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RESEARCH ARTICLE

RECORDING MESH USE IN ELECTIVE HERNIA REPAIR OPERATIVE NOTES AND DISCHARGE SUMMARIES: A RETROSPECTIVE REVIEW OF DOCUMENTATION

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ABSTRACT

In the UK, abdominal wall hernias of all types have a prevalence of 1.7% in patients of any age and 4% in those aged over 45 years. Despite the established gold standard of repair with prosthetic mesh, there are instances where a mesh is not used. It is therefore prudent that operation notes and discharge summaries contain information on the use (or indeed, absence) of prosthetic mesh, to aid diagnosis in the event of any subsequent complications and to guide further management. This retrospective study aims to review the documentation with a view to establishing current reporting practice.

Method: All patients who underwent elective open abdominal wall hernia repair (incisional, umbilical/paraumbilical and inguinal), in a London district general hospital, from January 2016 to January 2017 were included in the study.

Results: 53 cases meeting the inclusion criteria were identified with 2 cases excluded.
All cases contained explicit operative documentation regarding prosthetic mesh (48 mesh repairs and 3 repairs without mesh.) Only 64.7% (n=33) discharge summaries contained explicit information on whether on not mesh was used.

Conclusion: This study has found that there is sufficient documentation in operation notes, but a lack of mesh information in discharge summaries. The authors therefore recommend the operative surgeon guides junior staff on the information required on discharge summaries.

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INTRODUCTION

In the UK, abdominal wall hernias of all types have a prevalence of 1.7% in patients of any age and 4% in those aged over 45 years. Hernia repair is one of the most common general surgical operations with 70,000 inguinal hernia repairs performed in the NHS in 2000/01 (https://www.nice.org.uk/guidance/ta83/chapter/2-Clinical-need-and-practice). Whilst the principles of open hernia repair have not changed greatly since the late 19th century, the introduction of prosthetic mesh over the last 50 years has reduced recurrence rates, (https://www.nice.org.uk/guidance/ta83/chapter/2-Clinical-need-and-practice) and is now accepted as gold standard. The use of prosthetic mesh is not without risk; seroma, adhesions, chronic pain, mesh migration and prosthesis rejection are all recognised complications (Falagas, 2005).

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The most significant complication, however is mesh infection. With an incidence of 8% (Falagas, 2005), this represents significant morbidity. Indeed, the lifetime risk of mesh removal (due to infection) is 0.13% (Montgomery, 2016). Despite the established gold standard of mesh repair, there are instances where a mesh is not used (e.g. in the setting of infection) (Birolini, 2016). It is therefore prudent that operation notes (ON) and discharge summaries (DS) contain information on the use (or indeed, absence) of prosthetic mesh. This is particularly important, as the interval between primary procedure and potential re-procedure for infection can be upwards of 10 years. Clear and accessible documentation is imperative to prevent unnecessary delays in diagnosis, management and potential unnecessary imaging or surgical intervention for mesh identification and removal. This retrospective study aims to review the documentation in both the operation note, and the discharge summary, with a view to establishing current reporting practice.

Table 1. Summary of findings

	N=	Explicitly states mesh used	Explicitly states mesh not used	No explicit documentation	% Adequate documentation
Operation Note	51	48	3	0	100%
Discharge Summary	51	32	1	18	64.7%

MATERIALS AND METHODS

All patients who underwent elective open abdominal wall hernia repair (incisional, umbilical/paraumbilical and inguinal), in a London district general hospital, from January 2016 to January 2017 were included in the study. Exclusion criteria included femoral hernia, laparoscopic repair and emergency procedures. Operation notes and discharge summaries (both paper and electronic) were reviewed for explicit documentation of prosthetic mesh; whether used, not used or not documented.

RESULTS

53 cases meeting the inclusion criteria were identified and reviewed by two independent reviewers (UJW and MG.) 2 cases were excluded from analysis due to the procedure being abandoned (one due to tumour identification at procedure and the other for no hernia found). All 51 included cases contained explicit operative documentation regarding prosthetic mesh; 48 documented mesh use and 3 documented explicitly that mesh was not used. On review of DS, only 33 (64.7%) had adequate, explicit documentation regarding mesh use (32 with mesh use, 1 with no mesh). 18 (35.3%) DS made no mention of mesh. Of the 3 operations not using mesh, 1 explicitly stated no mesh was used. The two remaining made no explicit statement; there was merely no mention of mesh.

DISCUSSION

In a patient presenting with a suspected hernia repair site infection, knowledge of the presence, or indeed absence, of prosthetic mesh informs the diagnostic and management algorithm differentially. The mainstay of treatment is with intravenous antibiotics. In addition, patients with mesh in situ should have the mesh surgically removed (Falagas, 2005). Re-operation and removal of the an prosthetic mesh is extensive procedure carrying the increased risks of operative intervention and hernia recurrence (Petersen, 2001), and in addition, a high economic burden to the NHS. Poor or inadequate documentation regarding mesh can result in misdiagnosis and delays in definitive treatment (vis-à-vis mesh removal). Thus, knowledge of mesh status is essential. Clearly, imaging or an operative procedure to merely confirm the presence or absence of mesh is unacceptable, and not economically viable. This study has found that whilst ON are adequate, 35.3% of DS do not contain sufficient information regarding the use of mesh. ON are written by the operating surgeon whilst DS are often written by junior or house officers.

One could deduce that the inexperienced house officer may not be aware of the importance of mesh documentation. Information from the DS is often more readily carried forward than the ON (General practitioners and clerical staff often will only see the DS) and furthermore, the ON itself may be buried within the bulk of the patient notes. This infers even greater importance on the DS. It is therefore incumbent upon the operating surgeon and indeed the more senior clinician to guide the junior doctor (or persons creating the DS) and instil upon them the importance of explicit documentation regarding mesh use in the DS. A study by Petersen et al (Petersen, 2001), suggested different management protocols depending on the type of mesh used; polyester or polypropylene mesh should be managed with radiological drainage, whilst surgical removal is preferred with polytetrafluoroethylene mesh. It seems prudent, therefore to include not only the mesh status on the discharge summary but also the type of mesh used. This study has found that whilst there may be sufficient documentation in operation notes, there is a lack of mesh information in discharge summaries. The authors therefore recommend the operative surgeon guides junior staff on the information required on discharge summaries. Further work would include a re-audit, following dissemination of this studies findings and recommendation. In addition, documentation on the type of mesh used can be included.

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