Erectile Dysfunction (Impotence) in the Cyclist

See also Male Sexual Dysfunction

Background
1. General info
   o Overuse injuries occur in cyclists who regularly ride, especially those involved in competition
   o Ensuring that bike fit is correct is major factor in preventing overuse syndromes

2. Definition:
   o Repeated inability to get or keep an erection firm enough for sexual intercourse

Pathophysiology
1. Pathology of dz
   o Research suggests that perineal compression w/secondary decr in penile blood flow is contributing cause of ED in cyclists
   o Due to compression of dorsal branch of pudendal nerve and cavernous nerve between pubic symphysis and bicycle seat

2. Incidence/ prevalence
   o Approx 25% of men >65 yo suffer from ED
   o Incidence of ED in cyclists 4% compared w/1.1% in runners and 2% in swimmers
   o Studies report incidence of ED among cyclists between 4-24%

3. Risk factors
   o Bicycle riding more than 3 hrs/wk is considered by some authors as an independent risk factor for moderate to severe ED
   o Decr risk of ED by:
     ▪ Riding road bicycle instead of mountain bicycle
     ▪ Handlebar ht lower than saddle ht
     ▪ Using a saddle w/o a cutout if perineal numbness was experienced w/use of a cutout saddle
   o Saddles w/narrow protruding nose may incr pressure on perineum and incr risk of ED

4. Morbidity
   o Long-term ED 2° to cycling is unclear
     ▪ Some studies suggest relationship between acute high mileage events and ED
     ▪ Other studies of ED among cyclists indicate either
       • No significant difference compared w/general population, OR
       • Diminished risk compared w/general population

Diagnostics
1. History
   o Cyclist c/o inability to achieve any erection or satisfactory degree of erection
     ▪ May be acute after extended bike ride or gradually progressive
   o May have symptoms of paresthesia or hyperesthesia in distribution of pudendal or cavernous nerve
   o Check drug/ medication hx
- Be aware of illicit or "performance enhancing" drugs that can cause hypogonadism or ED
  - Elicit recent training hx
    - Volume, mileage
    - Over training associated w/decr libido and ED

2. Physical exam
   - Genital exam typically normal
     - Assess testicular size
     - Penile abnormalities
   - Perform neurologic exam, attn to:
     - Back pain
     - Radiating pain
     - Discomfort along nerve root or dermatomal distribution
   - Evaluate for
     - Thyroid disorder
     - Hyperglycemia
     - Gynecomastia
       - Endogenous and exogenous causes: adrenal disorder, steroids, alcohol
   - Perform vascular exam to assess risk of vascular abnormality or atherosclerosis

3. Diagnostic testing
   - Consider laboratory work-up if
     - Gradual onset of symptoms
     - Symptoms do not improve w/decr cycling
     - Symptoms not explained by acute incr in cycling
   - Include
     - CBC
     - UA
     - Blood glucose
     - Renal, hepatic panel, thyroid fxn
     - Lipid panel
     - Serum testosterone
     - Prolactin
   - Treat as indicated
   - Further testing
     - Nocturnal penile tumescence testing
     - Duplex ultrasound of cavernous arteries
     - Pelvic arteriography
     - Cavernosometry and cavernosography
   - Dx criteria
     - See: Male Sexual Dysfunction

Differential Diagnosis
1. See Male Sexual Dysfunction

Therapeutics
1. For general tx see Male Sexual Dysfunction
2. Additional recommendations for cyclists
○ Freq position changes
○ Stand during prolonged riding
○ Tilt nose of saddle downward
○ Change ht of saddle and/or handlebars
○ More prone position
  ▪ Incr flexion at spine, pelvis, hips
  ▪ May lower pressure on pudendal artery

3. Acute tx
○ No clear evidence to support any particular mgmt strategy
○ A "safe" general recommendation
  ▪ Avoid saddle pressure on perineum until symptoms have completely resolved

Follow-Up
1. Return to office
   ○ If acute symptoms do not resolve w/rest
2. Refer to specialist
   ○ If symptoms persist

Prognosis
1. May return to cycling after all symptoms resolve

References

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