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MORPHOMETRY OF THE WEAK AREAS OF THE INGUINAL REGION IN RELATION TO PROSTHESIS HERNIORRHAPHY

Objective: The study was conducted to obtain the shape and dimensions of the posterior wall of the inguinal canal and the Myopectineal Orifice (MPO) in relation to appropriateness of the size and shape of mesh, in prosthesis groin herniorrhaphy.

Patients / Methods: Dissection was carried out in 15 preserved human cadavers of both sexes. The Myopectineal Orifice was approached from the preperitoneal space. The anterior approach was used to access the part of the posterior wall of the inguinal canal medial and inferior to the arching fibres of the internal oblique – the weak area. The shapes of these areas were obtained from tracings on unfoldable surfaces and the areas determined by point counting.

Results: The weak area of the inguinal canal was lentiform in shape and its area was $3.8 \pm 1.62 \text{cm}^2$. The maximum length was 6.2cm and the maximum width was 1.8cm. All dimensions of the inguinal canal were larger in males.

The MPO was trapezoid in shape and its area $7.0 \pm 1.29 \text{cm}^2$. The maximum length of the MPO was 5.7cm and maximum width 2.9cm. The area of the MPO was larger in males.

Conclusions: When placing an onlay prosthesis on the floor of the inguinal canal an oval mesh measuring at least 9.2cm in length and 3.8cm in transverse width is appropriate. For preperitoneal placement of prosthesis, a rectangular mesh measuring at least 11.7cm by 8.9cm is appropriate with or without stapling. These dimensions ensure adequate coverage and overlap of the weak areas in the inguinal region.