

Window surgery- an effective treatment option for Seroma of the Pinna

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Abstract:

Introduction: Seroma, also called as Pseudocyst of pinna is a benign cystic swelling which commonly develops in the antero-lateral aspect of the pinna. It occurs due to accumulation of fluid between perichondrium and cartilage and does not have an epithelial lining. This study was conducted to compare and analyse the outcomes of the Window operation and aspiration and intralesional corticosteroid injection.

Materials and methods: 38 patients who had presented with seroma over a period of 5 years to a Tertiary care center were included in this study. They were divided randomly into two groups. One group with 20 patients underwent window operation and the other with 18 patients was treated by aspiration and intralesional injection of triamcinolone. Patients were followed up for 6 months to note for recurrence.

Results: The main concern is Seroma of the Pinna is recurrence. One patient who underwent Window operation reported with recurrence (5%) and six patients (33%) who underwent aspiration and injection of corticosteroid in a single setting reported with recurrence.

Conclusion: In our study, Seroma was commonly seen involving the upper half of the Pinna. The main concern in Seroma is the recurrence. Window operation was found to have lesser recurrence as compared to aspiration and intralesional injection of triamcinolone. Aspiration and injection of Triamcinolone was less invasive and consumed lesser time as compared to the Window operation. Complications were not reported in either of the groups. We conclude that Window operation is an effective treatment option for Seroma of the Pinna.

Introduction

Seroma also called as Pseudocyst of pinna is a benign cystic swelling which commonly develops in the antero-lateral aspect of the pinna. It occurs due to accumulation of fluid between perichondrium and cartilage and does not have an epithelial lining. The exact cause of the Seroma is unknown. It may be due to micro trauma¹. It may also occur de novo or following any surgery or trauma to the pinna².

These swellings can affect facial aesthetics³. Window operation which involves excision of a small piece of cartilage is the most widely accepted modality of treatment. There are various other modalities of treatment but not a single one has been found satisfactory. Seromas are notorious for recurrence and may need multiple procedures².

This study was conducted to compare and analyse the outcomes of the Window operation and aspiration and intralesional corticosteroids.

Materials and methods

38 patients who had presented with seroma of size less than 2.5X2.5cms to a tertiary care centre from January 2017 to December 2021 were included in this study. It was a comparative analytical study. Sample size was calculated based on the prevalence of seroma in external ear. Approval was taken from the ethical committee of the institution. Fisher exact test was used to calculate the results.

The study population was divided into two groups of 20 and 18 patients each in the Window surgery and aspiration and intralesional corticosteroid injection groups respectively. One group underwent window operation and the other was treated by aspiration and intralesional injection of triamcinolone in one setting. Patients were followed up for a period of 6 months. They reported monthly once and a note on the recurrence status was made.

The window surgery was performed via a post-auricular incision and a creation of a window in the cartilage of the Pinna, corresponding to the region of the Seroma. A drain is placed in this region which is removed 24-48 hours later depending on the quantity of fluid drained.

In the other modality of treatment, the fluid was aspirated with a 24 gauge needle followed by intralesional injection of 0.1 ml of 40mg/ml Triamcinolone acetate.

Results:

In this study 30 patients were males and 8 patients were females. It has been shown in Table no: 1

Table No 1: Sex distribution

Gender	TREATMENT		Total
	Window operation	Aspiration and steroid injection	
Female	2(10%)	6(33%)	8(21%)
Male	18(90%)	12(67%)	30(79%)
Total	20(100%)	18(100%)	38(100%)

Of the 38 patients, seroma was found in the Upper half of the Pinna involving the Scaphoid fossa, triangular fossa & the concha in 17 patients, in the Helix, scaphoid & triangular fossa predominantly in 13 patients and Anti-helix & concha in 8 patients. It has been shown in Table no: 2

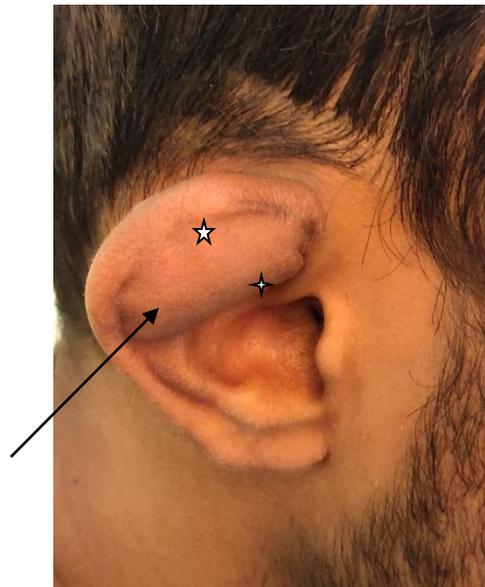
Table No 2: Site distribution

Site	TREATMENT		Total
	Window	Aspiration and steroid	

	operation	injection	
Anti-helix & concha	2(10%)	6(33%)	8(21%)
Helix, Scaphoid fossa & Triangular fossa	4(20%)	9(50%)	13(34%)
Upper half Pinna	14(70%)	3(17%)	17(45%)
Total	20(100%)	18(100%)	38(100%)



Picture showing Seroma (arrow) involving Anti-helix ☆ & concha ✦



Picture showing Seroma (arrow) involving Helix, Scaphoid fossa ☆ & Triangular fossa ✦

It can be noted that the patients who presented with a more extensive seroma involving the upper half of the pinna were preferably treated with the window surgery. In this study one patient who underwent window operation reported with recurrence for whom the window was enlarged and a small gap was created while suturing the skin to facilitate continuous drainage. Six patients who underwent aspiration and intralesional injection of Triamcinolone reported with recurrence. These patients who presented with recurrence were given the option of a window surgery subsequently. 2 patients refused while 4 underwent the surgery to have no further recurrence. It has been shown

in Table no: 3. that significant difference was reported. Fisher's exact test was used to determine the significance.

Table No 3: Recurrence

Recurrence	TREATMENT		Total
	Window operation	Aspiration and steroid injection	
No recurrence	19(95%)	12(67%)	31(82%)
Recurrence	1(5%)	6(33%)	7(18%)
Total	20(100%)	18(100%)	38(100%)

P value = 0.0244

Discussion

Seromas are rare, asymptomatic, cystic swellings of the pinna that result from an accumulation of sterile fluid in between the perichondrium and cartilage and the space does not have an epithelial lining. It is an unilateral and asymptomatic, cystic swelling of the helix or antihelix and more common in the scaphoid fossa². Seroma of pinna can poses challenges to the treating surgeons. Although it is benign, its treatment is never an easy task and is known for multiple recurrences and deformity which can be disturbing to the patients. There are several different modalities for the treatment of the same, claiming to have successful outcome but all the treating doctors have not been able to produce the same success rate. Some may prefer a particular technique over others and have a variable success rates. Every procedure has its own merits and demerits¹.

There are simple modalities like intralesional injection of corticosteroids, simple aspiration and aspiration with compression. There are more invasive techniques like injection of a sclerosing agent with pressure dressing, incision and drainage with drain, cruciate incision with pressure dressing, incision and drainage with button suturing, plaster of paris pressure dressing, corrugated drain suture and window procedure with drain¹.

Onkarappa et al found that Transwindow suture technique could provide pressure and was self draining. Hence they were successful in preventing recurrence in 75% of their cases¹.

Bhat et al advocated the technique of Cruciate incision for the treatment of the same. 8% of the patients showed perichondrial reaction and 12% showed thickening of pinna. Not a single case of recurrence was reported². Purwar et al advocated Pressure appliance to prevent recurrence of seroma post drainage³.

Rai et al found that aspiration and intralesional injection of corticosteroid was a simple and minimally invasive procedure and was not associated with complications and recurrence⁴.

Our study reported 5% recurrence in patients who underwent window operation and 30% recurrence in patients who underwent aspiration and injection of corticosteroid. Previous studies have not compared two or more different procedures used to treat seroma. We have made a comparison between Window operation and aspiration and injection of corticosteroid.

Conclusion

In our study, Seroma was commonly seen involving the upper half of the Pinna. The main concern in Seroma is the recurrence. Window operation was found to have lesser recurrence as compared to aspiration and intralesional injection of triamcinolone. Aspiration and injection of Triamcinolone was less invasive and consumed lesser time as compared to Window operation. Complications were not reported in either of the groups. We conclude that Window operation is an effective treatment option for Seroma of the Pinna.

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