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INSULIN-INDUCED LIPOHYPERTROPHY DIAGNOSTICS IN DIABETIC PATIENTS: SUBCUTANEOUS FAT ULTRASONOGRAPHY

Volkova N.I., Davidenko I.Y., Rudakova J.A., Sesukina A.S.
Rostov State Medical University, Rostov-on-Don, Russian Federation,
dim3.rostgmu@gmail.com

Objectives:
To compare the frequency of insulin induced lipohypertrophy (LH) revealed by ultrasonography of subcutaneous fat with those found by palpatory method in diabetic patients.

Material and methods:
215 diabetic patients under the treatment with insulin a mean 10 years
Observation, palpation techniques, and ultrasonography of subcutaneous fat of injection sites

Results:
- 29 patients with normal subcutaneous fat
- 66 patients with palpatory changes of subcutaneous fat
- 120 patients with pathological subcutaneous fat revealed only by ultrasonography
- 186 patients with LH revealed by ultrasonography
  - 131 - paraumbilical regions (61%)
  - 31 - paraumbilical regions and lateral surface of hips (15%)
  - 24 - paraumbilical regions and lateral surface of shoulders (11%)

Conclusions:
LH have been modified due to good quality modern insulin and expansion their concentration. As a result, pathologic areas of subcutaneous fat have been revealed in 30.7% patients by palpation, while LH have been found in 86.5% subjects by ultrasonography.

Ultrasonography of subcutaneous fat of injection sites could be used to diagnose LH in diabetic patients in clinical daily practice.