Hip Pointer

Indexing Metadata/Description

› Title/condition: Hip Pointer
› Synonyms: Iliac contusion; iliac bone bruise; contusion, iliac; bruise, iliac bone
› Anatomical location/body part affected: Anterior iliac crest or apophysis and the overlying soft tissue
› Area(s) of specialty: Sports Rehabilitation, Orthopedic Rehabilitation, Pediatric Rehabilitation
› Description: Contusion along upper or lower margin of iliac crest where abdominal and lower extremity musculature attach
› ICD-9 codes
  • 924.01 hip pointer
› ICD-10 codes
  • S70 hip contusion
  • S73.1 hip sprain/strain
  • S76 upper leg muscle/tendon injury

(ICC Codes are provided for the reader’s reference, not for billing purposes)

› G-Codes
  • Mobility G-code set
    – G8978, Mobility: walking & moving around functional limitation, current status, at therapy episode outset and at reporting intervals
    – G8979, Mobility: walking & moving around functional limitation; projected goal status, at therapy episode outset, at reporting intervals, and at discharge or to end reporting
    – G8980, Mobility: walking & moving around functional limitation, discharge status, at discharge from therapy or to end reporting
  • Changing & Maintaining Body Position G-code set
    – G8981, Changing & maintaining body position functional limitation, current status, at therapy episode outset and at reporting intervals
    – G8982, Changing & maintaining body position functional limitation, projected goal status, at therapy episode outset, at reporting intervals, and at discharge or to end reporting
    – G8983, Changing & maintaining body position functional limitation, discharge status, at discharge from therapy or to end reporting
  • Other PT/OT Primary G-code set
    – G8990, Other physical or occupational primary functional limitation, current status, at therapy episode outset and at reporting intervals
    – G8991, Other physical or occupational primary functional limitation, projected goal status, at therapy episode outset, at reporting intervals, and at discharge or to end reporting
    – G8992, Other physical or occupational primary functional limitation, discharge status, at discharge from therapy or to end reporting
  • Other PT/OT Subsequent G-code set
    – G8993, Other physical or occupational subsequent functional limitation, current status, at therapy episode outset and at reporting intervals
Reimbursement: No specific issues or information regarding reimbursement has been identified

Presentation/signs and symptoms: The hip pointer is usually a sports-related injury, seen most often in young male athletes who play tackling/blocking sports such as American football or rugby. Typically, patients present within 2 days of the injury. Signs and symptoms include focal tenderness, abrasion, contusion, hematoma, and guarded/painful movements, as well as antalgic gait in severe cases. Rarely, fracture of iliac crest, or avulsion of the iliac apophysis in adolescents

Causes, Pathogenesis, & Risk Factors

Causes: Direct blow from a collision (e.g., football helmet) or hard surface (e.g., equipment in gymnastics)

Pathogenesis: Contusion to the anterior-superior iliac crest, with swelling, inflammation, and occasional hematoma. Possible tearing (seldom avulsion) of muscle-tendon attachments to iliac crest (e.g., rectus femoris, sartorius, internal oblique)

Risk factors
- Contact sports (football, rugby, ice hockey)
- Sports involving high-velocity objects (e.g., baseball, soccer ball, lacrosse stick) or sports with high-risk falls (gymnastics, ice skating, equestrian, volleyball, skiing/snowboarding)
- Not wearing protective padding increases risk

Overall Contraindications/Precautions

In rare cases with visible deformity of the iliac crest or crepitus suggestive of fracture/avulsion, consult referring physician

Advise patients recovering from avulsion hip pointer to minimize muscle strain and risk of trauma for at least 6 weeks

Consider possible femoral neck/hip fracture if weight-bearing is not tolerable

See specific Contraindications/precautions to examination and Contraindications/precautions under Assessment/Plan of Care

Examination

Contraindications/precautions to examination
- Consider possible femoral neck/hip fracture if weight-bearing is not tolerable
• When palpating, the entire anterolateral hip might be extremely tender, thus requiring special handling as to not elicit excessive pain

› History

• History of present illness/injury
  – **Mechanism of injury or etiology of illness**: What type of trauma was involved? Was a “pop” or “snap” experienced? Was weight-bearing painful immediately after the injury? Date and location of injury? What treatments have helped? Is the pain subsiding?
  – **Course of treatment**
    - **Medical management**: Ask about patient’s past and current medical management. How has the pain responded to treatments? If sports-related, was the patient examined/treated in athletic training room?
    - **Medications for current illness/injury**: Analgesics might be prescribed for pain
    - **Diagnostic tests completed**: The primary goal of the physical examination is to identify the soft tissues involved in the contusion and the extent to which they limit function. Plain radiographs to rule out pelvic and avulsion fractures or epiphyseal separation in adolescents. CT scan for internal injuries or bone scan if condition does not improve
    - **Home remedies/alternative therapies**: Document any use of home remedies (e.g., ice or heating pack) or alternative therapies (e.g., acupuncture) and whether or not they help
    - **Previous therapy**: Document whether patient has had occupational or physical therapy for this or other conditions and what specific treatments were helpful or not helpful
  – **Aggravating/easing factors** (and length of time each item is performed before the symptoms come on or are eased)
  – **Body chart**: Use body chart to document location and nature of symptoms
  – **Nature of symptoms**: Document nature of symptoms (constant vs. intermittent, sharp, dull, aching, burning, numbness, tingling)
  – **Rating of symptoms**: Use a visual analog scale (VAS) or 0–10 scale to assess symptoms at their best, at their worst, and at the moment (specifically address if pain is present now and how much)
  – **Pattern of symptoms**: Document changes in symptoms throughout the day and night, if any (A.M., mid-day, P.M., night); also document changes in symptoms due to weather or other external variables
  – **Sleep disturbance**: Document number of wakings/night, if applicable
  – **Other symptoms**: Document other symptoms patient might be experiencing that could exacerbate the condition and/or symptoms that could be indicative of a need to refer to physician (dizziness, bowel/bladder/sexual dysfunction, saddle anesthesia)
  – **Barriers to learning**
    - Are there any barriers to learning? Yes __ No __
    - If Yes, describe __________________________

• Medical history
  – **Past medical history**
    - **Previous history of same/similar diagnosis**: Any prior low back, hip, or pelvis problems?
    - **Comorbid diagnoses**: Ask patient about other problems, including diabetes, cancer, heart disease, complications of pregnancy, psychiatric disorders, orthopedic disorders, etc.
    - **Medications previously prescribed**: Obtain a comprehensive list of medications prescribed and/or being taken (including over-the-counter drugs)
    - **Other symptoms**: Ask patient about other symptoms he/she might be experiencing

• Social/occupational history
  – **Patient’s goals**: Document what the patient hopes to accomplish with therapy and in general
  – **Vocation/avocation and associated repetitive behaviors, if any**: Does the patient participate in recreational or competitive sports?
  – **Functional limitations/assistance with ADLs/adaptive equipment**: Any disability in daily activities?
  – **Living environment**: Stairs, number of floors in home, with whom patient lives, caregivers, etc. Identify if there are barriers to independence in the home and if any modifications are necessary

› Relevant tests and measures: (While tests and measures are listed in alphabetical order, sequencing should be appropriate to patient medical condition, functional status, and setting)

• **Assistive and adaptive devices**: Evaluate for proper use and fit of ambulatory assistive device, if applicable

• **Balance**: Assess balance and symptom response of affected lower extremity in single-leg stance in comparison to the unaffected leg
• **Circulation:** Assess pedal pulses, especially in cases with hematoma

• **Gait/locomotion:** Assess gait pattern and need for protected ambulation; might be antalgic in severe cases, thus requiring crutches

• **Joint integrity and mobility:** Assess passive accessory movements of the hip joint when pain and irritability are low

• **Muscle strength:** Assess strength of all hip musculature, especially for hip flexion and abduction. Assess strength in trunk flexion, lateral flexion, and rotation with manual resistance applied to torso in sitting position, if appropriate

• **Observation/inspection/palpation (including skin assessment):** Evaluate general movements for muscle guarding or compensation for hip/thigh pain. Palpate for edema and tenderness at the iliac crest, anterior superior iliac spine (ASIS), upper thigh, and area around gluteus medius/tensor fascia lata

• **Posture:** Are trunk and lower-extremity alignment normal? Is there asymmetry because of weight shifting and guarding/splinting?

• **Range of motion:** Assess active ROM of trunk (rotation and lateral flexion might be painful) and at involved hip joint (abduction might be painful). Note whether passive stretching of trunk rotators and hip abductors increases pain

• **Sensory testing:** The femoral nerve or lateral cutaneous nerve might be affected  
  – Lateral cutaneous nerve
  - Sensory: lateral thigh
  – Femoral nerve: L2, 3, 4
  - Sensory: anteromedial thigh and leg
  - Motor: knee extension, hip flexion

**Assessment/Plan of Care**

› **Contraindications/precautions**  
  • Beware of femoral or lateral cutaneous nerve palsy secondary to hematoma compression or scar formation in severe cases, or prolonged application of cryotherapy\(^1\)
  
  • Will want to prevent the development of a hematoma, which could lead to myositis ossificans\(^4\)

› **Diagnosis/need for treatment:** Painful hip contusion that restricts mobility and functional capacity

› **Rule out**  
  • Muscle strain
  • Pelvic/hip fracture\(^4\)
  • Femoral neck fracture
  • Osteitis pubis\(^4\)
  • Epiphyseal separation/avulsion
  • Iliotibial band syndrome
  • Snapping hip syndrome\(^4\)
  • Compartment syndrome\(^4\)
  • Sacroiliac joint injury\(^4\)
  • Hip tendonitis/bursitis\(^4\)

› **Prognosis:** Very good to excellent. Most patients function with only mild limitations after 1 week and gradually return to competitive play within 1–3 weeks\(^4,5\) However, return to sport might be delayed for up to 8 weeks in severe cases\(^1\)

› **Referral to other disciplines:** Aspiration of hematoma and injection of local anesthetic might provide some pain relief. No evidence to support corticosteroid injection in hip pointer\(^4\)

› **Treatment summary:** Treatment consists of pain and edema management in the acute stage followed by progressive exercises and sport-specific activities

<table>
<thead>
<tr>
<th>Problem</th>
<th>Goal</th>
<th>Intervention</th>
<th>Expected Progression</th>
<th>Home Program</th>
</tr>
</thead>
</table>

(1) Relevant references
<table>
<thead>
<tr>
<th>Tenderness, swelling, ecchymosis/hematoma</th>
<th>Resolve tenderness and palpable edema/hematoma</th>
<th><strong>Physical agents and mechanical modalities</strong></th>
<th>Protective padding for injured area of iliac crest when returning to sport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>RICE (rest, ice, compression, elevation) for pain and swelling</td>
<td>Instruct patient in ice massage to injured area to reduce pain, swelling, and hematoma, 15 minutes, 3 or 4 times per day, especially during acute stage</td>
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<td>There is no evidence to support the use of low-intensity ultrasound or other low- or high-voltage currents, neuromuscular stimulation, or modalities in general for hip pointers. However, interferential current with ice pack is commonly used for acute pain and swelling</td>
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<td><strong>Manual therapy</strong></td>
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<td>Gentle massage/mobilization of involved soft tissues in acute stage</td>
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<td>Painful weight-bearing with antalgic gait</td>
<td>Normal gait pattern without assistive device</td>
<td><strong>Prescription, application of devices and equipment</strong></td>
<td>Prescription, application of devices and equipment</td>
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<td></td>
<td>Symmetry in standing posture and weight-bearing activities</td>
<td>Crutches for protective ambulation, as indicated</td>
<td>Gait training without device, as indicated</td>
</tr>
<tr>
<td>Pain-restricted strength and ROM of trunk and affected hip</td>
<td>Bilateral symmetry in strength</td>
<td><strong>Therapeutic exercises</strong></td>
<td><strong>Therapeutic exercises</strong></td>
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<td>Flexibility (pain-free full AROM) and single-leg balance</td>
<td>Although healing time is highly variable depending on the severity of injury, gentle active ROM and stretching exercises should be implemented as soon as tolerated to relax tightened muscles and to prevent muscle and tendon shortening from scar tissue formation⁶</td>
<td>After recovery of full and painless ROM, progress to lower-extremity resistance training and core stability exercises</td>
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<tr>
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<td>Symmetry in trunk (core) stability and flexibility</td>
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<tr>
<td></td>
<td>Appropriate functional strength and power for return to sport</td>
<td></td>
<td>Continue prescribed exercises at home</td>
</tr>
</tbody>
</table>
Limitations in sports-specific fitness | Return to sport | **Therapeutic exercises** | **Therapeutic exercises** | Encourage gradual return to sport when able
---|---|---|---|---
| | | Cross-training (aquatic exercise or hand cranking) until weight-bearing status and ambulation normalize | Progress to sports-specific training once lower-extremity strength normalizes |

### Desired Outcomes/Outcome Measures
- Resolution of tenderness and palpable edema/hematoma
  - Skin palpation
- Normal gait pattern without assistive device
  - Gait assessment
- Symmetry in standing posture and weight-bearing activities
  - Posture assessment
- Bilateral symmetry in strength
  - Manual muscle testing
  - Isokinetic testing
- Flexibility (pain-free full AROM) and single-leg balance
  - Goniometry
  - Muscle length assessment
- Appropriate functional strength and power for return to sport
  - LEFS
  - FIM
  - FMS
  - Sport Specific Testing

### Maintenance or Prevention
- Protective hip padding is highly advised for patients returning to sport

### Patient Education
- Hip Pointer. University of Pittsburgh Medical Center website.

### Note
- Recent review of the literature has found no updated research evidence on this topic since previous publication on September 16, 2016

### Coding Matrix

- **M** Published meta-analysis
- **SR** Published systematic or integrative literature review
- **RCT** Published research (randomized controlled trial)
- **R** Published research (not randomized controlled trial)
- **C** Case histories, case studies
- **G** Published guidelines
- **RV** Published review of the literature
- **RU** Published research utilization report
- **QI** Published quality improvement report
- **L** Legislation
- **PGR** Published government report
- **PFR** Published funded report
- **PP** Policies, procedures, protocols
- **X** Practice exemplars, stories, opinions
- **GI** General or background information/texts/reports
- **U** Unpublished research, reviews, poster presentations or other such materials
- **CP** Conference proceedings, abstracts, presentation

### References
