Spontaneous intracranial hemorrhage is a well-recognized complication in patients with haematological disease. Intracranial hemorrhage is the second leading cause of death in patients with acute myeloid leukemia. The reported mortality is over 50% for patients with haematological malignancy and spontaneous intracranial hemorrhage. The reported incidence of spontaneous intracranial hemorrhage appears to be slightly higher in acute myeloid leukemia (AML) and chronic myeloid leukemia in blast crisis than in other forms of homological malignancy. The distribution of ICH is as follows: Intraparenchymal hemorrhage accounts for about 60% of the reported case series. The remaining sites are distributed between the cerebellum, brainstem, and basal ganglia, subarachnoid, subdural, interventricular and epidural regions. Over 50% of patients will be having more than one intracranial bleeding site on CT. Previously proposed risk factors for spontaneous intracranial bleeding includes: Direct invasion by tumor cells, invasive intracranial sepsis, hyper leukocytosis, and coagulopathy. Abnormalities of clotting include DIC, thrombocytopenia and prolonged prothrombin time. Coagulopathy and thrombocytopenia are probably not the main factors responsible for spontaneous intracranial hemorrhage in view of the fact that neither platelets nor clotting factors are responsible for maintaining cerebral vessel integrity under normal physiological conditions. Cohort studies from patients with idiopathic thrombocytopenia have shown a poor correlation between platelet count and the risk of spontaneous intracranial hemorrhage in both adults and children. Batchelor (2015) has shown that coagulopathy in patients with traumatic intracranial bleeding increases the risk of progressive hematoma progression by an odds ratio of 6.176 (95% CI: 4.727–8.069). This paper will explore other factors which may account for spontaneous ICH in patients with haematological malignancy. This paper will also explore the threshold for platelet transfusions in patients with haematological malignancy and thrombocytopenia based upon the current evidence.

Biography

John Batchelor is currently Consultant in Emergency Medicine at Central Manchester Foundation Trust, England UK. He is also Honorary Lecturer at Manchester Metropolitan University. He is graduated from Leeds University England in 1982. He is a Fellow of the Royal College of Surgeons of Ireland and Fellow of the Faculty of Emergency Medicine of England. He undertook his MD thesis at University College London. He has written extensively on the subject of minor head injuries. He has presented a paper in Paris in 2012 on a meta-analysis looking at the relationship between cerebral micro bleeds and antiplatelet agents. He has also recently published a meta-analysis on the effect on morality of platelet transfusions in adults with spontaneous or traumatic antiplatelet associated intracranial hemorrhage. His current research interest lies in the area of risk factors for intracranial hemorrhage in both adults and paediatrics secondary to coagulopathy and thrombocytopenia.

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