

Appendix B - Additional clinical examination findings

Participant reported pain locations during abdominal resistance tests for n=61 symptomatic sides (average of both examiners).

Resistance tests (n=61)	Pain in the inguinal canal region	Pain in region of other entities			
		Adductor	Iliopsoas	Pubic	Other
Straight sit-up 0°	23%	8%	0%	0%	10%
Cross test - shoulder affected side	21%	3%	0%	0%	8%
Cross test - shoulder contralateral side	38%	18%	7%	0%	10%
Straight sit-up 45°	30%	7%	0%	0%	10%
Oblique sit-up - shoulder affected side	15%	3%	0%	0%	8%
Oblique sit-up - shoulder contralateral side	30%	8%	0%	0%	10%

Average prevalence of participant-reported palpation pain NOT related to their injury in symptomatic and asymptomatic sides (n=88).

Abdominal palpation tests	Pain NOT related to injury
Rectus abdominis insertion	11%
Rectus abdominis muscle/tendon	2%
Pubic tubercle	9%
Inguinal ligament	6%
External ring (medial border)	11%
External ring ^a	16%
Conjoint tendon ^a	16%
Posterior wall (Valsalva) ^a	23%

^aPalpation tests during scrotal invagination

Mean prevalence of positive tests in athletes classified with defined inguinal-related groin pain (examiner A: n=41, examiner B: n=37), and “all” (defined+likely) inguinal-related groin pain (examiner A: n=52, examiner B: n=42).

Abdominal palpation	Mean prevalence of positive tests in defined inguinal-related groin pain	Mean prevalence of positive tests in “all” (defined+likely) inguinal-related groin pain
Pubic tubercle	66%	56%
Inguinal ligament	58%	49%
External ring (medial border)	59%	49%
External ring	55%	46%
Conjoint tendon	54%	45%
Posterior wall (during Valsalva)	79%	66%
Any inguinal palpation pain without invagination ^a	77%	64%
Any inguinal palpation pain DURING invagination ^b	94%	78%
Any inguinal palpation pain (without/during) invagination	100%	83%
Abdominal resistance	Mean prevalence of positive tests in IRGP	Mean prevalence of positive tests in IRGP
Straight sit-up 0°	30%	34%
Cross test - shoulder affected side	27%	28%
Cross test - shoulder contralateral side ^c	49%	48%
Straight sit-up 45°	38%	38%
Oblique sit-up - shoulder affected side	21%	20%
Oblique sit-up - shoulder contralateral side ^c	39%	38%
Pain during any abdominal resistance test	58%	57%

^a If any of the above 3 tests (pubic tubercle, inguinal ligament, external ring (medial border)) were scored positive

^b If any of the above 3 test (external ring, conjoint tendon, posterior wall) were scored positive

^c Pain reported on the contralateral side (e.g. patient reported recognizable injury pain in the *left* inguinal canal region during an oblique sit-up with resistance on the *right* shoulder)