EUROPEAN HERNIA SOCIETY

GUIDELINES ON PREVENTION AND TREATMENT OF PARASTOMAL HERNIAS

2019

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CLINICAL PRACTICE GUIDELINE

Implementation by the European Hernia Society (EHS).

Based on a systematic and comprehensive literature review.

Considers the balance benefits/risk of prevention and the current approaches available for diagnostic, treatment and management of parastomal hernias.

USER TARGET:
Healthcare professionals (surgeons, general practitioners, stoma care nurses, physiotherapists), policymakers within the European region.

WORKING GROUP:
Scientists and surgeons coming from 14 European countries + the guideline development group of EHS.

PATIENTS:
With a temporary or a permanent stoma, or patients expected to have a stoma.

Simons MP, Smietanski M, Bonjer HJ, Bittner R, Miserez M, Aufenacker TJ, Fitzgibbons RJ, Chowbey PK, Tran HM, Sani R, Berrevoet F, Bingener J, Bisgaard T, Bury K, Campanelli G, Chen DC, Conze J, Cuccurullo D, de Beaux AC, Eker HH, Fortelny RH, Gillion JF, van den Heuvel BJ, Hope WW, Jorgensen LN, Klinge U, Köckerling F, Kukleta JF, Konate I, Liem AL, Lomanto D, Loos MJA, Lopez-Cano M, Misra MC, Montgomery A, Morales-Conde S, Muysoms FE, Niebuhr H, Nordin P, Pawlak M, van Ramshorst GH, Reinpold WMJ, Sanders DL, Schouten N, Smedberg S, Simmermacher RKJ, Tumtavitikul S, van Veenendaal N, Weyhe D, Wijsmuller AR.

METHODS

- First-level search: done in February 2016 and included databases of MEDLINE (through PubMed), CINAHL (through OpenAthens) and CENTRAL (through Wiley Online Library), with no date or language restrictions. The grey literature was searched through OpenGrey (Exalead)
- Second-level screening: The quality of the evidence was assessed using the Scottish Intercollegiate Guidelines Network (SIGN) checklists and rated according to the GRADE approach
- Consensus meeting held in April 2016 in Brussels
- Peer review and assessment by two external reviewers in August 2016 according to the AGREE II instrument

RECOMMENDATION KEY

STRONG Benefits do or do not outweigh risks and burden.
WEAK Benefits, risks and burden are finely balanced.
NONE No evidence could be found, no recommendation can be made.

INCIDENCE

Estimated overall incidence of parastomal hernia:

- 30% by 12 months
- 40% by 2 years
- 50% at longer follow-up

End colostomy associated with a higher incidence of parastomal hernia, compared to loop colostomy and loop ileostomy.

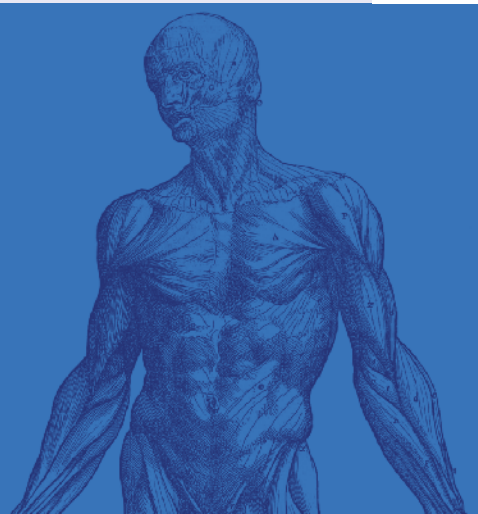
CLASSIFICATION

- 5 existing classifications on parastomal hernias
- None have been validated
- Insufficient evidence to favour one classification

QUALITY OF EVIDENCE	VERY LOW	LOW	MODERATE	HIGH

RECOMMENDATIONS

WEAK: Suggestion to use the European Hernia Society for uniform reporting.



DIAGNOSTICS

No gold standard examination for the detection of parastomal hernias. Diagnosis is challenging, as not reproducible from one observer to another.

- Clinical examination
  - Sensitivity = 66 – 100%
  - Negative predictive value = 75 – 100%
- CT scan may result in false positive diagnoses
- Clinical relevance of ultrasonography is not clear

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

WEAK: Clinical examination in supine/erect position using Valsalva maneuver is necessary for the diagnosis.

CT scan or ultrasonography may be performed in uncertain cases.

The differential diagnosis between parastomal hernia and stoma prolapse may require CT imaging.

WATCHFUL WAITING FOR PATIENTS WITH A NON-INCARCERATED PARASTOMAL HERNIA

No evidence on the benefit of watchful waiting vs surgery

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

NONE: BUT when making clinical decisions, the surgeon needs to consider:
- the risks associated with watchful waiting (e.g. strangulation, hernia enlargement, development of comorbidities) which may increase the difficulty and risks of subsequent surgery.
- the increased incidence of perioperative complications following emergency surgery, as well as quality of life parameters.

SPECIFIC TECHNIQUES WHEN CONSTRUCTING A STOMA

Statement 1: Insufficient evidence on the comparative risk of parastomal hernia development after construction of a stoma via the extraperitoneal OR the transperitoneal route.

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

NONE

Statement 2: Insufficient evidence on the comparative risk of parastomal hernia development after the construction of the stoma at a lateral pararectus location OR a transrectus location.

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

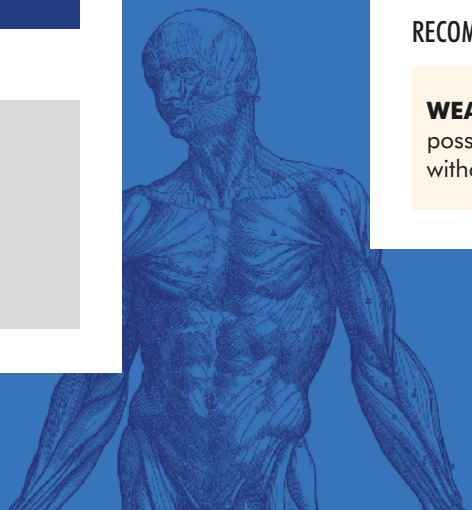
NONE

Statement 3: Insufficient evidence on the ideal size of the fascial aperture when constructing a stoma.

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

WEAK: We suggest keeping the size of the fascial aperture as small as possible to allow passage of the intestine through the abdominal wall without causing ischemia.



PROPHYLACTIC MESH

High quality evidence supports the use of a prophylactic mesh during construction of a permanent end colostomy in elective surgery in reducing the incidence of parastomal hernia development.

QUALITY OF EVIDENCE	VERY LOW	LOW	MODERATE	HIGH ✓

RECOMMENDATIONS

STRONG: It is recommended to use a prophylactic synthetic non-absorbable mesh when constructing an elective permanent end colostomy to reduce the parastomal hernia rate.

QUALITY OF EVIDENCE	VERY LOW	LOW ✓	MODERATE	HIGH

RECOMMENDATIONS

NO recommendation for the use of a prophylactic mesh for ileostomies or ileal conduit stomas.

NO recommendations for the use of synthetic absorbable or biological meshes.

NON MESH REPAIR

- No high quality evidence on the comparative risk of recurrence following parastomal hernia repair with mesh, stoma relocation or suture repair
- There is evidence suggestive of a high risk of recurrence following suture repair
- Insufficient evidence on the comparative risk of morbidity following mesh repair, stoma relocation or suture parastomal hernia repair
- There is evidence suggestive of a low rate of infectious complications for parastomal hernia repair with a synthetic mesh

QUALITY OF EVIDENCE	VERY LOW	LOW ✓	MODERATE	HIGH

RECOMMENDATIONS

STRONG: It is recommended not to perform a suture repair for elective parastomal hernia surgery because of a high risk of recurrence

LAPAROSCOPIC REPAIR

- Insufficient evidence on the risk of recurrence following laparoscopic versus open parastomal hernia repair with a mesh
- Insufficient evidence on the morbidity following laparoscopic versus open parastomal hernia repair with a mesh

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

NONE: BUT clinical decision should depend on
- Local resources,
- Patient preferences,
- Surgical experience
- Specific patient conditions (i.e. comorbidities, previous surgeries, intraperitoneal adhesions and the size of the hernia)

OPEN TECHNIQUES

- Insufficient evidence on the optimal technique for open parastomal hernia repair with regard to morbidity or recurrence

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

NONE

LAPAROSCOPIC TECHNIQUES

- Existing evidence favouring the use of a mesh without a hole in preference to a keyhole mesh for laparoscopic parastomal hernia repair in terms of recurrence
- Insufficient evidence on the safest laparoscopic technique for parastomal hernia repair with regard to morbidity

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

WEAK: For laparoscopic parastomal hernia repair, a mesh without a hole is suggested in preference to a keyhole mesh.

MESH TYPES

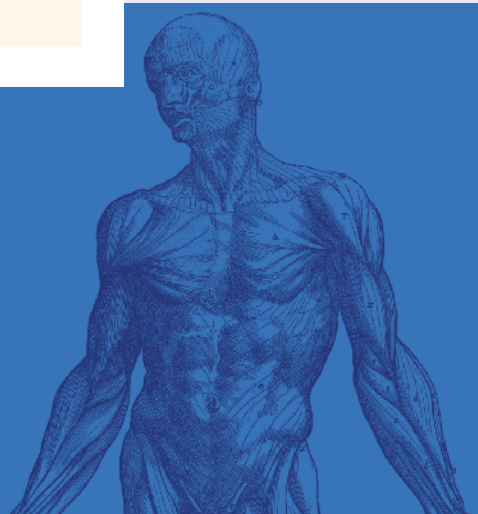
- Insufficient evidence on the most effective mesh for parastomal hernia repair with regard to recurrence or morbidity
- No evidence supporting superiority of biological over synthetic meshes with regard to recurrence or morbidity

QUALITY OF EVIDENCE	VERY LOW ✓	LOW	MODERATE	HIGH

RECOMMENDATIONS

NONE

The impact of these guidelines on clinical practice is planned to be assessed through a Web-based survey to be completed by members of the EHS, 2 years after publication of this manuscript. Partial or complete adherence to these guidelines by at least 70% of the participants will be considered suggestive of adequate implementation. Participants will be invited to submit comments and suggestions for the planned update of these guidelines. The results of this survey will be made publicly available. A 2-year interval for repeated assessment is considered adequate to monitor the level of implementation.



EUROPEAN HERNIA SOCIETY
CALLE CASTELLÓ 128
28006 MADRID – SPAIN

T: +34 913 836 000 -EXT 133
EMAIL: SECRETARIATEHS(AT)PACIFICO-MEETINGS.COM

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