Application of telecytology for quality assurance programs in cytology – Georgian experience

Ekaterine Kldiashvili
Georgian Telemedicine Union, Georgia

Abstract

The study aimed evaluation of the possibility to use telecytology and clinical information system as tools for implementation of online cytology quality assurance programs under the conditions of Georgia. 100 gynecological cytology cases (benign – 52; atypical squamous cells of undetermined significance (ASCUS) – 28; low-grade squamous intraepithelial lesion (LSIL) – 7; high-grade squamous intraepithelial lesion (HSIL) – 13) were randomly selected. The randomization has been done by application of the Research Randomizer. Digital images were obtained on all cases at a maximum resolution of 2048x1536 pixels. All 100 cases (medical data and images) have been uploaded at clinical information system; they were labeled “QA”. Diagnosis of glass slides and digital images were done independently in a double-blind manner by 3 certified cytologists, commencing with the diagnosis of “QA” cases followed by diagnosis of glass slides 4 months later. All 3 cytologists have an experience of telecytology and usage of clinical information system. Diagnoses were recorded as benign, ASCUS, LSIL and HSIL. Diagnoses of “QA” cases correspond with initial diagnoses made in routine manner. Therefore, digital images are suitable substitutes for glass slides; telecytology can be used in cytology quality assurance programs; clinical information system can be applied as a platform for cytology online quality assurance programs.

Biography

Ekaterine Kldiashvili has completed her Ph.D at the age of 30 years from Tbilisi State University. She is the executive director of Georgian Telemedicine Union (Association), NGO focusing on implementation of eHealth and telemedicine projects. She has published more than 25 papers in reputed journals, edited one book and contributing chapters to two books.