mg of NM from immediately after surgery until postoperative day 4. We performed 1:1 propensity score matching and included 56 patients in each group. PHLF was defined according to the International Study Group of Liver Surgery (ISGLS).

**Results**: The incidence of PHLF was lower in the NM group than control group (P = 0.018). The mean peak total bilirubin (P = 0.006), aspartate transaminase (P = 0.018), and alanine aminotransferase (P = 0.018) levels postoperatively were significantly lower in the NM group. The mean hospital stays (P = 0.012) and major complication rate (P = 0.023) were also significantly lower in the NM group.

**Conclusions**: Prophylactic administration of NM reduced the risks of complication and decreased the frequency of PHLF after hepatectomy. A further prospective study is needed to verify our findings.

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