

Introduction

Medical photographs are commonly employed to enhance education, research, and patient care throughout the neurosurgical discipline. The rise of smartphone camera technology has enabled surgeons to quickly capture, document, and share a patient scenario with colleagues. Research has shown that patients generally view clinical photography favorably, and the practice has become integral to healthcare. Attending neurosurgeons in satellite locations often rely upon residents to send photos of imaging studies, neurological exam findings, or post-operative wounds. Conversely, images are also frequently taken by the supervising surgeons who pursue publication of unique cases, operative techniques, educational conference presentations, and telemedicine consults. Image quality is highly variable. Capturing and sharing photographs should be accompanied by an awareness of the legal ramifications of the Health Insurance Portability and Accountability Act (HIPAA).

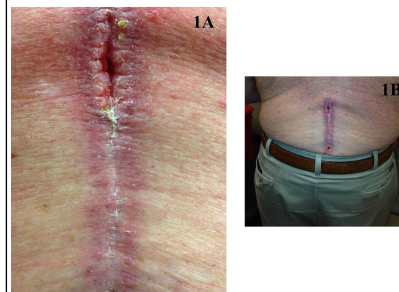
Methods

An overview of four easily implemented photography skills is illustrated. Descriptions of the HIPAA-related components of cell phone photographs and patient protected health information (PHI) are also highlighted.

Results

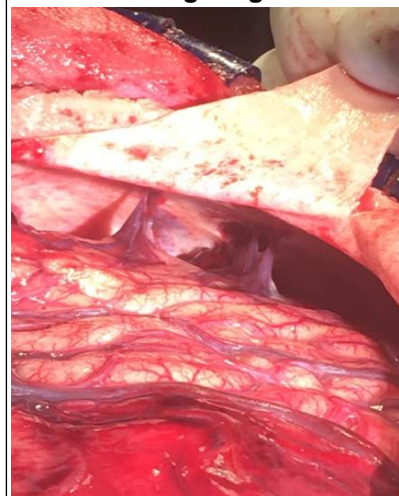
Four photography techniques every neurosurgeon who uses their mobile phone for patient care should know are described: providing context, appropriate lighting, dimensionality, and managing distracting elements. HIPAA identifiers include an arm band or diagnostic imaging containing a patient's name, unique tattoo or birthmark, and full facial portraits. If these items are in a photograph, it is considered PHI and subsequently a HIPAA infraction to be kept in an unsecured fashion.

Provide Context



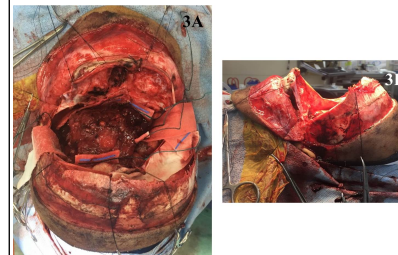
Postop wound with magnified view (A) and a second photo providing context (B).

Lighting



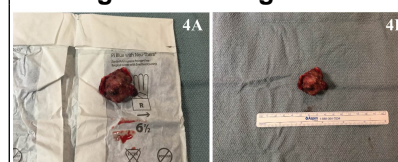
The 3-D nature of bridging veins is illustrated secondary to two light sources - perpendicular and parallel.

Dimensionality



Intracranial cavity after craniotomy with axial (A) and sagittal (B) views to illustrate the extent of mass resection.

Manage Distracting Elements



Clarity of a surgical specimen is heightened when placed on a controlled (B) vs uncontrolled (A) background.

Learning Objectives

1. To provide four easily-implemented techniques for higher photograph quality
2. To educate neurosurgeons regarding HIPAA-compatibility of cell phone imaging practices
3. To share the factors that constitute patient-protected health information with respect to photographs

Conclusions

Simple modifications to a daily surgical practice can be made to improve image value and accuracy. HIPAA compliance is straightforward when empowered with the knowledge of what constitutes a patient identifier in a photograph.

References

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