Are MR Compatible hemoclips safe after control of hemostasis?

An 82-year-old man with a medical history of hypertension and cerebrovascular disease was referred to our clinic with hematemesis. Laboratory findings were: hemoglobin 8.5 g/dL (normal range 14–18 g/dL), white blood cells 16.1 × 10^9/L (normal range 4–10 × 10^9/L), and platelets 74 × 10^9/L (normal range 150–400 × 10^9/L). He was given a transfusion of two units of packed red blood cells.

He underwent emergency endoscopy, which revealed bright red blood in the esophagus and stomach. Below the upper esophageal sphincter, a long, deep, linear laceration with an adhering blood clot was seen in the proximal esophagus (Fig. 1a). A hemoclip (Instinct; Cook Medical Inc., Bloomington, Indiana) was applied at both edges of the laceration (Fig. 1b). He was placed on a proton pump inhibitor infusion and kept nil per os. His hemoglobin level subsequently stabilized at 11.6 g/dL without further transfusion. Six days later, he noticed decreased strength in his right hand. Brain magnetic resonance imaging (MRI) showed extensive cytotoxic edema within the parietal lobe indicating acute infarction in the left middle cerebral artery territory (Fig. 1c). During the return to his hospital room, the patient started vomiting blood. Cardiopulmonary arrest occurred as a result of the sudden massive hematemesis, and the patient died.

Endoscopic clipping devices have been used to achieve hemostasis of focal gastrointestinal bleeding [1]. Hemoclips will spontaneously slough off in approximately 3–4 weeks, but may cause clip migration, resulting in severe rebleeding with lethal outcome. Therefore, a high level of attention is warranted for entry to the MRI suite, even for patients who have received MR Conditional hemoclips.

References

1 Hwang JH, Fisher DA, Ben-Menachem T et al. The role of endoscopy in the management of acute non-variceal upper GI bleeding. Gastrointest Endosc 2012; 75: 1132–1138

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