

# SASES

The South African Society of Endoscopic Surgeons  
From the Office of the Honorary Secretary

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2013

## CONSENSUS DOCUMENT ON APPENDICECTOMIES

This document has been compiled by Dr G D Brombacher and Prof E Panieri  
and supported by consensus of the SASES EXCO

**Controversy: Is the statement “ALL appendicectomies should be done laparoscopically” necessarily true?**

This issue was then debated as a Society at the 28<sup>th</sup> ASSA BIENNIAL CONGRESS  
in East London on 15<sup>th</sup> March 2013.

For the motion was Dr Masee Naidoo. Opposing the motion was Dr Dick  
Brombacher.

The session was chaired by Dr Stephen Grobler with Prof Tim Rockall on the panel.  
Discovery Medical Schemes were invited to contribute to the session but failed to  
attend.

### Background

There have been numerous complaints by SASES members that Medical Schemes  
were not funding all patients to have the laparoscopic procedure. This leads to non-  
payment of accounts and shortfalls, threatened litigation by patients and great  
unhappiness between the SASES membership, patients and the Medical Schemes.

The decision to operate on appendicitis is commonly taken after hours, when the  
Funder’s authorisation services are not available. The surgeon makes a decision to  
operate based on what he or she perceives to be in the best interest of the patient.  
**The SASES membership feels strongly that the choice between open and  
laparoscopic appendicectomy should be left to the treating surgeon in  
consultation with the patient, and not be constrained by Medical Scheme rules.**

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Medical Schemes, on the other hand, fund laparoscopic appendicitis on criteria of gender and age of patient, and most importantly on the level of insurance the patient is covered by. This information varies significantly between various Medical Schemes and is not usually available to the doctors or patients after hours.

The main issues debated were the cost implications; the experience of the surgeons; the availability of a minimally invasive service at the designated hospital; time to full recovery; diagnostic issues; patient factors such as age, Body Mass Index, previous surgery and the extremely acute abdomen.

### **Cost Implications:**

On review there is a difference in costing, with the open procedure being marginally cheaper. The laparoscopic counter argument is that this cost is offset by a shorter time in hospital and by a prompt diagnosis of other conditions mimicking appendicitis.

Society members were reminded to be cost conscious and realistic about choice of instrumentation and disposables. There is no need for ultrasonic dissectors or stapling devices for laparoscopic appendectomies, outside of exceptional circumstances. SASES is strongly committed to the practice of sustainable laparoscopy and to contain costs whenever possible.

### **Operator Experience:**

An open appendicectomy is commonly the first operation junior doctors are taught and are able to do independently early in their surgical career. Similarly a laparoscopic appendicectomy is frequently the first laparoscopic operation a junior surgeon is exposed to, but some element of laparoscopic expertise is required before this procedure is mastered.

Any qualified surgeon can safely perform open surgery. With the current lack of formal laparoscopic training not every qualifying surgeon is independently competent in laparoscopic surgery. This varies significantly between different training institutions.

SASES is strongly committed to on-going training in minimal access surgical skills. SASES funds fellowships, workshops and actively supports the newly formed Surgical Skills Training Centre at the Red Cross Hospital as well as other Units in the country. We have engaged with the College of Surgeons of South Africa and the Teaching Hospital to encourage surgical education in minimal access techniques.

### **Availability of Laparoscopic Equipment and Skills:**

The vast majority of hospitals have laparoscopic facilities and trained staff during working hours. After hours not all theatre staff are familiar with minimally invasive surgery. In such cases, if the procedure cannot be delayed until the next day, it would be reasonable to perform an open procedure.

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## **Time to Full Recovery:**

In early acute appendicitis, where the muscle sparing Lanz style incision is used, the time to recovery has not been shown to differ from the laparoscopic route.<sup>(1)</sup>

## **Diagnostic Dilemma:**

The diagnosis of acute appendicitis can be elusive. The classic triad of right lower quadrant abdominal pain, fever and leucocytosis may be absent or may be secondary to a wide variety of other conditions. This is particularly pertinent in the female patient during the reproductive period of her life. There is a strong argument that a laparoscopic appendicectomy has significant advantages in this context. Some of the Medical Schemes who do not fund laparoscopic appendicectomy, allow the use of laparoscopy for diagnostic purposes.

## **Patient Factors:**

- **Age:** Age as a singular factor should not determine the approach chosen. To date where costs have been higher for laparoscopic and time to recovery no better, the tendency was to using the open route for children. However in a retrospective cohort study using discharge abstract data of twelve regional hospitals in Southern California the authors concluded that the laparoscopic route was associated with a decreased risk of wound infection, abscess drainage and length of hospitalisation compared with an open appendicectomy.<sup>(2)</sup>

A further study concluded after analysis of the literature that the laparoscopic technique presented several advantages compared with the open technique. The authors felt that if a child is hospitalised today for appendicitis in a centre where the laparoscopic approach is unavailable, he or she should be placed on antibiotics and transferred to a centre that offers the laparoscopic approach.<sup>(3)</sup>

- **Body Mass Index:** A high BMI is not a contra indication to the laparoscopic route, but rather should be an indication for the same. A study analysing data of 116 patients with a mean body mass index of 35 found that the laparoscopic route is associated with shorter lengths of stay, fewer open wounds, equivalent hospital charges, intra-abdominal abscess rates and should be considered the procedure of choice for obese patients with appendicitis.<sup>(4)</sup>
- **Previous Surgery and Adhesions:** In the early days of laparoscopic surgery this was considered a contra-indication to a laparoscopic approach. With experience this is no longer the case but it remains up to the treating surgeon, after a full assessment, to decide what is best.
- **The Acute Abdomen:** This issue was raised as a concern by the membership. The debate was really about the early acute appendix and not the acute abdomen with diffuse peritonitis. In this case the surgeon's discretion and assessment should guide the surgical choice.

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## **Conclusion:** (Cochrane Review)<sup>(5)</sup>

The Cochrane review analysed 67 clinical studies in which surgical technique (conventional open or laparoscopic) for each patient was determined by chance. The majority of studies were done on adults, but there were also 7 studies on children. The main advantages of laparoscopic over conventional appendicectomy were reduced risk of wound infection, reduced postoperative pain, shorter hospital stay (-1 day) and more rapid return to normal activities. Disadvantages of laparoscopic appendicectomy were a longer duration of the operation (+10 minutes) and a higher rate of intra-abdominal abscesses. The results for children were similar to those seen in adults. An additional benefit of the laparoscopic approach is the opportunity of inspecting the inside of the abdomen thoroughly. Laparoscopy therefore reduces the risk of an unnecessary appendectomy and confirms the diagnosis of alternative causes for the presenting symptoms, particularly in women of childbearing age in whom many other conditions may mimic appendicitis.

**In summary, laparoscopic surgery for suspected appendicitis has diagnostic and therapeutic advantages as compared to conventional surgery.** However, conventional appendicectomy should not be considered “wrong” because the difference between the two techniques is rather small and strongly depends on patient characteristics and the treating surgeon’s expertise.

## **SASES POSITION STATEMENT**

SASES supports the performance of laparoscopic appendicectomy and strongly objects to administrative restrictions imposed by Medical Schemes.

The surgical approach in suspected acute appendicitis is a critical decision which **MUST** be at the discretion of the surgeon.

This statement is supported by evidence of clinical benefit and is in keeping with international consensus and best current practice.

All Medical Schemes should fund laparoscopic appendicectomy with the caveat that high cost disposable instruments (Ultrasonic scissors/stapling devices/hand ports/SILS ports) are not necessary and need not be funded, unless specifically motivated.

## **References:**

- (1) Laparoscopic versus open appendicectomy: prospective randomised trial  
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- (3) Open versus laparoscopic appendicectomy in the pediatric population: a literature review and analysis of complications; Esposito C, Calvo AI, Castagnetti M, et al. *J Laparoendosc. Adv Surg Tech.* 2012;22:834-9.
- (4) Laparoscopic appendicectomy is superior to open appendicectomy in obese patients. Corneille MG, Steigelman MB, Myers JG, et al. *Am J Surg.* 2007 Dec;194(6):877-80; discussion 880-1.
- (5) Laparoscopic versus open surgery for suspected appendicitis. S Sauerland, T Jaschinski, E Neugebauer. Editorial Group: Cochrane Colorectal Cancer Group. Published Online: 6 Oct 2010. Assessed as up-to-date: 25 Aug 2010. DOI: 10.102/14651858.CD001546.pub3

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