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7:00 - 7:55 ACC Breakfast Session – 1. Avoidable Patient Harm 2.
Hernias

Abdominal wall hernia caused by accident?

A guide to ACC cover

GP CME North, Rotorua

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Presentation outline



1. Why did we need a guide to hernia cover?
2. How did we develop the guide?
3. When can ACC cover hernias?
4. Case studies - examples

Why did we need a guide to hernia cover?

Criteria for inguinal hernia cover developed in 2001 in response to the study by Smith et al

Smith G, Crosby D, & Lewis P. (1996). Inguinal hernia and a single strenuous event.
Annals of the Royal College of Surgeons of England, 78, 367-368

Why did we need a guide to hernia cover?

- Received wisdom (?common sense) that strenuous lifting causes an inguinal hernia

The evidence is contrary to that view

- Smith et al provided some initial evidence for what claims might be an injury caused by accident. Subsequent clinical and epidemiological studies provided further evidence.

Why did we need a guide to hernia cover?

Problems with the Smith criteria:

- Inconsistent use e.g. applied to non-inguinal hernia
- Explanation at odds with medical evidence e.g.
 - patient is stoic so was able to continue working
- Illogical explanations e.g.
 - no pain means a small tear has grown over time
 - usual activities but this time it caused a rupture

Why did we need a guide to hernia cover?

All abdominal wall hernias not just inguinal

Need for clarity so we could be:

- Fairer on patients: realistic expectations
- Fairer on GPs: greater consistency and transparency
- Fairer on surgeons and DHBs: more appropriate referrals
- Consistent with modern scientific understanding of hernias.

How did we develop the guide?



- Expert Advisory Group included practicing surgeons nominated by NZ Board of RACS and senior ACC medical advisors
- An evidence-based researcher carried out a systematic search of medical databases
- Review of scientific literature published between 2001 and 2016
- Multiple Expert Advisory Group meetings in 2016 to agree what factors should be considered in deciding whether a hernia is caused by an accident
- The guide is based on current scientific knowledge and cumulative clinical experience and expert opinion.

The result - A guide to ACC cover

Primary abdominal wall hernias, including groin hernias A guide to ACC cover



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Purpose

This document provides guidance on when ACC is likely to cover an abdominal wall hernia as an injury caused by an accident¹. The recommendations on cover reflect the consensus view of the Expert Advisory Group representing ACC and the Royal Australasian College of Surgeons.

Key points:

- The prevalence of abdominal wall hernias in the general population is difficult to estimate because a hernia is often asymptomatic.
- The aetiology and pathogenesis of abdominal wall hernias are multifactorial and complex.
- In many instances a bulge protrudes through an existing abdominal wall defect that enlarges with time. Such hernias are not caused by a single strenuous event but simply become apparent or increase in size after an event, such as lifting.
- Ultrasound is not indicated when a hernia is clinically obvious.
- ACC can cover an abdominal wall hernia if it is established that the hernia is a result of an accident (such as direct trauma to the abdominal wall).
- ACC does not cover hernias that are caused wholly or substantially by disease or ageing.

Type of hernia	Consensus statement
Traumatic abdominal wall hernia	• Hernias that are the result of a direct blow to the abdominal wall involving extreme force and a traumatic rupture are rare in clinical practice. Typically, these hernias are associated with handlebar or lap seatbelt injuries, or crushing of the abdomen. • ACC is likely to cover these injuries if contemporaneous hospital or medical records confirm tissue disruption and a fascial defect from the trauma.
Femoral hernia Epigastric hernia Umbilical or para-umbilical hernia Spigelian hernia	• It is unlikely that any of these types of hernia is caused by a single strenuous event. • The available evidence indicates that normally these hernias develop slowly as a result of weakening of tissues in the abdominal wall, or through fascial defects, and then become obvious in some people.

Continued...

¹ Treatment injury – a hernia caused by treatment (ie incisional hernia) is considered separately.

Type of hernia	Consensus statement
Inguinal hernia	An inguinal hernia is the most common type of groin hernia. In considering cover for an inguinal hernia the following factors must be present: • The patient reports that a single strenuous event has caused the hernia. • The event involves the application of an unusual, sudden, unexpected force as opposed to a controlled movement. • The patient suffered significant groin pain at the time of the event, and the pain was substantial enough to cause the patient to cease activity at that time or soon afterwards. In addition, the following factors would be expected: • A medical or nurse practitioner's record of the physical examination includes localised groin tenderness and a demonstrable lump in the groin. • The hernia diagnosis is made within 10 days of the event. If not made within 10 days there must be a reasonable explanation for the delay. • There is no prior or current history of a non-traumatic inguinal hernia on the same side. • If the event occurred in a workplace, an incident has been officially reported. If a patient also has an inguinal hernia on the opposite side, the same criteria apply to that hernia.

Guide development

This guide was developed by the Expert Advisory Group representing ACC and the Royal Australasian College of Surgeons (RACS).

The Expert Advisory Group:

- reviewed scientific literature published between 2001 and 2016
- noted limited research evidence related to hernia causation from a single strenuous event
- considered the existing approach to cover for inguinal hernias
- confirmed that the cover criteria for inguinal hernias are not applicable to other types of abdominal wall hernia
- provided additional advice on the events and pain experienced when an inguinal hernia is caused by a single strenuous event.

A copy of this guide and the summary of research evidence are held on acc.co.nz/hernia-guide

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- Julian Speight, General Surgeon

Approved by the New Zealand National Board,
Royal Australasian College of Surgeons

Hernia causation

For cover the **hernia must be caused by an accident** and not ‘wholly or substantially’ by disease or ageing and not merely bringing to light a pre-existent condition

Objective evidence

- The fundamental mechanism of hernia formation is collagen disease and/or loss of structural integrity at the musculotendinous abdominal layers
- Critical review of recent literature, case control studies and prospective studies
- Increasing incidence with age, male predominance
- No association with work type or physical activities.

Hernia causation

*No evidence that a single or recurrent strenuous event can cause an abdominal wall hernia which would not have occurred anyway**

- Hendry PO, et al. (2008). Work related aspects of inguinal hernia: a literature review. Journal of the Royal Colleges of Surgeons of Edinburgh & Ireland 6(6):361-5.

*A common set of factors that were often evoked as causative in the genesis of a hernia were cough, obesity, constipation, benign prostatic hypertrophy, pregnancy, ascites, and heavy lifting. It is safe to say today... that these factors revealed a hernia but did not cause it.**

* Bendavid, R. (2004). The Unified Theory of hernia formation. Hernia, 8, 171-176.

ACC cover for abdominal wall hernias

ACC cover is likely for:

Traumatic abdominal wall hernia e.g. direct blow from handlebar or lap seatbelt injuries

ACC cover is very unlikely for:

- Femoral
- Epigastric
- Umbilical or para-umbilical
- Spigelian

Cover decided on a case-by-case basis for:

- Inguinal hernia

Cover for inguinal hernia



Inguinal hernia caused by a single strenuous lift means the sudden loss of structural integrity of musculotendinous abdominal layers while lifting a heavy object.

Factors that **must** be present:

- The patient reports that a single strenuous event has caused the hernia
- The event involves the application of an unusual, sudden, unexpected force as opposed to a controlled movement
- The patient suffered a significant groin pain at the time of the event, and the pain was substantial enough to cause the patient to **cease** activity at that time or soon afterwards.

Cover for inguinal hernia

In addition, the following factors **would be expected**:

- A medical or nurse practitioner's records of the physical examination includes localised groin tenderness and a demonstrable lump in the groin.
- The hernia diagnosis is made within 10 days of the event. If not made within 10 days there must be a reasonable explanation for that delay.
- There is no prior or current history of a non-traumatic inguinal hernia on the same side.
- If the event occurred in a workplace, an incident has been officially reported.

Note: 1. Imaging is not necessary. A clinical diagnosis of an inguinal hernia by a doctor or nurse practitioner is sufficient.

2. No distinction between direct or indirect hernias.

Case study 1



45 year old male truck driver

No prior history of hernia

Was climbing into his truck and 'felt a pop' in the groin

This is something I do everyday and I need to twist as I get in the cab

Did not need to stop work and did not take time off

Lump in left groin noted the next day

Saw GP the following week when a 4cm left sided inguinal hernia noted, with mild tenderness

Work report completed the day after GP visit.

- Patient reports a single strenuous event has caused the hernia **Y / N**
- Unusual, sudden, unexpected force (vs controlled movement) **Y / N**
- Groin pain at the time, substantial enough to cease activity **Y / N**

Case study 2



53 year old male road construction worker

Intermittently using (and leaning on) a concrete drill at work over 3 weeks

Thursday afternoon noted a tender lump next to his belly button

Seen at A&M clinic that night, where a tender para-umbilical hernia was identified

Referred for surgical opinion

Surgeon reports hernia appeared after prolonged use of machine, and this hernia appeared through a weakened part of the abdominal wall

ACC medical adviser notes umbilical hernias are common after age 50, and current medical opinion is the events described can reveal the hernia which is emerging, but the activity itself is not the cause of the umbilical hernia.

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Acknowledgements



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