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**EVOLIUCINĖ MEDICINA:
ŽMOGAUS RAIDOS PERSPEKTYVOS IR SVEIKATA
BESIKEIČIANČIOJE APLINKOJE**

**EVOLUTIONARY MEDICINE:
PERSPECTIVES ON HUMAN DEVELOPMENT AND HEALTH
CONSEQUENCES IN A CHANGING ENVIRONMENT**

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Vilniaus universiteto Medicinos ir sveikatos mokslų
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IMAGING THE DEVELOPING BREAST: A SONOGRAPHIC JOURNEY FROM NEONATES TO ADOLESCENTS

Andrius CEKUOLIS^{1,2}, Rytis MAROZAS², Zivile SABONYTE-BALSAITIENE¹, Zana BUMBULIENE¹

¹Clinic of Obstetrics and Gynaecology, Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

²Section of Ultrasound, Department of Pediatric Radiology, Centre of Radiology and Nuclear Medicine, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania

Contact e-mail: andrius.cekulis@gmail.com

Background and Aim: Everyone has breasts, going through different stages of development from newborns to adults, in both males and females.

Thelarche, breast lumps, pain – the main clinical concerns in pediatric breasts. The main sonographic findings in adolescent breasts are cysts and fibroadenomas. Most cases are discovered when symptoms occur.

Materials and Methods: Ultrasound of: 1. Clinically suspicious neonatal breasts. 2. Breast lumps in girls up to 7 years of age. 3. Painful or enlarged male breasts in adolescence. 4. 952 healthy volunteer girls aged 7 to 17 years underwent breast ultrasound from 2023 to 2026 as a part of biomedical research.

Results: 1. In neonates, only the normal spongious breast buds were revealed. In cases of neonatal mastitis, no surgery was required. 2. The normal breasts remain quiescent from 2 years of age to puberty. Breast buds can persist until 7 years of age, with a typical sonographic immature breast pattern. No cases of precocious puberty were suspected on ultrasound of isolated thelarche until 7 years. 3. In males, the normal pubertal breast buds can be differentiated from gynecomasty or other masses. Very few cases of glandular gynecomastia were observed, with the prevalence of normal pubertal buds. 4. Breast cysts were found in 157 healthy girls (16.5%). The youngest were 10 years old (4 girls), the highest incidence was 12 – 15-year-olds. Mostly cysts were located subareolarly. Additionally, in 3 girls, mastitis developed around the cysts. Fibroadenomas were found in 13 girls (1.37 %) aged 14 to 17 years (Tanner B3-B5). Nine girls (Tanner stages B2-B5) had adipose breasts with limited glandular tissue. No other pathological entities were identified.

Conclusions: Breast cysts are common in asymptomatic adolescent girls, and their incidence is higher than expected. In contrast, asymptomatic breast fibroadenomas are rare. Adiposity can mimic breast development.

Keywords: adolescents, breasts, neonates, ultrasound