

THE KNOWLEDGE OF USERS REGARDING SAFETY OF ULTRASOUND DURING PREGNANCY

Abdalla A. Eljaaidi

Cape Peninsula University of Technology
SOUTH AFRICA

Prof M.T.E. Kahn

Cape Peninsula University of Technology
SOUTH AFRICA

ABSTRACT

Ultrasound (US) is widely used in most medical clinics, especially obstetrical clinics. It is a way of imaging methods that has important diagnostic value. Although useful in many different applications, diagnostic ultrasound is especially useful in antenatal (before delivery) diagnosis. The use of two-dimensional ultrasound (2DUS) in obstetrics has been established. However, there are many disadvantages of 2DUS imaging. Several researchers have published information on the significance of patients being shown the ultrasound screen during examination, especially during three- and four-dimensional (3D/4D) scanning. In addition, a form of ultrasound, called keepsake or entertainment ultrasound, has boomed, particularly in the United States. However, long-term epidemiological studies have failed to show the adverse effects of ultrasound in human tissues. Until now, there is no proof that diagnostic ultrasound causes harm in a human body or the developing foetus when used correctly. While ultrasound is supposed to be absolutely safe, it is a form of energy and, as such, has effects on tissues it traverses (bio-effects). The two most important mechanisms for effects are thermal and non-thermal. These two mechanisms are indicated on the screen of ultrasound devices by two indices: The thermal index (TI) and the mechanical index (MI).

Keywords: Acoustic output, foetus, thermal index, mechanical index, questionnaire survey.