

## Mild Cognitive Impairment and Consent to Surgery



Consider the following hypothetical situation: after examining a 79-year-old female in your office, you conclude that she has gangrene localized to the distal aspect of her right second toe with osteomyelitis of the distal phalanx, and an underlying history of diabetes mellitus that is complicated by peripheral neuropathy, vasculopathy, and nephropathy. After evaluating the patient and conferring with her, and after reviewing the results of recent noninvasive vascular tests of her right lower extremity, it becomes clear to you that simply amputating the necrotic toe would likely result in a nonhealing amputation stump, and that more proximal amputation is indicated. When you initiate the informed consent process, the patient seems to have difficulty comprehending what you are saying and you suspect that she has mild cognitive impairment (MCI) that could influence her decision to either consent to undergo the operation, or to decline pursuit of it. Even though she appears to be capable of carrying out the basic activities of daily living, she seems to be unable to remember what you just told her about her gangrenous toe. At this point, how would you proceed?

Clearly, if present, involvement of a member of the patient's family in the discussion could be helpful, and a closer review of the patient's

medical record could possibly shed some light on her cognitive state, especially if recent psychologic testing results are available for your review. Fortunately, we also have a number of screening tools at our disposal that could be implemented in the office, should one choose to undertake such an examination. One test that can be used in this regard is the Mini-Mental State Examination (MMSE), which has been shown to have criterion validity when compared to the standard Luria-Nebraska Neuropsychological Battery (LNNB) (1). Another screening test for MCI is the Montreal Cognitive Assessment (MoCA) (<https://www.mocatest.org/splash/>) instrument, which has actually been shown to display high sensitivity and specificity for identifying MCI even in patients scoring in the normal range on the MMSE (2). Either of these screening tools can be administered in minutes, in either paper or electronic form in the office or at bedside in the hospital, should you feel that your patient is exhibiting signs of MCI. If the screening test indicates MCI, then thorough neuropsychological follow up is indicated, and our surgical intervention may have to be postponed if it is neither urgent nor emergent in nature. Since MCI can accompany neurological disease, such as Alzheimer's disease, Parkinson's disease, vascular dementia, fronto-temporal dementia, multiple sclerosis, and others; as well as disorders such as brain tumor, head trauma, heart failure, human immunodeficiency virus infection, schizophrenia, depression, substance abuse, insomnia, or as a result of certain drug adverse effects, foot and ankle surgeons should be on the lookout for cognitive impairment when we explain our surgical recommendations to our patients, particularly in our geriatric patients. To this end, it can be helpful to implement an appropriate screening test, such as the MoCA, if we suspect that our surgical patient might be experiencing MCI.

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### References

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2. Nasreddine ZS, Phillips NA, Bédirian V, Charbonneau S, Whitehead V, Collin I, Cummings JL, Chertkow H. The Montreal Cognitive Assessment, MoCA: a brief screening tool for mild cognitive impairment. *J Am Geriatr Soc* 2005 Apr;53(4): 695-699.