**MANAGING INTRACRANIAL BLEEDING IN DENGUE FEVER: THERAPEUTIC PLATELET TRANSFUSION FOR A RARE YET LETHAL C OMPLICATION**

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Introduction:

Dengue Fever, transmitted by Aedes aegypti mosquitoes, poses a significant health threat in Malaysia, with varying severity from mild febrile illness to life-threatening complications known as “Severe Dengue” including plasma leakage, haemorrhage, and organ impairment. Out of the various dengue complications, neurological manifestations are quite rare, and intracranial haemorrhage (ICH) constitutes less than 1% of these cases, leading to a rare but potentially fatal outcome.

Case Description:

A 69-year-old man, initially diagnosed with heat stroke after being found unconscious in his car on a bright day (temperature 42’ Celsius) was later identified with acute right subdural haemorrhage (SDH). His thrombocytopenia (platelet 33 x 101/L) raised a suspicion of dengue fever which subsequently confirmed with dengue NS1, leading to a revised diagnosis of severe dengue fever with warning signs, complicated with bleeding (SDH) and leaking (pericardial and pleural effusion), not in shock. The decision for fluid administration (crystalloid/colloid versus packed red cell) for his “bleaking” was complex due to the absence of shock and stable haemoglobin (14.3 g/L) and haematocrit (44%) levels. Following a treatment dilemma, he ultimately received platelet transfusion for therapeutic measures.

Discussion:

Severe Dengue Fever can lead to hemodynamic instability due to plasma leakage ("leaking"), haemorrhage ("bleeding"), or both ("bleaking"). While fluid administration is crucial for leaking patients and packed red cell transfusion for bleeding condition, platelet transfusion is typically reserved for prophylactic pre-procedural scenarios. In this case, the patient's "bleaking" condition prompted a collective decision for platelet transfusion as a therapeutic measure, as his ICH could progress to brain herniation. Dengue-associated ICH occurs due to concurrent vasculopathy and thrombocytopenia and can rapidly damage his brain. As his hemodynamic status was stable (not in shock), platelets played a therapeutic role in preventing the expansion of the hematoma to salvage his brain.

Conclusion:

Dengue-associated ICH is a rare neurological complication and can lead to potentially fatal outcomes. Non-traumatic ICH in patients with thrombocytopenia should raise a high suspicion of dengue. A prompt diagnosis may significantly assist in decision-making regarding fluid administration, warranting therapeutic platelet transfusion to salvage the patient's neurological condition.

Keywords:

Dengue-associated Intracranial Haemorrhage, Thrombocytopenia, Platelet transfusion