

European Hernia Society guidelines on management of rectus diastasis.

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The Guideline group consisted of eight surgeons. The Grading of Recommendation, Assessment, Development and Evaluation (GRADE) approach and the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument were used. A systematic literature search was done in November 2018 and updated in November 2019 and October 2020. Nine Key Questions (KQs) were formulated.

Literature reporting on the definition, classification, symptoms, outcomes and treatments was limited in quality, leading to weak recommendations for the majority of the KQs. The main recommendation is to define RD as a separation between rectus muscles wider than 2 cm. A new classification system is suggested based on the width of muscle separation, postpregnancy status and whether or not there is a concomitant hernia. Impaired body image and core instability appear

to be the most relevant symptoms. Physiotherapy may be considered before surgical management. It is suggested to use linea alba plication in patients without concomitant hernia and a mesh-based repair of RD with concomitant midline hernias.

RD should be defined as a separation of rectus muscles wider than 2 cm and a new classification system is suggested.

The European Hernia Society has decided to develop a Clinical Practice Guideline in order to optimize the management of rectus diastasis patients. The Grading of Recommendation, Assessment, Development and Evaluation (GRADE) approach and the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument were used. The main recommendation is to define rectus diastasis as a separation between rectus muscles wider than 2 cm. A new classification system is suggested based on the width of muscle separation, post pregnancy status and whether there is a concomitant hernia or not. Physiotherapy may be considered prior to surgical management. It is suggested to use linea alba plication in patients without concomitant hernia and a mesh-based repair of rectus diastasis with concomitant midline hernias

pmc-status-qstatus 0 pmc-status-live yes pmc-status-embargo no pmc-status-released yes pmc-prop-open-access yes pmc-prop-olf no pmc-prop-manuscript no pmc-prop-legally-suppressed no pmc-prop-has-pdf yes pmc-prop-has-supplement yes pmc-prop-pdf-only no pmc-prop-suppress-copyright no pmc-prop-is-real-version no pmc-prop-is-scanned-article no pmc-prop-preprint no pmc-prop-in-epmc yes pmc-license-ref CC BY-NC Introduction The definition, classification, and management of rectus diastasis (RD) is controversial, with a variety of different surgical treatments described. Consequently, the European Hernia Society (EHS) has developed a Clinical Practice Guideline on the management of RD. The executive summary is presented here, with a full version of the methodology and discussion of the evidence underpinning the guidelines available as Supplementary material .

The Guideline Group consisted of eight surgeons. The Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach and the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument were used. A systematic literature search was done in November 2018 and updated in October 2020.

Nine key questions (KQs) were formulated.

Statement: There is limited evidence on an exact definition of RD. RD is an abnormal separation of the two rectus abdominis muscles caused by a thinning and widening of the linea alba. A separation of the rectus muscles of 2 cm or less might be considered physiologically normal.

Recommendation: As a good practice statement, rectus diastasis is defined as a widening of the linea alba exceeding 2 cm.

Strength of recommendation: Strong (upgraded)

Statement: Clinical examination and measurement using the 'finger width' method appears adequate for diagnosing RD. Measurement of the inter-rectus distance using either ultrasound imaging or calipers is a reliable method. There is limited evidence to support the use of CT.

Recommendation: Clinical examination is suggested for diagnosing RD in most patients. CT may be useful in detecting a concomitant hernia and for surgical planning. For more precise measurement, the use of ultrasound imaging or calipers at 3 cm above the umbilicus is suggested.

Statement: None of the existing classification systems seems to be optimal for classifying RD or to serve as a basis for treatment strategy.

Recommendation: A new classification system for RD is suggested based on the width of muscle separation, postpregnancy status, and whether or not there is a concomitant hernia (Fig. 1).

Strength of recommendation: Strong (upgraded)

Statement: A range of symptoms is reported to be associated with RD. It is unknown whether the width of the diastasis is related to the severity of symptoms. Impaired body image and core instability seem to be the most common symptoms.

Recommendation: As a clinical expertise guidance, impaired body image and core instability appear to be the most relevant symptoms to report on and to investigate in future studies.

Statement: Studies describing outcome measures are very limited. The inter-rectus distance may be an objective measure, although the correlation with clinical presentation is unclear. Patient-reported outcome measures are the best tool to evaluate clinical symptoms, such as body image and core instability. The Short Form 36 and Body Image Questionnaire are helpful.

Recommendation: It is suggested that future studies should focus on core instability and body image.

Statement: There is limited evidence to support a benefit from non-operative treatment. Physiotherapy seems to reduce inter-rectus distance. Several different training programmes have been described, but no specific regimen can be recommended. It is unknown whether symptoms and quality of life can be improved using a specific exercise programme.

Recommendation: No specific non-operative treatment for RD can be recommended. However, physiotherapy may be considered before surgical management of the rectus diastasis.

Statement: RD without concomitant midline hernias can be treated surgically using linea alba plication (suture) with or without mesh augmentation, both via an open or a laparoendoscopic approach. Studies comparing different options are scarce, heterogeneous and of low quality.

Recommendation: If surgery is performed, the technique used should result from a shared decision-making process between the patient and surgeon. As a clinical expertise guidance, linea alba plication is suggested in patients without concomitant hernia. No recommendation on the type of suture or suturing technique can be made.

Statement: Mesh-based repair is recommended according to the European Hernia Society and Americas Hernia Society Guidelines for Treatment of Umbilical and Epigastric Hernias. Plication of the anterior rectus sheath may be sufficient to repair the smallest (less than 1 cm) umbilical or epigastric hernias. Other approaches have been reported. The endoscopic subcutaneous dissection followed by linea alba plication with an onlay mesh was the most reported technique.

Recommendation: A mesh-based repair of RD with concomitant midline hernias is suggested. Plication of the linea alba may be sufficient to repair a diastasis associated with small (less than 1 cm) umbilical/epigastric hernias.

Statement: Abdominal binders appear to aid mobilization, and reduce postoperative pain and psychological stress. They have no effect on seroma formation or pulmonary function. No specific postoperative rehabilitation programme is used worldwide.

Recommendation: As a clinical expertise guidance, the use of an abdominal binder in the postoperative period can be suggested. The noted advantages of reduced pain, enhanced mobilization, and their perceived psychological support after surgery, make their contribution

modest but of value. No specific postoperative rehabilitation programme can be recommended.

The literature reporting on the definition, classification, symptoms, outcomes, and treatments was very limited in quality, leading to weak recommendations for the majority of the KQs. The main recommendation of this guidance is to define RD as a separation between rectus muscles wider than 2 cm. A new classification system is suggested based on the width of muscle separation, postpregnancy status, and whether or not there is a concomitant hernia (Fig. 1). Until new research is available, management and treatment strategy options need to be discussed adequately with patients to assist them in making informed decisions and understanding as much as possible about the procedures they are agreeing to.

European Hernia Society RD classification

Supplementary material is available at BJS online.

Full guidelines to accompany this executive summary are available online.