

## **Development of an educational research software with advisory role in the clinicobiochemical evaluation of amenorrhea**

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### **ABSTRACT**

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**Introduction:** Amenorrhea is a symptom of a variety of disorders and dysfunctions. Historically, there have been many practical difficulties associated with the diagnosis of amenorrhea due to the complex nature of the ovaries, pituitary gland and hypothalamus.

**Purpose:** To develop a free, simple stand alone educational research software (ERS) to assist the education of clinicians and laboratorians (or undergraduate students) with regard to the clinicobiochemical evaluation of amenorrhea.

**Materials and methods:** The software was designed using: a) Microsoft Windows as operating system, b) C# .NET (4.0) as software component (plug-in), and c) C# (C Sharp) as (object-oriented) programming language. It can be distributed on Compact Disk (CD) and be run on any Personal Computer (PC) on Windows.

**Results:** The developed (ERS) -which we have called ERSA v.1.0 - does not require comprehensive skills and expertise in computers. Its educational benefits (common reasons for use) include activating motivation, stimulating recall of the prerequisite material, providing learning guidance and feedback (interactivity), usability outside timetabled course, and competency assessment.

**Conclusions:** The free ERSA v.1.0 could be a practical digital teaching tool for supporting the clinicobiochemical education. Future research should continue so as to evaluate and improve its accuracy, appropriateness, and usability by healthcare students or professionals.

**Key words:** Digital learning, biomedical informatics, hypothalamus, ovary, uterus.

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