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A SCORING ALGORITHM FOR DIFFERENTIATED SELECTION OF THE ENDOVIDEOSURGICAL HERNIOPLASTY METHOD IN INGUINAL HERNIAS

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Relevance

The choice of endovideosurgical technique for inguinal hernia repair is still largely empirical, and recurrence and chronic postoperative inguinal pain have not decreased substantially. An objective, quantitative tool linking method selection to the state of the muscular-aponeurotic frame and to other risk factors is therefore needed.

Material and methods

On the basis of the data of 220 patients, a scoring algorithm for selecting the endovideosurgical hernioplasty method was developed and validated. The algorithm integrates the ultrasound degree of oblique muscle atrophy, hernia size, body mass index and history. Its predictive value for complications and recurrence was assessed by ROC analysis.

Results and discussion

The scoring algorithm showed high predictive value, with an area under the ROC curve of 0.81 for complications and 0.84 for recurrence. According to the algorithm, e-TEP was preferable for large, medial, bilateral and recurrent hernias accompanied by pronounced muscle atrophy, whereas TAPP was used for standard unilateral hernias with a preserved muscular frame; fixation-free mesh placement in e-TEP reduced early and chronic postoperative pain. Applying the algorithm



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allowed a differentiated approach based on ultrasound muscle assessment and hernia characteristics, reducing the rates of complications and recurrence.

Conclusion

The developed and validated scoring algorithm, based on ultrasound assessment of the muscular-aponeurotic frame together with hernia size, body mass index and history, provides an objective basis for selecting the endovideosurgical hernioplasty method and improves the immediate and long-term results of inguinal hernia repair.