

Sonothrombolysis – Safety Aspects

1. For sonothrombolysis the following is preferred

- a) low frequencies (< 1 MHz) because of cavitation
- b) high frequency because of the increased absorption of US
- c) high frequency, short pulses and high MI
- d) Short pulses with short exposure time

a) The effect of adding bubbles for Sonothrombolysis

- a) nothing - it doesn't help because the vessels are already blocked and the UCA can't reach the region of interest
- b) bubbles are nuclei for cavitation
- c) UCA are dangerous because they contain gas which can block the artery
- d) Bubbles decrease the density of the thrombus and make them easier to destroy

b) The following is true

- a) Sonothrombolysis requires addition of a drug
- b) Sonothrombolysis is only effective in the brain
- c) Sonothrombolysis is based on temperature increase of the thrombus
- d) Sonothrombolysis requires cavitation

c) Severe side effect of sonothrombolysis in the brain can be

- a) intra cranial bleeding during treatment
- b) Vomiting after treatment
- c) improvement in mathematical skills
- d) Bubbles in the brain

d) Main areas for sonothrombolysis treatments in humans are

- a) Heart
- b) Kidney
- c) Brain
- d) Liver

Correct answers:

- 1a: low frequencies (< 1 MHz) because of cavitation
- 2b: bubbles are nuclei for cavitation
- 3d: sonothrombolysis requires cavitation
- 4a: intra cranial bleeding during treatment
- 5b: Brain