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**Bleeding Complications Following Percutaneous Liver Biopsy**

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**Aims:** To review bleeding complications in patients undergoing percutaneous liver biopsy and their subsequent management.

**Methodology:** A retrospective audit was carried out on 1000 consecutive percutaneous liver biopsies performed on 942 patients between Jan 2014 to Dec 2017. 14 patients developed bleeding complications (14/942 or 1.5%). Mean patient age was 66.4 years (range 45 - 89 years) with equal gender distribution. Non - targeted liver parenchymal biopsies were performed in 8/14 (57.1%) patients, with the remaining being targeted biopsies. Coaxial technique was employed in 11/14 (78.6%), and these patients then underwent gelfoam embolization of the biopsy track with either gelfoam torpedo (n=9) or gelfoam slurry (n=2) post procedure. Four (28.6%) of the patients had an abnormal baseline coagulation profile and needed blood transfusions pre - biopsy. There were 2 biopsy related mortality (2/942 or 0.21%).

**Result:** Clinical manifestations of post - biopsy bleeding included pain (n=9, 64.3%) and hypotension (n=8, 57.1%). There was an average drop of 2.3g/dL in hemoglobin (range 0 to 6.2). Imaging (US or CT scan) findings included subcapsular hematoma (n=5), perihepatic hematoma (n=3), hemoperitoneum (n=5) and active contrast extravastation (n=5). Six patients were managed conservatively with close monitoring, 2 patients received blood transfusions while the remaining 6 patients had both blood transfusions and angioembolization. 1 patient required repeat angioembolization. Mean number of packed cells transfused was 1.9 (range 0 to 4). Average length of stay in hospital was 7.6 days (range 1 to 31 days). There were 2 mortality and both had abnormal coagulation profiles pre biopsy, gel foam embolization of biopsy tract, and needed repeat angioembolizations and multiple transfusions.

**Conclusion:** Our audit shows that post liver biopsy bleeding rate (1.5%) and mortality rate (0.2%) are within reported benchmarks of 0.13 - 3.2% and 0 - 0.33% respectively. Gel foam embolization of liver biopsy tracts can still result in bleeding complications but may reduce the severity of bleeding.