intervals. In consequence, this leads to only a partial decrease of the mean error of STV indices calculation together with a sign change into a minus (–39 % for STI index, Table 1). In turn, the influence of the random error – heart beats location in time – goes to minimum, the regression line intercept decreased ten times (Table 2). It may be assumed, that the regression line parameters determined experimentally for a given monitor type are independent from measurement conditions, and they can be used to correct the index value for any other signal recorded by monitor of this particular type.

The proposed method for correction of the indices describing quantitatively the short-term FHR variability allow us to increase the reliability of the signal acquired from fetal monitors based on the US technology with built-in autocorrelation procedure. This correction relies upon suppression of the constant error component, which is a result of an averaging nature of the autocorrelation function. This is reflected by the ΔSTI mean value close to zero (Fig.9). The remaining random component of the averaging process reached value RE = 1.44. It corresponds to 24 % of typical value of STI which is about 6.0 (Table 3). This ensures the improvement of global evaluation of FHR variability for the entire patient's monitoring session, whose duration is usually 60 minutes, because the final variability is computed as a mean value over particular one-minute variability values.

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