

Case Series

Management of Pancreatic Pseudocyst: where do we stand?Galketiya KB ¹, Pinto MVG ², Samarasinghe B ¹, Rohankumar RR ¹, Bandara WRSM ¹¹ Department of Surgery, Teaching Hospital Peradeniya, Sri Lanka² Department of Anaesthesiology, Teaching Hospital Peradeniya, Sri Lanka**Abstract**

Pancreatic pseudocysts persisting beyond six weeks needs decompression, specially when they are larger than 6cm and symptomatic. Cysto-gastrostomy is the treatment of choice. This may be done by open, laparoscopic or endoscopic methods. Endoscopic cystogastrostomy has the least morbidity. Ultrasound guided aspiration causes lesser morbidity but has a higher incidence of recurrence. We compare six patients with pseudocysts treated by aspiration and cystogastrostomy; open, laparoscopic and endoscopic.

Key words: Pancreatic pseudocyst; Cystogastrostomy; Endoscopy; Laparoscopy**Copyright:**© 2015 Galketiya KB *et al*. This is an open access article distributed under the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.***Correspondence:** kbgalketiya@yahoo.com**Cite this article as:** Galketiya KB, Pinto MVG, Samarasinghe B, Rohankumar RR, Bandara WRSM. Management of Pancreatic Pseudocyst: where do we stand?. *Anuradhapura Medical Journal* 2015;9(1):9-11.**DOI:** <http://dx.doi.org/10.4038/amj.v9i1.7540>

Introduction

Pancreatic pseudocysts constitute about 70 - 80% of all masses in the pancreas. It arises as a consequence of acute pancreatitis, pancreatic trauma and chronic pancreatitis.(1,2). Initial management is conservative, expecting spontaneous resolution. Symptomatic cysts which persist beyond six weeks and larger than six centimeters warrants decompression (1,2,3,4). The standard drainage procedure is cysto-gastrostomy by laparotomy. This is associated with a significant morbidity like pain, ileus, prolonged hospital stay and late wound complications like incisional hernia.(5,6,7) Minimal access techniques can reduce this morbidity.. Radiological guided, laparoscopic and endoscopic drainage are minimal access techniques.(1,2,3,5,6). However they need equipment, accessories and training. Therefore an evaluation of these techniques as compared to open surgery is required.

In this case series we compare six patients with pancreatic pseudocysts managed via open, radiological, laparoscopic and endoscopic techniques.

Cases and methods

A retrospective analysis of patients with pancreatic pseudo-cysts managed at Teaching Hospital Peradeniya was done. After confirming the clinical diagnosis by ultrasound scan initial management was conservative. Cysts persisting beyond six weeks, larger than 6cm and symptomatic were recruited for drainage. Open cysto-gastrostomy, percutaneous drainage, laparoscopic cysto-gastrostomy and endoscopic cysto-gastrostomy were used as interventions. Open surgery was the standard until we had training on minimal access techniques.

The open surgery was performed under general anaesthesia and endotracheal intubation. An upper mid line laparotomy was performed. The anterior wall of the stomach was opened. The cyst was drained in to the stomach by making an incision on the posterior wall of the stomach. This opening was sutured with a continuous suture and the anterior gastrostomy closed in two layers. The laparoscopic procedures were done under general

anaesthesia and endotracheal intubation. Three ports were used. Anterior wall of stomach was opened, cyst drained through the posterior wall and subsequent closure was performed.

Endoscopic drainage was done under sedation using a side viewing endoscope. The cyst bulging in to the posterior wall of the stomach was identified. An incision over the posterior wall was made using a needle knife draining the cyst in to the stomach.

Percutaneous drainage was done under the guidance of ultra-sound imaging with sedation.

The selection of the method of therapy was dependent on the availability of equipment and training of minimal access techniques.

The following details were compared to evaluate the efficacy of the techniques; type of anaesthesia, time taken, blood loss, complications, post operative analgesic requirement, post operative feeding, duration of hospital stay and immediate resolution of the cyst.



Figure 1 Endoscopic view showing the cyst bulging on to the posterior wall of the stomach

Results

Six patients were treated during a period of two years. There were 5males and one females. Age ranged from 8-59 years.

Table 1 Interventions and outcome

	Cystogastrostomy			Ultrasound guided aspiration
	Open	Laparoscopic	Endoscopic	
Number of patients	1	2	3	1
Anaesthesia	GA	GA	Sedation	Sedation
Average time (hours)	3	4	0.25	0.5
Blood loss(ml)	200	Not measurable	nil	Nil
Complications	nil	nil	nil	Nil
Post op narcotic analgesics (period in hours)	72	24	nil	Nil
Time taken to commence oral feeding (hours)	96	48	2	2
Hospital stay (days)	9	7	1	2
Immediate resolution	100%	100%	100%	100%

One patient of above six, an eight year old child, underwent complete aspiration. After 2 months he presented with a recurrence and endoscopic cystogastrostomy performed.

Discussion

Symptomatic pancreatic pseudocysts which persist beyond six weeks and larger than six centimeters warrants decompression(1,2,3,4). The standard technique is open cysto-gastrostomy associated with a post surgical morbidity(5,6,7). Minimal access techniques will minimize this morbidity allowing early feeding, mobilization and discharge from hospital(1,2,3,5,6).

With the availability of equipment and training laparoscopic drainage was used in place of open in our unit. Two patients following laparoscopic drainage required less analgesics, were fed early and had a short hospital stay, compared to open surgery patient. (Table 1) Then we offered endoscopic drainage done under sedation, completed in an average time of fifteen minutes.

They were commenced on oral feeding after two hours, required no post procedure analgesics and discharged next day. (Table 1)

Ultra-sound guided aspiration too had minimal morbidity but had a recurrence requiring endoscopic drainage. (Table 1)

Conclusion

According to our case series endoscopic cystogastrostomy is safe and effective and has the least morbidity. If there is failure to drain endoscopically, laparoscopic drainage is preferred than open procedure

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Competing Interests

None

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