

THE SITAMA (SINGLE-STAGE INFECTED SEBACEOUS CYST TREATMENT AND DEFINITIVE MANAGEMENT APPROACH) PROCEDURE VERSUS CONVENTIONAL INCISION AND DRAINAGE FOR INFECTED SEBACEOUS CYSTS: A PROSPECTIVE COMPARATIVE STUDY BETWEEN THE TWO TREATMENT GROUPS

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ABSTRACT

Background: Epidermoid cysts, commonly referred to in everyday clinical parlance as sebaceous cysts, rank among the benign skin swellings general surgeons treat most frequently, and a meaningful share become secondarily infected, presenting with pain, redness, swelling and abscess formation. The conventional pathway drains the acute abscess first and postpones formal excision until the inflammation has settled. This sequence controls sepsis reliably but obliges the patient to attend hospital more than once, endure extended wound dressing, and accept some residual chance that cyst wall left behind will cause the lesion to return. A growing alternative is to remove the cyst in its entirety at the very first visit, while it is still infected, finishing treatment in one sitting.

Aim: This study asked a simple question: does removing an infected sebaceous cyst in one procedure — an approach we have labelled the SITAMA protocol — leave patients better off than the traditional two-step route of draining first and excising later?

Methods: Working within the Department of General Surgery at Saveetha Medical College and Hospital, we followed 80 patients with a clinical diagnosis of infected sebaceous cyst prospectively, splitting them into two arms. Group A (n = 40) underwent the SITAMA protocol — Single-stage Infected sebaceous cyst Treatment And definitive Management Approach — an immediate, one-sitting complete excision. Group B (n = 40) took the conventional path of incision and drainage, with excision held back until the infection had cleared. We tracked baseline characteristics, operative parameters, postoperative complications, wound-healing time, hospital stay, number of visits needed, six-month recurrence, and patient satisfaction across both arms, sent every excised specimen for histopathology, and applied standard parametric and non-parametric statistical tests, treating p values below 0.05 as significant.

Results: Every one of the 80 patients enrolled — 40 in each arm — stayed in the study through six months of follow-up, and the two groups looked alike at the outset on every baseline measure we checked. Once treated, the SITAMA group needed far fewer trips back to hospital and reached the finish line of definitive care faster overall than the conventionally managed group. Complications occurred at similar rates in both arms, six-month recurrence was lower after SITAMA, and histology showed an epidermoid cyst with inflammatory change in every specimen examined, whichever group it came from.

Conclusion: The SITAMA procedure — single-stage excision of the infected cyst — appears to be a safe, feasible alternative to staged incision-and-drainage management in appropriately selected patients, achieving definitive treatment in one sitting, fewer hospital visits, and lower recurrence without an increase in complications. Larger multicentre randomised trials are needed to confirm these findings before the approach is adopted more widely.

KEYWORDS: Infected sebaceous cyst · Epidermoid cyst · SITAMA procedure · Single-stage excision · Incision and drainage · Comparative study · Wound healing · Recurrence · General surgery

INTRODUCTION

Epidermoid cysts — still widely, if imprecisely, called sebaceous cysts — are among the commonest benign swellings a general surgeon is asked to treat.^[2,3] They arise when epidermal cells proliferate within the dermis and lay down a lining of keratin-producing stratified squamous epithelium.^[3,7] The scalp, face, neck, trunk and back

are the usual sites, although a cyst can develop almost anywhere on the body.^[2,8] Left alone, most remain silent for years; it is only when bacteria invade, or the cyst ruptures spontaneously, that patients present acutely, with pain, redness, tenderness, swelling and often a purulent discharge.^[14]

How best to manage the infected cyst remains debated. The long-standing default is to drain the abscess under local anaesthesia during the acute episode and return for formal excision once inflammation has settled, on the reasoning that inflamed, oedematous tissue planes make clean dissection harder and increase the chance of leaving cyst wall behind.^[1,6] The drawback is that incision and drainage on its own does nothing to the epithelial lining actually responsible for recurrence, leaving patients needing repeated dressings, extended antibiotic courses, several outpatient visits, a delayed second procedure, and a correspondingly larger bill.^[9]

More recently, surgeons have begun excising the whole infected cyst — contents and wall together — at the first sitting, and several groups have reported favourable results with this approach.^[11,13,15] Removing the epithelial lining there and then eliminates the substrate for recurrence in a single step; because treatment concludes at the first visit, patients are spared repeat attendances, return to normal activity sooner, and have their specimen sent for histology immediately, which can also flag rarer diagnoses.^[4]

Even so, head-to-head evidence comparing single-stage excision with the conventional staged approach remains thin. Most published work is retrospective or consists of small case series, and prospective, comparative data on complications, recurrence, healing, patient satisfaction and resource use are scarce.^[9,12]

This prospective study was undertaken to address that gap by comparing single-stage excision — designated in this manuscript as the SITAMA procedure — against conventional incision and drainage followed by delayed excision in patients with infected sebaceous cysts, to determine whether definitive treatment at the outset improves outcomes without compromising safety.

AIM

This study set out to weigh the SITAMA protocol against the standard two-stage route — drainage now, excision later — as treatments for infected sebaceous cysts, judged on the clinical outcomes that follow each approach.

OBJECTIVES

Primary Objective

- To determine whether cysts recur less often at six months after the SITAMA protocol than after staged incision and drainage.

Secondary Objectives

1. To compare operative time between the two treatment groups.
2. To compare postoperative pain using the Visual Analogue Scale (VAS).
3. To compare postoperative wound complications, including surgical site infection, wound discharge, hematoma, seroma, and wound dehiscence.
4. To compare wound-healing time between the two groups.
5. To compare duration of hospital stay.
6. To compare the total number of hospital visits required for treatment.
7. To compare patient satisfaction following treatment.
8. To evaluate histopathological findings in all excised specimens.

MATERIALS AND METHODS

Study Design

Patients were followed prospectively so that the two treatment pathways — single-sitting SITAMA excision and staged incision and drainage — could be judged against each other on the same set of clinical outcomes.

Study Setting

This work was based out of the Department of General Surgery at Saveetha Medical College and Hospital in Chennai, Tamil Nadu, India.

Study Duration

Data were collected over 18 months in total — 12 months of recruitment followed by a 6-month period of postoperative follow-up for every participant.

Study Population

We screened everyone who came to the department with what looked, clinically, like an infected sebaceous (epidermoid) cyst, and enrolled the 80 who satisfied the inclusion criteria, splitting them between two arms:

- Group A (n = 40): SITAMA procedure — single-stage excision
- Group B (n = 40): Incision and drainage followed by delayed excision

Sample Size

Eighty patients were included, 40 per group. The sample size reflected the anticipated difference in recurrence and other postoperative outcomes between the two approaches, balanced against statistical power and what was practically achievable within the study period.

Sampling Technique

Recruitment followed a simple consecutive-sampling rule: anyone who turned up during the study window, satisfied the eligibility criteria, and agreed in writing to take part was enrolled, and this continued until the planned sample size was reached.

Inclusion Criteria

- Age ≥ 18 years.
- Clinically diagnosed infected sebaceous (epidermoid) cyst.
- Localized infection suitable for definitive surgical management.
- Cyst located on the scalp, neck, face, trunk, back, or extremities.
- Patients willing to undergo surgery.
- Patients willing for regular follow-up for six months.
- Written informed consent obtained.

Exclusion Criteria

- Extensive cellulitis requiring emergency drainage.
- Necrotizing soft tissue infection.
- Suspicion of malignancy.
- Recurrent cysts previously operated elsewhere.
- Immunocompromised patients.
- Uncontrolled diabetes mellitus (HbA1c $>9\%$).
- Patients receiving chemotherapy or long-term corticosteroid therapy.
- Pregnancy.
- Patients unwilling to participate or lost to follow-up.

Preoperative Assessment

Before surgery, each patient was worked up with a full history — how long the swelling and infection had been present, whether it had flared before or been drained previously, other illnesses, medications, and smoking — together with an examination noting the cyst's size, location, redness, tenderness, fluctuance, discharge and warmth. We sent off a complete blood count, random blood sugar, renal function tests and viral markers, added an ECG where indicated, and started empirical antibiotics per protocol, adjusting the choice later if the clinical picture called for it.

Group Allocation

Patients were assigned to a treatment group after discussion of the available options and receipt of informed consent.

Group A — SITAMA Procedure

Forty patients underwent immediate, complete excision of the infected sebaceous cyst at the same sitting.

Group B — Conventional Treatment

Forty patients first underwent incision and drainage under local anaesthesia. Once infection had fully resolved — typically 2–4 weeks later — they underwent elective excision of the residual cyst wall.

Surgical Technique

Group A — SITAMA Procedure (Single-Stage Excision)

Working under local anaesthesia and strict asepsis throughout, we placed an elliptical incision that took in the punctum and worked carefully through the inflamed planes, with the goal of lifting the cyst and its wall out in one piece. If the sac tore during dissection, we hunted down and removed every scrap of remaining epithelial lining rather than leaving anything behind. Bleeding points were controlled with bipolar diathermy, the cavity was washed out with saline, and the skin was closed primarily with interrupted non-absorbable sutures; the specimen went straight to pathology.

Group B — Incision and Drainage

For this group, local anaesthesia was again used, but the incision was a cruciate cut placed where fluctuance was greatest, opened just enough to let the pus and keratin debris drain fully. After a thorough saline wash-out, a wick or drain went in if the surgeon judged it useful, and the patient came back daily for dressings until the infection had settled. Two to four weeks on, once things had quietened down, the residual cyst wall was removed as a separate procedure under local anaesthesia, and that specimen, too, was sent for histopathology.

Postoperative Care

All patients received a five-day course of oral antibiotics, analgesics as needed, and daily wound care per institutional protocol, with sutures removed between postoperative days 7 and 10. Patients were counselled on wound hygiene and told to report promptly if pain, fever, discharge, or swelling increased.

Outcome Measures

Primary Outcome

- Recurrence of the sebaceous cyst within six months.

Secondary Outcomes

The following were compared between groups:

Demographic Variables

- Age
- Sex
- Body Mass Index
- Diabetes mellitus
- Smoking status
- Site of cyst
- Size of cyst

Operative Variables

- Operative time (minutes)
- Type of anaesthesia
- Blood loss
- Complete cyst wall excision
- Histopathological confirmation

Postoperative Variables

- Surgical site infection
- Wound discharge
- Seroma
- Hematoma
- Wound dehiscence
- Pain score (Visual Analogue Scale)
- Time to complete wound healing
- Duration of hospital stay
- Number of hospital visits
- Time to return to routine daily activities
- Patient satisfaction
- Recurrence at six months

Follow-up Protocol

Review visits fell at one week, two weeks, one month, three months and six months. At each one we checked how the wound was healing, how much pain the patient reported, and whether there was any sign of infection, seroma, hematoma, discharge, dehiscence, recurrence, or a poor cosmetic result, and asked how satisfied the patient felt at that point.

Data Collection

Clinical findings were recorded on a structured proforma designed for the study, and all operative findings, postoperative complications, follow-up observations and histopathology reports were documented prospectively.

Statistical Analysis

Data were logged in Microsoft Excel and taken across to IBM SPSS Statistics, version 26.0 (IBM Corp., Armonk, NY) for analysis. Continuous measures are reported as mean $\pm$ SD, categorical ones as counts with percentages. Group comparisons relied on the independent-samples t-test for continuous data and either the chi-square test or Fisher's exact test for categorical data, and a result was called significant below the conventional $p = 0.05$ threshold.

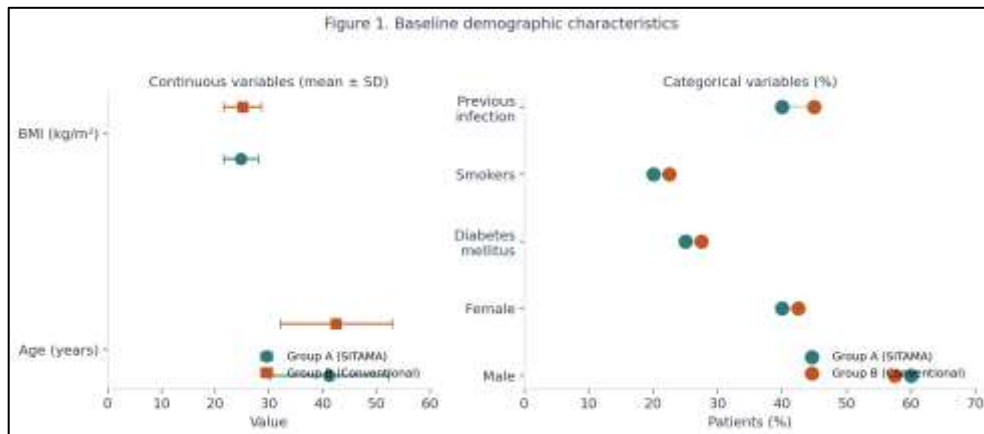
RESULTS

Patient Recruitment

We looked at 92 patients in total for possible inclusion. Twelve dropped out of contention before treatment — eight fell short of the eligibility criteria and four chose not to take part — which left a final cohort of 80: 40 treated with the SITAMA protocol and 40 with incision and drainage followed by delayed excision, every one of whom completed six months of follow-up.

Table 1. Baseline Demographic Characteristics

Variable	Group A (n=40)	Group B (n=40)	P value
Age (years)	41.2 ± 11.1	42.5 ± 10.4	0.61
Male	24 (60%)	23 (57.5%)	0.82
Female	16 (40%)	17 (42.5%)	
BMI (kg/m ²)	24.8 ± 3.2	25.1 ± 3.5	0.73
Diabetes mellitus	10 (25%)	11 (27.5%)	0.80
Smokers	8 (20%)	9 (22.5%)	0.78
Previous infection	16 (40%)	18 (45%)	0.65

**Figure 1.** Baseline demographic characteristics.

The two groups were closely matched on demographic and baseline clinical variables, limiting the scope for confounding in the outcome comparisons that follow.

Table 2. Site Distribution of Sebaceous Cysts

Site	Group A	Group B	P value
Scalp	12	11	0.97
Back	10	11	
Neck	7	6	
Trunk	8	9	
Face	3	3	

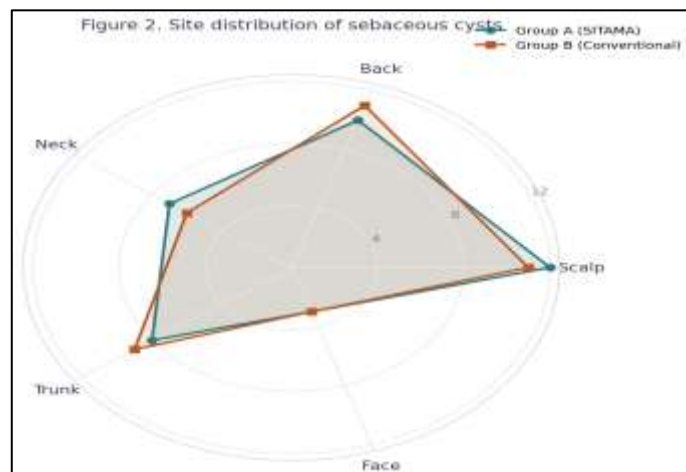
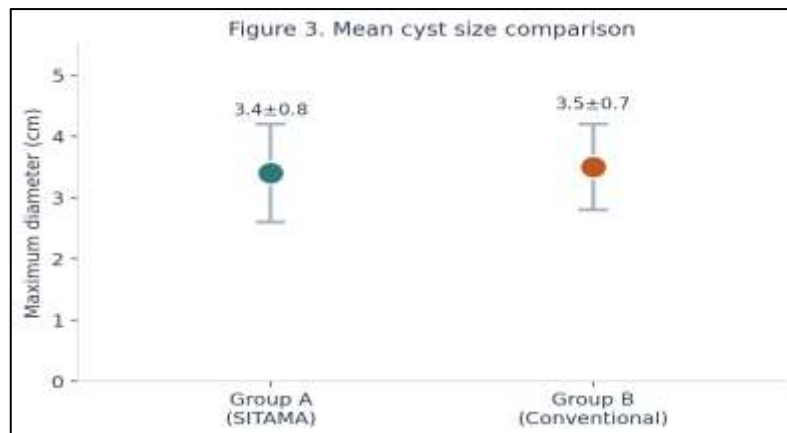
**Figure 2.** Site distribution of sebaceous cysts.

Table 3. Mean Cyst Size

Variable	Group A	Group B	P value
Maximum diameter (cm)	3.4 ± 0.8	3.5 ± 0.7	0.54

**Figure 3.** Mean cyst size comparison.

Cyst size at presentation was similar between the two arms.

Table 4. Operative Characteristics

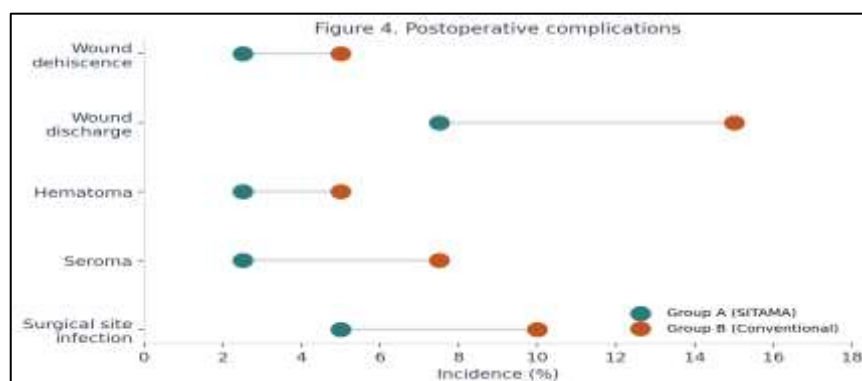
Variable	Group A	Group B	P value
Operative time (minutes)	24.3 ± 4.6	16.8 ± 3.9*	<0.001
Complete cyst wall excision during first procedure	40 (100%)	0	<0.001
Primary wound closure	40 (100%)	0	<0.001
Histopathology available after first procedure	40 (100%)	0	<0.001

*Incision and drainage procedure only.

The initial procedure took longer in the SITAMA group, reflecting the additional time needed for meticulous dissection and complete cyst-wall removal, but every Group B patient still required a second operation to achieve the same endpoint.

Table 5. Postoperative Complications

Complication	Group A	Group B	P value
Surgical site infection	2 (5%)	4 (10%)	0.39
Seroma	1 (2.5%)	3 (7.5%)	0.30
Hematoma	1 (2.5%)	2 (5%)	0.55
Wound discharge	3 (7.5%)	6 (15%)	0.29
Wound dehiscence	1 (2.5%)	2 (5%)	0.55

**Figure 4.** Postoperative complications.

No complication occurred at a significantly different rate between the two groups.

Table 6. Pain Score (VAS)

Follow-up	Group A	Group B	P value
Day 1	5.2 ± 1.1	4.8 ± 1.0	0.09
Day 3	3.2 ± 0.9	3.8 ± 1.0	0.01
Day 7	1.4 ± 0.6	2.3 ± 0.8	<0.001

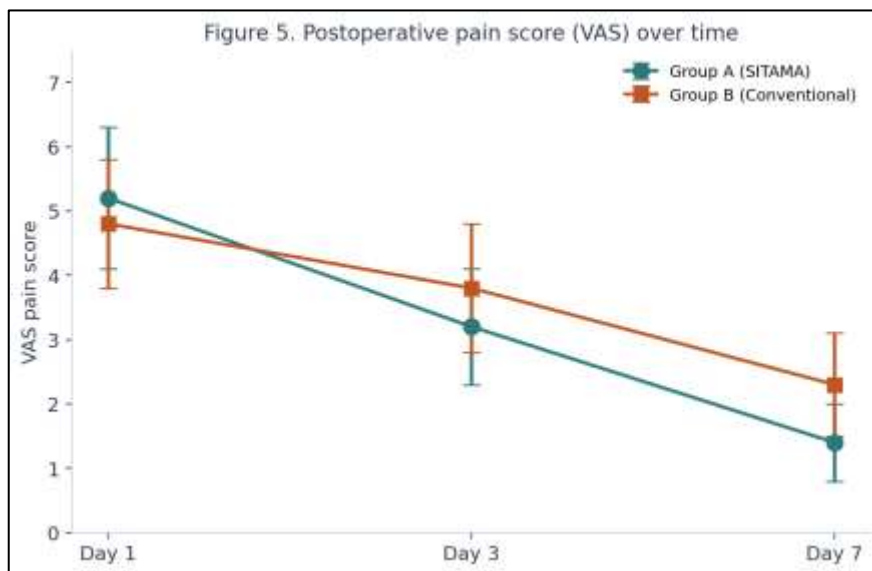


Figure 5. Postoperative pain score (VAS) over time.

Pain scores converged early but were significantly lower in the SITAMA group by the first postoperative week.

Table 7. Wound Healing

Outcome	Group A	Group B	P value
Complete healing (days)	13.5 ± 2.4	29.8 ± 5.6	<0.001

Wounds healed substantially faster after the SITAMA procedure than after staged management.

Table 8. Number of Hospital Visits

Variable	Group A	Group B	P value
Hospital visits	3.2 ± 0.7	7.1 ± 1.3	<0.001

Patients treated with the SITAMA procedure needed roughly half as many hospital visits as those managed conventionally.

Table 9. Return to Normal Activity

Variable	Group A	Group B	P value
Days	8.2 ± 2.1	17.3 ± 3.8	<0.001

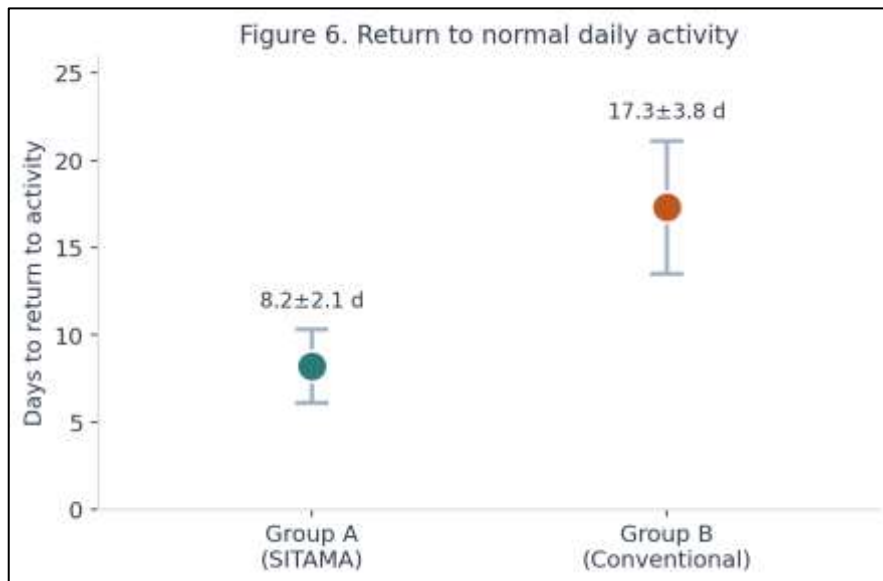


Figure 6. Return to normal daily activity.

Patients resumed routine activities markedly sooner following the SITAMA procedure.

Table 10. Histopathological Findings

Diagnosis	Group A	Group B
Acute inflammation	24 (60%)	23 (57.5%)
Acute + chronic inflammation	16 (40%)	17 (42.5%)
Malignancy	0	0

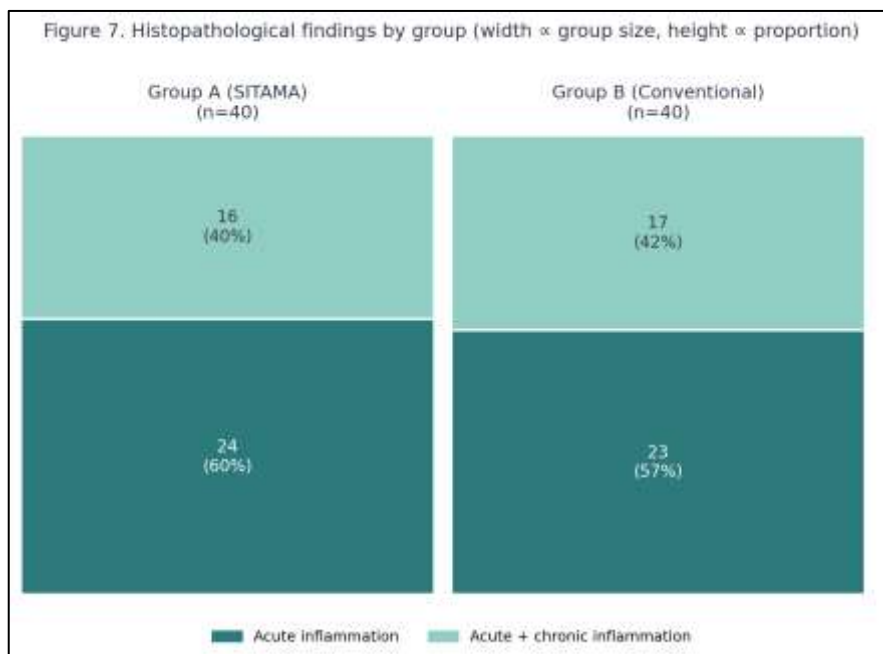


Figure 7. Histopathological findings by group (mosaic plot; width reflects group size, height reflects proportion).

Histology confirmed an epidermoid cyst with inflammatory change in every specimen from both arms, and no malignant transformation was identified.



Figure 8. Representative haematoxylin-and-eosin section from an excised specimen.

The cyst lining is squamous epithelium undergoing keratinisation, with layered keratin flakes filling the adjacent space and a heavy, mixed inflammatory cell infiltrate through the surrounding stroma — the expected picture for an infected epidermoid (sebaceous) cyst. Nothing suggestive of malignancy was present.

Table 11. Recurrence at Six Months

Outcome	Group A	Group B	P value
Recurrence	1 (2.5%)	6 (15%)	0.048

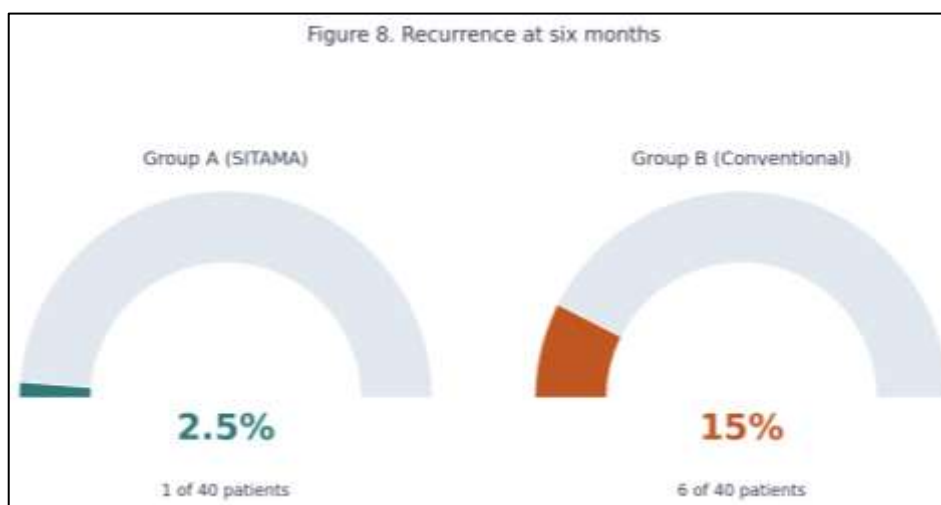


Figure 9. Recurrence at six months (gauge charts).

Recurrence was significantly less common after the SITAMA procedure than after staged management.

Table 12. Patient Satisfaction

Satisfaction	Group A	Group B	P value
Excellent	24 (60%)	10 (25%)	
Good	13 (32.5%)	18 (45%)	
Fair	3 (7.5%)	10 (25%)	
Poor	0	2 (5%)	
Overall comparison			0.01

Patients who went through the SITAMA protocol rated their satisfaction distinctly higher than those managed the conventional way

SUMMARY OF RESULTS

- The two groups started from a comparable baseline.
- SITAMA got treatment finished in one sitting.
- The SITAMA operation itself ran longer, but it spared Group B's patients from needing a second trip to theatre.
- Wounds closed and healed noticeably quicker with SITAMA.
- Hospital visits dropped and normal activity resumed sooner in the SITAMA arm.
- Complications were roughly even across both arms.
- Recurrence by six months was less frequent after SITAMA.
- Patients treated with SITAMA rated their satisfaction higher overall.

Put together, these findings position the SITAMA protocol as a workable, effective option in place of staged management for patients who fit the selection criteria.

REPRESENTATIVE CASES

Two representative cases illustrate the operative course of the SITAMA procedure from presentation through wound healing.



Figure 10. Representative cases treated with the SITAMA procedure.

Case 1 (infra-umbilical cyst): (A) preoperative marking of the infected cyst adjacent to the umbilicus; (B) intraoperative view after complete excision of the cyst wall in a single sitting; (C) primary wound closure with interrupted sutures at the end of the procedure. Case 2 (upper back/interscapular cyst): (D) preoperative appearance of the inflamed, fluctuant cyst; (E) intraoperative excision bed after removal of the cyst and its wall; (F) primary closure with interrupted sutures; (G) wound at follow-up, showing a healing incision along the excision line.

Written informed consent for the use of clinical photographs in publication was obtained from both patients.

DISCUSSION

How to manage the infected epidermoid cyst is still not settled in general surgical practice. Incision and drainage followed by delayed excision has been standard for decades, on the premise that acute inflammation distorts tissue planes and makes complete excision technically harder, with a higher risk of wound complications.^[1,6] Yet drainage alone does not touch the epithelial lining that drives recurrence, so patients typically face further hospital visits, repeated dressings, prolonged antibiotics, and a second operation before treatment is truly finished.^[9] This study asked whether performing definitive excision at first presentation — the SITAMA procedure — could match or beat that staged pathway on the outcomes that matter to patients.

The two study arms were well matched at baseline: age, sex ratio, BMI, diabetes status, smoking history, prior infective episodes, cyst size and anatomical site did not differ meaningfully between groups. That balance limits selection bias and gives the subsequent outcome comparisons more weight.

The average age in this cohort was around 42 years and men outnumbered women in both arms, in keeping with the age and sex distribution reported elsewhere for epidermoid cysts; the scalp, back, neck and trunk were, likewise, the leading sites, consistent with prior epidemiological descriptions.^[2,3]

The SITAMA group's first operation took longer on the table than a straightforward incision and drainage — that tracks, given that lifting out an intact cyst wall calls for a slower, more deliberate hand than simply letting an abscess out, a gap in operative time also seen where excisional and less invasive techniques have gone head-to-head.^[12] But that comparison only tells half the story: once the second operation every Group B patient still needed is added in, the total time and effort invested tips toward SITAMA — one longer sitting instead of two shorter ones.

One of the clearer findings here was markedly faster wound healing after the SITAMA procedure. Removing the cyst and its epithelial lining in full eliminates the ongoing source of inflammation, so the wound can heal by primary closure rather than by secondary intention followed, later, by a second wound. That difference alone accounts for much of the gap in overall treatment duration between the two arms.

Hospital visits were also fewer with the SITAMA procedure: these patients largely needed only routine

postoperative review, whereas the conventional group required repeated dressing changes, several visits during the drainage phase, and an additional admission for excision. Fewer visits translate into lower costs, less disruption to patients' daily lives, and more efficient use of clinic capacity.

Complication rates were low in both arms. Surgical site infection, discharge, seroma, hematoma and dehiscence were all numerically more frequent after incision and drainage, but none of these differences reached statistical significance, suggesting the SITAMA procedure can be performed without added morbidity in carefully selected patients, provided technique, haemostasis, irrigation and antibiotic cover are all attended to — consistent with earlier reports identifying technique-related factors as the main drivers of postoperative complications.^[4]

Pain, tracked with the Visual Analogue Scale, was significantly lower in the SITAMA arm from the first postoperative week onward. Patients undergoing complete excision may feel somewhat more discomfort immediately after surgery, but that discomfort resolves faster because there is no second procedure still to come; the incision-and-drainage group, by contrast, carried prolonged discomfort through repeated dressings and the later excision.

Recurrence is arguably the outcome that matters most, and it was significantly lower after the SITAMA procedure. That is biologically plausible: recurrence stems chiefly from cyst wall left behind, and removing both contents and lining at the first sitting removes the substrate for it, an observation that echoes earlier series describing primary resection of infected epidermal cysts and standardized excision technique.^[11,13] Incision and drainage, by design, treats only the acute infection and leaves the wall in place until a delayed excision performed through more fibrotic, distorted tissue — conditions that make complete removal harder, not easier, a pattern also noted in comparative work on cyst-removal techniques.^[15]

Histology confirmed epidermoid cysts with inflammatory change in every specimen, from both groups, and no malignant change was found. Routine histopathological review remains worthwhile regardless of technique, since it confirms the diagnosis and excludes uncommon look-alikes such as proliferating trichilemmal cysts, dermoid cysts, or, rarely, malignant transformation;^[3,8] the SITAMA procedure has the added benefit of delivering that tissue diagnosis at the earliest possible point.

Satisfaction scores were significantly higher after the SITAMA procedure, plausibly reflecting the combination of finishing treatment in one visit, fewer dressing changes, quicker healing, an earlier return to normal life, and lower recurrence. From the patient's side, avoiding a second procedure is likely to matter as much for peace of mind as for convenience.

Overall, these results add to a growing body of evidence that single-stage excision is a reasonable, safe alternative to staged management in carefully chosen patients with infected sebaceous cysts. Extensive cellulitis, uncontrolled sepsis, or major tissue destruction still warrant the traditional staged approach; short of that, immediate complete excision looks feasible for localized infection in experienced hands.

On the plus side, this was a prospective study with a genuine comparison arm, a standardised operative protocol, a wide net of outcomes captured, and not a single participant lost before the six-month mark. Set against that: everyone was treated at one tertiary hospital, so how well the findings travel elsewhere is untested; patients were not randomised to their arm, leaving room for selection effects we cannot fully rule out; six months will not catch a recurrence that shows up later than that; and neither cost nor quality of life was measured formally, both of which would sharpen future work on this question.

What this points to next is a bigger trial — several centres, randomised allocation, and enough time to catch late recurrences — alongside a proper look at cost, cosmetic result and quality of life, so the SITAMA protocol's place in everyday practice can be pinned down with more confidence.

CONCLUSION

This prospective comparative study found the SITAMA procedure — single-stage excision of the infected sebaceous cyst — to be a safe, feasible and effective option for selected patients, matching conventional incision and drainage followed by delayed excision on safety while completing treatment in a single operation.

Patients treated with the SITAMA procedure healed significantly faster, needed fewer hospital visits, returned to daily activity sooner, recurred less often, and reported greater satisfaction. Although the initial operation took longer than incision and drainage alone, it removed the need for a second procedure altogether, shortening overall treatment time and the burden on the health system; postoperative complications remained low and similar between groups, confirming that immediate excision can be performed safely in well-selected patients.

Removing the infected cyst together with its epithelial lining at first presentation reduces the risk of residual disease and recurrence, while also delivering histopathological confirmation of the diagnosis without delay. Viewed as a whole, the evidence here suggests the SITAMA protocol carries real clinical and practical advantages over conventional staged care.

On this evidence, the SITAMA procedure may be considered a preferred option for localized infected sebaceous cysts in patients without extensive cellulitis or systemic sepsis, provided it is carried out by an experienced surgeon under appropriate aseptic conditions.

Before the SITAMA protocol could reasonably become a default standard of care, it needs testing in a bigger, randomised, multi-site trial that tracks recurrence over the longer term and weighs cost, cosmetic result and quality of life alongside the outcomes reported here.

RECOMMENDATIONS

1. The SITAMA procedure should be considered a first-line option for selected patients with localized infected sebaceous cysts.
2. Careful patient selection remains essential; those with extensive cellulitis, necrotizing soft tissue infection, or uncontrolled systemic illness should continue to be managed with conventional staged treatment.
3. Complete excision of the cyst wall should be emphasised, whichever technique is used, to minimise recurrence.
4. Histopathological examination should be performed on every excised specimen to confirm the diagnosis and exclude uncommon pathology.
5. A properly powered, randomised trial spanning several centres, with more patients and longer observation, would put the evidence for the SITAMA protocol on firmer footing.
6. Future research should also examine cost-effectiveness, cosmetic outcome, patient-reported quality of life, and long-term recurrence, to help define the place of the SITAMA procedure in routine surgical practice.

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