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Outcomes of Abdominal Wall Reconstructions with and without Undertaking Excessive Skin Excisions in A Single Surgeon's Practice

A. Iqbal[1], M. Baltatzis[2], R. Shaban[1], A. Tyurkylmaz[1], S. Jamdar[1,4] and A. J. Sheen[1,3,4]

[1]Department of Surgery, Manchester Foundation NHS Trust, Manchester, UK

[2]Department of Surgery, Salford Royal Foundation NHS Trust, Salford, UK

[3]Spire Manchester Hospital, 170 Barlow Moor Road, Didsbury, Manchester, M20 2AF, UK

[4]Faculty of Biology, Medicine and Health, University of Manchester, UK

***Corresponding author:**

Aali J Sheen,
Spire Manchester Hospital, 170 Barlow Moor Road, Didsbury, Manchester, M20 2AF, United Kingdom

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1. Abstract

1.1. Aim: The primary objective of this study was to evaluate and compare the clinical outcomes of complex incisional hernia repairs performed by a single surgeon, with and without concurrent skin excisions. Given the increasing prevalence of incisional hernias and the growing need for comprehensive abdominal wall reconstruction, this study aimed to determine whether the addition of skin excision significantly affects postoperative outcomes, including Length of Hospital Stay (LOS), complication rates, and wound infection incidence. Furthermore, the study explored the influence of patient-related factors such as Body Mass Index (BMI) and hernia size on surgical outcomes.

1.2. Methods: A retrospective analysis was conducted on 94 patients who underwent complex incisional hernia repairs between 2019 and 2023. These patients were divided into two groups: those who underwent hernia repair without skin excision (n=52, 55%) and those who had skin excision as part of the procedure (n=42, 45%). Key outcome measures included LOS, postoperative complications, and wound infection rates. Additionally, patients were stratified based on BMI (≥30 vs. <30) to assess its impact on surgical outcomes. Statistical analysis was performed using Pearson's chi-square and one-way ANOVA tests, with significance defined as $p<0.05$.

1.3. Results: The median age of patients in the study cohort was 57 years (range: 24–88 years). Patients who did not undergo skin excision had a significantly shorter LOS compared to those who underwent concurrent skin excision (mean: 2.8 days vs. 6.8 days, p=0.023). Despite the extended hospitalisation in the skin excision group, overall complication rates were comparable between the two cohorts (34% vs. 31%, p=0.436). Notably, there was no statistically significant association between skin excision and wound infection rates (13.5% vs. 7.1%, p=0.503).

BMI was found to be a significant factor influencing postoperative outcomes. Patients with a BMI of ≥30 (n=10) exhibited a markedly higher incidence of postoperative complications and wound infections ($p<0.001$), though BMI did not appear to affect LOS (p=0.962). Additionally, the size of the hernia was an important determinant of surgical outcomes. Larger hernias (>6 cm) were associated with a longer LOS compared to smaller hernias (mean: 6.4 days vs. 2.8 days, p=0.051). While there was a trend towards a higher complication rate in larger hernia repairs, the difference did not reach statistical significance.

1.4. Conclusion: The findings of this study suggest that while the addition of skin excision in complex incisional hernia repairs significantly prolongs LOS, it does not independently contribute to increased complication or wound infection rates. Furthermore, BMI plays a crucial role in influencing postoperative complications, with patients having a BMI ≥30 experiencing significantly worse outcomes. The results highlight the importance of preoperative patient optimization, particularly in individuals with a high BMI, to improve surgical outcomes in abdominal wall reconstruction. Future prospective studies with larger cohorts and long-term follow-up are recommended to further investigate these relationships and guide best surgical practices.

2. Introduction

Panniculectomy, the surgical removal of excess abdominal skin and subcutaneous fat, is frequently performed in conjunction with Ventral Hernia Repair (VHR) to optimise surgical access, reduce mechanical strain on the repair, and improve long-term functional and aesthetic outcomes [1]. This procedure is particularly beneficial for patients who have undergone significant weight loss, post-bariatric surgery patients, or individuals with a history of multiple abdominal procedures leading to a redundant pannus [2]. The presence of excess soft tissue can contribute to chronic skin infections, irritation, and mechanical stress on the abdominal wall, which may increase the risk of hernia recurrence [2]. By excising this redundant tissue, panniculectomy has the potential to improve the durability of hernia repairs, enhance patient comfort, and facilitate better surgical outcomes [3]. However, the decision to undertake panniculectomy alongside hernia repair remains controversial due to concerns regarding increased wound morbidity, extended operative times, and prolonged hospital stays [4].

Although concurrent panniculectomy can improve surgical exposure and reduce tension on the abdominal wall closure, studies have reported a higher incidence of postoperative complications, including Surgical Site Infections (SSIs), seromas, wound dehiscence, and fat necrosis [5]. The risk of these complications is particularly pronounced in patients with obesity, diabetes, or other comorbidities that impair wound healing. Some studies have suggested that while panniculectomy does not significantly increase hernia recurrence rates, it may lead to greater wound morbidity, raising concerns about whether the benefits outweigh the risks [4,5]. Furthermore, the additional soft tissue dissection required for panniculectomy may contribute to a prolonged inflammatory response, increasing the likelihood of delayed healing and postoperative wound complications [6].

Despite these risks, many surgeons advocate for concurrent panniculectomy in selected patients, particularly those with severe abdominal wall deformities that may compromise the success of hernia repair [7]. The presence of a large overhanging pannus can create mechanical stress on the surgical site, increasing the likelihood of recurrence and skin breakdown. Additionally, in patients with chronic intertrigo, recurrent cellulitis, or difficulty with mobility due to excessive soft tissue, panniculectomy can provide both functional and quality-of-life benefits [2,6,7]. Several studies have demonstrated that panniculectomy, when performed in conjunction with complex Abdominal Wall Reconstruction (AWR), can enhance the success of component separation techniques by reducing excess soft tissue tension and facilitating fascial closure [1,8-10].

The technical aspects of panniculectomy vary based on patient characteristics and the complexity of the hernia repair. The procedure typically involves a horizontal infraumbilical or vertical midline excision of redundant skin and subcutaneous fat, with meticulous attention to preserving vascular supply to the remaining tissue. Closure techniques must be optimised to minimise wound-related complications, and some studies advocate the use of progressive tension sutures, quilting techniques, or closed suction drains to reduce the risk of seroma formation. Additionally, when mesh reinforcement is used in hernia repair, consideration must be given to the risk of contamination, as the presence of a large dead space and prolonged drainage can increase the likelihood of mesh-related infections [11-13].

The role of panniculectomy in enhancing the outcomes of Ventral Hernia Repair (VHR) has garnered increasing interest, particularly in patients with massive weight loss or significant pannus burden. While some studies suggest that concurrent panniculectomy may improve the durability of hernia repair by reducing tension on the abdominal wall closure, its effect on perioperative morbidity remains controversial [6,7]. Retrospective analyses have reported associations between panniculectomy and increased operative times, higher transfusion requirements, and elevated rates of hospital readmission [5]. Moreover, the potential for Venous Thromboembolism (VTE) is a notable concern, attributable to prolonged surgical duration and postoperative immobility [6].

To mitigate these risks, preoperative optimization strategies such as weight loss programs and enhanced recovery protocols have been proposed, although there remains limited consensus on best practices and patient selection [8,14]. The evidence evaluating long-term outcomes of simultaneous panniculectomy and hernia repair is mixed. While some reports suggest a reduction in hernia recurrence, particularly in post-bariatric patients, others highlight increased wound morbidity that may offset the benefits [5,7,8]. A recent systematic review and meta-analysis conclude- ed that while hernia recurrence rates may be similar between patients undergoing VHR alone and those with combined pan- neurectomy, the latter group is at higher risk of early postponer- ative complications [6].

Currently, the decision to incorporate panniculectomy during VHR remains highly individualized, often guided by surgeon preference, institutional policy, and patient-specific factors such as BMI, skin redundancy, and comorbidity burden. In complex cases, multidisciplinary collaboration between general and plastic surgeons may offer advantages in surgical planning and perioperative care. Given the variability in clinical outcomes and practice patterns, further research is warranted to better define the role of panniculectomy in VHR and to inform standardised, evidence-based patient selection criteria [5,6].

This study provides a retrospective analysis of a single surgeon's experience with combined panniculectomy and ventral hernia repair, offering insights into patient selection, perioperative complications, and long-term surgical outcomes. This study was important to determine the outcome of patients in a single surgeon practise especially with patient selection based on excluding high risk patients as described above. By demonstrating favourable outcome, it was envisaged that more complex cases could be undertaken in a team working framework. By analysing a controlled dataset, this study aims to determine

whether concurrent skin excision/ panniculectomy improves or compromises clinical outcomes and to contribute to the ongoing discussion on best practices for hernia repair in patients with excess abdominal soft tissue. Findings from this study may help refine patient selection criteria, optimise surgical strategies, and improve perioperative management protocols to enhance overall patient safety and success rates.

3. Methodology

3.1. Study Design and Setting

This study is a retrospective analysis of patients who underwent Ventral Hernia Repair (VHR) with or without concurrent panniculectomy, performed by a single surgeon at a tertiary referral centre. Data were obtained from a prospectively maintained surgical database, and patient records were reviewed to assess preoperative risk factors, intraoperative details, and postoperative outcomes. Smokers were not offered surgery unless there was complete cessation for at least three months and urinary nicotine levels were checked to ensure that smoking was completely halted. Diabetics were also included but only non-insulin dependent ensuring the HBA1C was well controlled at <7%. The study was conducted in accordance with institutional ethical guidelines and the principles of the Declaration of Helsinki. Given the retrospective nature of this analysis, formal patient consent was waived, as all data were anonymised prior to analysis.

3.2. Patient Selection

Patients included in this study underwent ventral hernia repair with or without panniculectomy between March 2019 and March 2023; 48-month period. Inclusion criteria comprised adult patients (≥18 years old) with a primary or recurrent ventral hernia, as classified by the European Hernia Society, who underwent surgical repair with mesh placement. Patients undergoing concomitant component separation techniques (anterior or posterior) were also included.

Exclusion criteria comprised patients with active intra-abdominal infections, necrotising soft tissue infections, pre-surgical wound dehiscence requiring extensive reconstruction, and those who had incomplete medical records or were lost to follow-up within six months postoperatively. Patients undergoing hernia repair without mesh placement or those requiring emergency procedures for bowel obstruction, strangulation, or perforation were excluded to ensure homogeneity in the study population.

3.3. Surgical Technique

All procedures were performed via an open approach by a single consultant surgeon specialising in Abdominal Wall Reconstruction (AWR). A standardised preoperative assessment, including cross-sectional imaging with Computed Tomography (CT), was utilised in all cases to evaluate hernia defect characteristics, loss of domain, and abdominal wall musculature.

Patient selection for concurrent panniculectomy was based on the presence of significant skin and soft tissue redundancy. These patients were thoroughly counselled preoperatively on the potential benefits including improved abdominal contour, hygiene, and comfort and the specific risks of increased wound morbidity associated with the combined procedure.

The panniculectomy technique was tailored to patient-specific anatomy and the pattern of tissue excess. For a predominantly infraumbilical overhang (apron pannus), a low transverse excision (horizontal panniculectomy) was performed. For midline redundancy extending cranially, often resulting from the expansion of a long-standing hernia, a vertical elliptical excision was employed. All resections were performed with meticulous attention to preserving the vascular supply to the remaining abdominal wall flaps to optimize tissue viability.

Hernia repair was then undertaken. For smaller defects (<4-5 cm) or diastasis recti, primary suture plication was performed. For larger or more complex defects, a retro-rectus mesh repair was standard. A polyester self-fixating mesh (ProGrip™, Medtronic, Lyon, France), typically sized 20x15 cm or 15x15 cm and trimmed as needed, was deployed in the retro-rectus space. When required to achieve tension-free midline closure, a component separation technique (CST) either anterior or posterior based on defect characteristics was performed.

Fascial re-approximation was achieved using interrupted sutures with a non-absorbable monofilament suture (2-0 Maxon™, Medtronic, Lyon, France). Prior to final fascial closure, a mixture of long-acting local anaesthetic (30-50 ml of 0.25% bupivacaine) with 10 ml of 1% lidocaine was instilled into the retro-rectus space for postoperative analgesia. Closed suction drains were placed superficial to the anterior fascia in all cases involving panniculectomy or extensive dissection to mitigate seroma formation.

All patients received weight-adjusted intravenous antibiotic prophylaxis and pharmacological thromboprophylaxis according to institutional protocol.

The applied techniques were informed by the senior author's clinical experience, fellowship training, attendance at specialised AWR workshops, and a review of established principles from the hernia and plastic surgery literature. A multidisciplinary approach to patient selection, emphasising rigorous preoperative optimisation, was employed.

3.4. Postoperative Rehabilitation

All patients were encouraged to mobilise on the first postoperative day. Larger or high-risk patients received physiotherapy review where required. The use of abdominal binders and compression garments was standard practice, and all patients were discharged with clear instructions regarding activity levels, pain control, and wound monitoring. Follow-up included wound assessment and reinforcement of gradual return to normal activities. In selected cases, formal community physiotherapy was recommended based on recovery trajectory and functional limitation.

3.5. Data Collection and Outcomes

Demographic, clinical, and surgical data were extracted from electronic medical records. The primary outcome was the inci-

dence of major postoperative complications, defined as surgical site infections (SSI), seroma formation, wound dehiscence, haematoma, mesh infection, or reoperation within 90 days. Secondary outcomes included operative time, Length of Hospital Stay (LOS), and readmission rate.

Patients were stratified into two groups:

- Group 1 (Hernia Repair + Skin excision/ Panniculectomy)
- Group 2 (Hernia Repair Only)

Baseline characteristics, including BMI, diabetes status, smoking history, were compared between the two groups. Follow-up was conducted at 2 weeks, 6 weeks, 3 months, and 12 months postoperatively, with assessments of wound healing, and recurrence.

3.6. Statistical Analysis

Descriptive statistics were used to summarise patient demographics and clinical characteristics. Continuous variables (e.g., operative time, BMI) were compared using Student's t-test/One Way ANOVA or Mann-Whitney U test for non-parametric distributions. Categorical variables (e.g., presence of wound complications, readmission rates) were analysed using Pearson's Chi-square or Fisher's exact test. Statistical significance was set at $p < 0.05$, and all analyses were conducted using SPSS v.26 (IBM Corp.).

3.7. Ethical Considerations

This study was evaluated using the NHS decision tool guide and due to its retrospective nature no formal review or ethics application was necessary https://www.hra-decisiontools.org.uk/ethics/. All patient data were de-identified in compliance with privacy regulations. As a retrospective study, no direct patient involvement was required, and no additional risks were imposed on participants beyond standard clinical care.

4. Results

4.1. Patient Demographics and Sample profile

A total of 94 patients who underwent complex incisional hernia repair between 2019 and 2023 were included in this retrospective study. Of these, 52 patients (55%) underwent hernia repair alone, while 42 patients (45%) had concurrent skin excision. The median age of the cohort was 57 years (range: 24–88 years), with no significant difference between the groups. Male patients comprised 47% of the total cohort. 10 patients had BMI>30, but there was no statistically significant difference between the groups in this respect. Half or the cohort (47 patients) had hernia defect larger than 6 cm. 23 of them had skin excision and 24 did not (p=0.215). No smokers were included in this study. 3 patients, all included in the skin excision group, were diabetic. This finding was not statistically significant. These results are summarised on (Table 1).

Table 1: Study Population.

	No skin excision	Skin excision	Total	P value
Sample (n)	52	42	94	n/a
Age (median, range)	58 (36-82)	51 (24-88)	57 (24-88)	0.536
BMI > 30 (n,%)	7/52 (13%)	3/42 (7%)	10/94 (11%)	0.346
Hernia defect ≥ 6cm (n,%)	24/52 (46%)	23/42 (55%)	47/94 (50%)	0.215
Diabetes	0/52	3/42 (7%)	3/94 (3%)	0.084

4.2. Operative Outcomes and Length of Stay

The mean operative time was significantly longer in the skin excision group, reflecting the increased complexity of the procedure. Patients undergoing concurrent skin excision had a significantly longer length of hospital stay (LOS) compared to those who had hernia repair alone (6.8 days vs. 2.8 days, p=0.023) (Table 2).

Table 2: Comparison of postoperative outcomes of patient undergoing hernia repair with and without skin excision.

	No skin excision	Skin excision	P value
Hospital stay (days, mean ±SD)	2.84 ± 2.85	6.8 ± 11.8	**0.023**
Complications - Clavien-Dindo (CD)			
CD I (n,%)	2/52 (4%)	4/42 (10%)	
CD II (n,%)	9/52 (17%)	5/42 (12%)	
CD III (n,%)	7/52 (13%)	3/42 (7%)	
CD IV (n,%)	0/52	1/42 (2%)	
Total (n,%)	18/52 (34%)	13/42 (31%)	0.436
Wound infection (n,%)	7/52 (13%)	3/42 (7%)	0.503

4.3. Postoperative Complications

20 patients out of the total 94 (21.3%) had postoperative complications, with no significant difference between the hernia repair-only group (21.1%) and the skin excision group (21.4%). Regarding the number of complications, which could be more than one for each patient they were classified and compared using the Clavien-Dindo classification. The results are summarised on (Table 2). There was no significant difference in the number and severity of complications between the groups (p=0.436)

4.4. Surgical Site Infection (SSI) and Wound Morbidity

The incidence of wound infections was higher in the skin excision group 13.5% compared to 7.1% in the hernia repair-only group, but this difference did not reach statistical significance (p=0.503). Similarly, seroma formation was more common in the skin excision group but was not significantly associated with increased morbidity. Of the 94 patients in this study, 44 (47%) underwent concurrent skin excision. Most (36, 82%) had a horizontal panniculectomy, performed for a significant overhanging pannus, while 8 patients (18%) required a vertical excision, undertaken when excess midline tissue resulted from the expansion effect of a large incisional hernia. Complication rates did not differ significantly between horizontal and vertical excision (p=0.443), nor did wound infection rates (p=0.421). The intraoperative involvement of a plastic surgeon also had no impact on overall complications (p=0.892) or infections (p=0.759).

4.5. Complication Rates by Hernia Size

A subgroup analysis based on hernia size revealed that larger hernias (≥6 cm) had a higher incidence of postoperative complications, particularly Clavien-Dindo Grade 2-4 complications. The distribution of complications by hernia size was as follows:

- Hernia <6 cm: No complications in 32 patients, while CD1–CD4 complications occurred in 10 patients.
- Hernia ≥6 cm: No complications in 29 patients, while CD1–CD4 complications were recorded in 18 patients.

Although the trend suggested a higher rate of complications with increasing hernia size, statistical analysis did not demonstrate a significant association between hernia size and postoperative complications (p=0.235).

The above findings are summarized on (Table 3).

4.6. BMI and Surgical Outcomes

Patients with a BMI ≥30 had a significantly higher rate of postoperative complications and wound infections (p<0.001) compared to those with a lower BMI. However, BMI did not significantly affect length of hospital stay (p=0.962) – (Table 4).

4.7. Summary of Findings

Table 3: Comparison of postoperative outcomes based on hernia defect size.

	Hernia defect size		P value
	1-5cm	6cm or larger	
Hospital Stay	2.80 ± 2.09	6.38 ± 11.39	0.051
Complications - Clavien-Dindo (CD)			
CD I (n,%)	4/42 (10%)	2/47 (4%)	
CD II (n,%)	3/42 (7%)	9/47 (19%)	
CD III (n,%)	3/42 (7%)	6/47 (13%)	
CD IV (n,%)	0	1/47 (2%)	
Total (n,%)	10/42 (24%)	18/47 (38%)	0.235
Wound infection	6/42 (14%)	12/47 (26%)	0.187

Table 4: Comparison of postoperative outcomes between patient with low and high BMI.

	BMI ≤ 30	BMI >30	P value
Hospital stay (mean ±SD)	4.57 ± 8.66	4.70 ± 4.57	0.962
Complications (n,%)	12/84 (14%)	8/10 (80%)	<0.001
Wound infection (n,%)	0/84	10/10 (100%)	<0.001

- Skin excision significantly prolonged hospital stay but did not increase the overall complication rate; these findings suggest that neither the orientation of skin excision nor the presence of a plastic surgeon had a measurable impact on surgical site morbidity in this cohort.
- BMI ≥30 was a strong predictor of postoperative complications, particularly wound infections ($p<0.001$).
- Hernia size >6 cm was associated with longer hospital stay but was not an independent predictor of postoperative complications.
- Surgical site infection rates were slightly higher in the skin excision group, though not statistically significant.

5. Discussion

The findings of this study contribute to the ongoing debate regarding the benefits and risks of concurrent panniculectomy in ventral hernia repair [5,15]. The results demonstrate that while panniculectomy leads to longer operative times and hospital stays, it does not significantly increase the overall rate of postoperative complications. Importantly, the study suggests a potential benefit against hernia recurrence, particularly in patients with lower BMI values [16] as obese patients represent a challenge for the surgeon [17]. This finding supports the notion that remov- ing excess skin and subcutaneous tissue may reduce mechanical strain on the repaired abdominal wall, thereby improving long- term outcomes.

These results align with existing literature, which has shown that panniculectomy may be associated with an increased risk of wound complications but does not appear to impact long-term recurrence rates [3,5,18]. Previous studies involving propensity score matching analysis have similarly demonstrated the same findings. While the addition of panniculectomy can lead to higher rates of wound-related morbidity, it does not negatively affect the durability of hernia repair [4]. A systematic review and meta-analysis confirmed that concurrent panniculectomy significantly increases the risk of surgical site infection, seroma formation, and wound dehiscence, yet may offer long-term benefits by reducing hernia recurrence rates [6]. The present study's findings support this trend, suggesting that while panniculectomy adds complexity to the procedure, its advantages may outweigh its risks in selected patient populations.

Several factors appear to influence the outcomes of combined hernia repair and panniculectomy. Obesity, particularly in patients with a BMI of 30 or greater, was associated with a higher rate of postoperative complications, particularly wound infections. This finding is consistent with previous studies that have identified obesity as a significant risk factor for wound-related morbidity [3,5,17]. Despite this, obesity did not appear to have a significant impact on hernia recurrence rates, which aligns with other analyses suggesting that. When optimal surgical techniques are used, BMI alone is not an independent predictor of recurrence [5,6,16]. Hernia size also played a role in postoperative recovery, with larger defects (≥6 cm) associated with longer hospital stays and a trend towards higher wound morbidity, although this did not reach statistical significance in the present analysis. This is in line with previous studies demonstrating that larger hernia defects may predispose patients to increased wound complications and extended recovery periods [5,18,19]. The number of diabetics were kept to a minimum and as those with poor control or an HBA1C of >7.0%, were not offered surgery. The routine use of NPWT was not standard in our practice during the study period due to resource constraints. However, based on emerging evidence [20] and our own experience with higher BMI patients, we now selectively employ NPWT for high-risk closures. A sensible policy therefore is selective use and to consider NPWT for open incisional hernia repairs with elevated risk (large midline incisions, obesity, prior SSI, smoking, diabetes, prolonged operative time), while perhaps not using it routinely for low-risk or minimally invasive hernia cases.

Despite the strengths of this study, several limitations must be acknowledged. The retrospective nature of the analysis introduces potential biases in patient selection and data collection, which could be mitigated by a prospective or randomised controlled trial. Additionally, as the study represents outcomes from a single surgeon's practice, the findings may not be generalisable to other institutions where surgical approaches and perioperative management may differ. The heterogeneity of the repair undertaken (e.g., retro-rectus repair, anterior CST, posterior CST, no CST) is another limitation, but it reflects real-world practice. The absence of randomisation means that differences in baseline characteristics between groups may still have influenced the results. Furthermore, while short-term postoperative outcomes were well-documented, long-term follow-up data beyond 12 months remain limited. A longer follow-up period would be required to fully assess the durability of concurrent skin excision/ panniculectomy in hernia repair.

To further clarify the role of panniculectomy in hernia repair, future research should focus on prospective, multicenter trials to validate findings across different surgical settings. Longer-term follow-up studies would help determine whether the apparent reduction in hernia recurrence persists over time. Additionally, further investigation into alternative strategies for high-risk patients, such as staged procedures or minimally invasive techniques, would be beneficial in identifying the safest and most effective approach for patients with multiple risk factors. Evaluating patient-reported outcomes, including quality of life and functional recovery, would also provide valuable insight into whether panniculectomy offers significant benefits beyond reducing hernia recurrence.

This study demonstrates that concurrent vertical skin excision or panniculectomy during ventral incisional hernia repair can be safely performed in selected patients, with appropriate perioperative optimisation, especially with the strict adherence to such factors such as the exclusion of patients with poorly controlled diabetes. This experience has informed the authors of better patient stratification, and consideration of reconstructive input for

patients with high BMI and complex skin redundancy. Lessons learned include closer attention to nutritional status and early postoperative mobilisation protocols as well as consideration of using NPWT for patients with a BMI >30. In this carefully selected cohort, concurrent skin excision did not lead to a significant increase in complications despite longer hospital stay. These findings suggest that redundant skin excision or a panniculectomy should be considered in patients with redundant soft tissue that may contribute to mechanical strain on the repaired hernia site. However, further prospective studies with extended follow-up are required to confirm these findings and establish clearer guidelines for patient selection.

Reflecting on the cohort presented and outcomes observed, several refinements have been made to patient selection and perioperative decision-making going forward. Specifically, greater emphasis is now placed on preoperative nutritional optimisation and comorbidity risk scoring (e.g., CEDAR/ASA). Patients with complex skin redundancy or higher BMI are more likely to be considered for a staged approach or co-managed with reconstructive surgical input. The use of drains and duration of inpatient observation has also been adapted in select cases, based on individual intraoperative findings. These refinements aim to reduce postoperative morbidity while maintaining the functional and cosmetic benefits of combined skin and hernia repair.

6. Conclusion

These findings suggest that while concurrent skin excision in complex incisional hernia repairs leads to longer hospital stays, it does not independently contribute to increased postoperative complications. However, patient factors such as BMI and hernia size play a significant role in determining outcomes, highlighting the importance of preoperative optimisation to reduce complications in high-risk populations.

During the preparation of this work the author(s) used ChatGPT in order to polish language only. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

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