Epididymit

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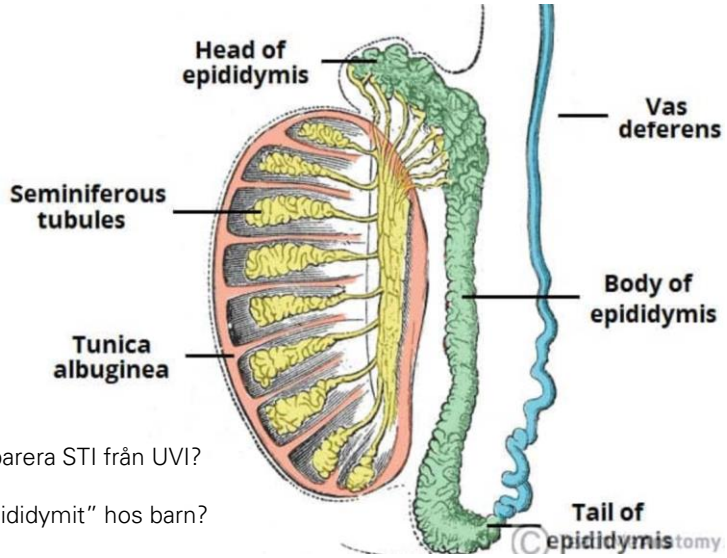
2023-09-12



Fyra frågor
- Varifrån kommer 35-årsgränsen för att separera STI från UVI?
- I vilka lägen behövs lång behandling?
- Vad ligger bakom slaskdiagnosen ”viral epididymit” hos barn?
- Covid 19 och epididymit, hänger det ihop?

1

Epidemiologi

- 250 till 650 fall per 100 000 män/år
  inkl. nya och recidiverande fall

*EAU Guidelines. Edn. presented at the EAU Annual Congress Milan, Italy 2023. ISBN 978-94-92671-19-6
*Çek, M., et al. Acute and Chronic Epididymitis in EAU-EBU Update Series. Eur Urol Suppl 2017. 16: 124.

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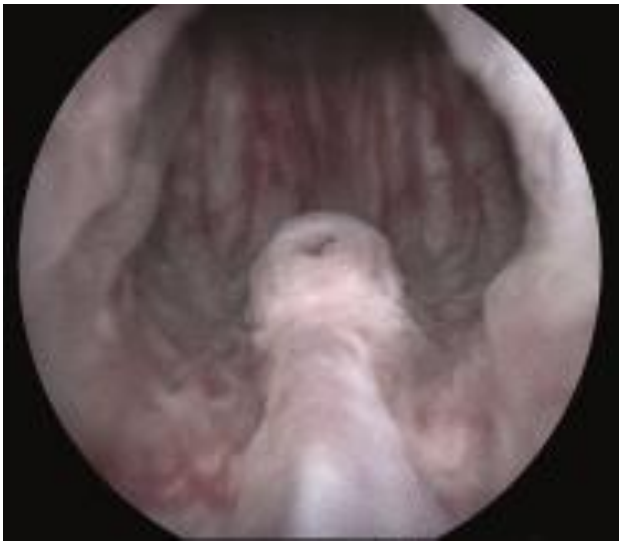
Etiologi

- Bakterier som vandrar ner genom sädesledaren
- Virus
- Svamp
- TB
- (Immunreaktion)
- (Hematogen spridning)



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Etiologi

Bakterier som vandrar ner genom sädesledaren

- STI – klamydia, gonorré, mycoplasma
- Tarmbakterier – E. coli, andra Enterobacteriaceae
- Hudbakterier – Staf Aureus, KNS m.fl.

Riskfaktorer

- Uretrastriktur/valvel
- KAD eller instrumentering i urinvägar, mikrovågsbehandling av prostataförstoring
- UVI / STI / oskyddad sex / analsex

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Etiologi

Komplikation av parotit (mycket ovanligt)

- 20% av prepubertala pojkar med påssjuka
- 30% av postpubertala män med påssjuka
- Orkit 5 – 10 d efter parotit-insjuknandet
- Insjuknande möjligt trots vaccinering
- Symtomatisk behandling
- Spontan läkning efter 1-2 veckor

Bild Copyright: https://onkosimfer.ru/blog/hronicheskij-parotit-u-vzroslyh-simptomy-prichiny,

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Etiologi

Tuberkulös epididymit/orkit

- Urogenital TB ca 40% av alla extrapulmonala TB-fall
- HIV, malnutrition, diabetes predisponerar
- Ca 70% insjuknar med akut skrotum
- Skrotal fistulering förekommer
- Kan vara sekundärt till prostata-TB
- 40% av fallen har ett kronisk förlopp

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Etiologi

Fråga 1

Varifrån kommer 35-årsgränsen för att separera STI från UVI?

THE LANCET

Volume 309, Issue 8016, 16 April 1977, Pages 819-821

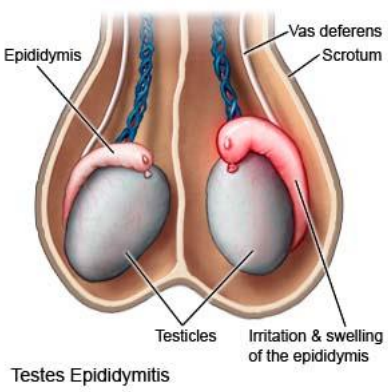
ÆTIOLOGY OF ACUTE EPIDIDYMITIS

JamesP. Harnisch [a b], E.Russell Alexander [a b], RichardE. Berger [a b], George Monda [a b], KingK. Holmes [a b]

Abstract

24 patients with acute epididymitis were examined and underwent urethral and urine cultures for *Neisseria gonorrhoece, Ureaplasma urealyticum,* herpes-simplex virus, *Chlamydia trachomatis,* cytomegalovirus, and gram-negative aerobic bacteria. The results suggest that in young men the sexually transmitted organisms which cause urethritis (*N. gonorrhœæ, C. trachomatis,* and possibly *U. urealyticum)* may also lead to acute epididymitis, whereas in older men coliforms and *Pseudomonas* are the predominant causes of epididymitis.

Symtom och tecken



Testes Epididymitis

- Oftast unilateralt
- Smygande debut
- Svullnad
- Tydlig palpömhet
- Rodnad (inte alltid)
- Dysuri (ibland)
- Feber/frossa (ibland)

Differentialdiagnoser

Testistorsion

Torsion av Morgagnis hydatid

Testiscancer

Spermatocele

Hydrocele

(Trauma hos barn)

Utredning

Labprover (blodstatus, CRP)

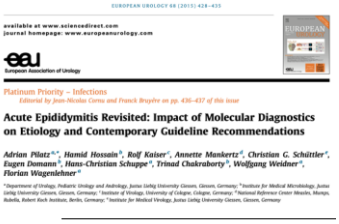
Urinsticka, urin- och blododling (40-90% negativa)

STI-prover vid behov

Bladderscan: åtgärdkrävande resurin?

Klinisk diagnos: ultraljud skrotum endast vid klinisk osäker diagnos / komplicerat förlopp

Patogener



EUROPEAN UROLOGY 68 (2015) 428–435

available at www.sciencedirect.com
journal homepage: www.europeanurology.com

eau European Association of Urology

Platinum Priority – Infections
Editorial by Jean-Nicolas Cornu and Franck Bruyère on pp. 436–437 of this issue

Acute Epididymitis Revisited: Impact of Molecular Diagnostics on Etiology and Contemporary Guideline Recommendations

Adrian Pilatz[a,], Hamid Hossain[b], Rolf Kaiser[c], Annette Mankertz[d], Christian G. Schüttler[e], Eugen Domann[b], Hans-Christian Schuppe[a], Trinad Chakraborty[b], Wolfgang Weidner[a], Florian Wagenlehner[a]*

[a]Department of Urology, Pediatric Urology and Andrology, Justus Liebig University Giessen, Giessen, Germany; [b]Institute for Medical Microbiology, Justus Liebig University Giessen, Giessen, Germany; [c]Institute of Virology, University of Cologne, Cologne, Germany; [d]National Reference Center Measles, Mumps, Rubella, Robert Koch Institute, Berlin, Germany; [e]Institute for Medical Virology, Justus Liebig University Giessen, Giessen, Germany

Table 2 – Pathogen spectrum

	Naive	Pretreated
Bacterial culture in all patients	*n* = 150	*n* = 87
Escherichia coli, *n*	79	11
Enterococcus spp, *n*	6	4
Pseudomonas spp, *n*	6	4
Klebsiella spp, *n*	4	1
Staphylococcus aureus, *n*	2	1
Citrobacter spp, *n*	2	0
Serratia marcescens, *n*	2	0
Proteus spp, *n*	1	1
Morganella spp, *n*	1	0
Staphylococcus epidermidis, *n*	0	2
Patients with positive culture, *n*	96	21[†]
STI-PCR in all sexually active patients	*n* = 89	*n* = 48
Chlamydia trachomatis, *n*	20	5
Mycoplasma spp, *n*	7	1
Neisseria gonorrhoeae, *n*	2	4
Sexually active patients with positive STI, *n*	28	9[‡]
Patients with negative culture and negative STI-PCR, *n*	29	57
16S rDNA analysis in culture- and STI-negative patients	*n* = 29	*n* = 57
Escherichia coli, *n*	0	8
Proteus spp, *n*	0	2
Staphylococcus epidermidis, *n*	0	1
Aerococcus spp, *n*	0	1
Propionibacterium spp, *n*	0	1
Haemophilus spp, *n*	5	1
Lactobacillus spp, *n*	2	0
Bacteroides spp, *n*	1	0
Eubacterium spp, *n*	1	0
Patients with positive 16S rDNA analysis, *n*	9	14[‡]
Viral analysis in patients without bacterial pathogen	*n* = 20	*n* = 43
Enterovirus, *n*	2	0

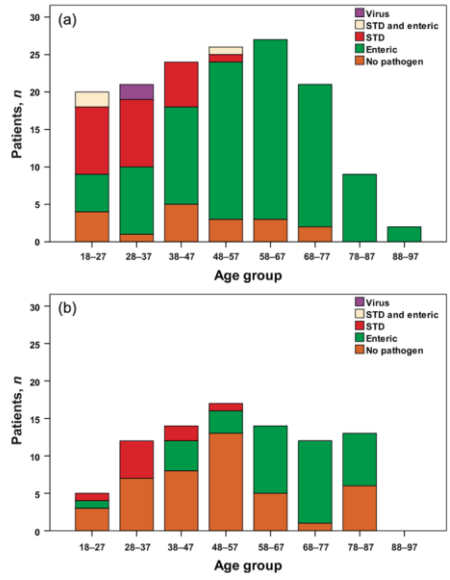
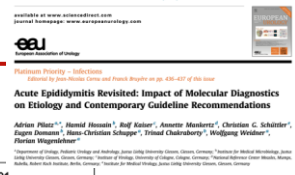


Fig. 1 – Pathogen distribution according to patient age (a) in 150 antibiotic-naive patients and (b) in 87 pretreated patients. STD = sexually transmitted disease.

Antibiotikakänslighet



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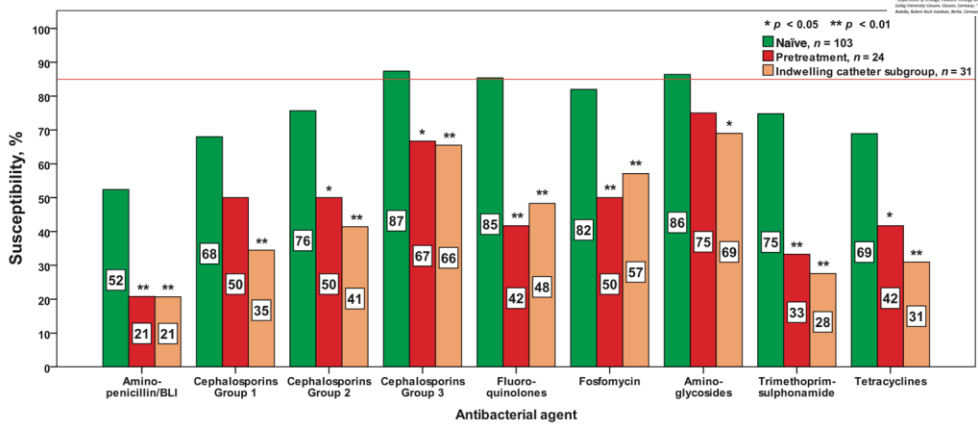

Fig. 2 – Susceptibility (percentage) of bacterial pathogens to different antibacterial agents. Green bars indicate results of 96 patients with 103 pathogens. Red bars show susceptibility of 24 pathogens isolated from 21 patients with antimicrobial pretreatment. Orange bars display results of 24 patients with indwelling urinary catheters harboring 31 pathogens. Red line indicates 85% susceptibility only for cephalosporins group 3, fluoroquinolones, and aminoglycosides in naive patients. The susceptibility is significantly lower in strains isolated from pretreated patients and from those with indwelling urinary catheters compared with naive patients ($p < 0.05$ or $p < 0.01$; Fisher exact test).

Empirisk behandling före odlingssvar

Enligt EAU Guidelines

- Om både STI och UVI kan misstänkas: Kinolon p.o. 10-14 dagar
- Om STI (förutom Gonorré) misstänks i första hand: Doxycyklin p.o. 200 m/dygn i 10-14 dagar
- Om UVI misstänks i första hand: Kinolon p.o. 10-14 dagar

Enligt Internetmedicin

- NSAID-preparat (t ex diklofenak 50 mg x 3 i 14 dagar). Ofta lindrar nätbyxa och högläge smärtan.
- Vid avsaknad av abscess är förstahandsvalet kinolonpreparat: ciprofloxacin 500 mg x 2 p.o. i 14-21 dagar. Andrahandsvalet är trimetoprim/sulfametoxazol 160 mg + 800 mg x 2 p.o. i 14-21 dagar.
- Vid stark misstanke om, eller odlingsverifierad, Chlamydia-infektion kan doxycyklin (Doxyferm) 200 mg x 1 p.o. i 14-21 dagar vara ett alternativ liksom erytromycin (Ery-Max, Abboticin) eller annan makrolid.

*EAU Guidelines. Edn. presented at the EAU Annual Congress Milan, Italy 2023. ISBN 978-94-92671-19-6
*https://www.internetmedicin.se/behandlingsoversikter/urologi/akut-skrotum/

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Behandlingsstudier

Ciprofloxacin 500 mg x 2 x 10 dagar

vs Pivampicillin 700 mg x 2 x 10 dagar

BJU International (1999), **84**, 827–834

A double-blind, randomized, controlled multicentre study to compare the efficacy of ciprofloxacin with pivampicillin as oral therapy for epididymitis in men over 40 years of age

J.H. EICKHOFF, N. FRIMODT-MØLLER*, S. WALTER† and C. FRIMODT-MØLLER‡,
on behalf of the DANISH EPIDIDYMITIS STUDY GROUP (see Appendix 1)
*Glostrup Hospital, *Statens Seruminstitut, †Odense University Hospital and ‡Gentofte Hospital, Denmark*

Table 2 The causes of treatment failure and recorded in 158 patients treated for epididymitis and adverse events recorded in 172 patients entering the trial, with trial treatment

Number (%)	*Ciprofloxacin*	*Pivampicillin*	P*
Outcome			
No. of patients failing	15 (19.7)	33 (40.2)	0.006
Causes†			
In vitro resistance	3 (3.9)	3 (3.7)	0.62
Abscess	2 (2.6)	0 (0)	0.23
Recurrence	1 (1.3)	4 (4.9)	0.37
Adverse event	2 (2.6)	12 (14.6)	0.01
Insufficient clinical response requiring changed antibiotic	6 (7.9)	21 (25.6)	0.003
Significant or residual symptoms	8 (10,5)	10 (12,2)	0.81

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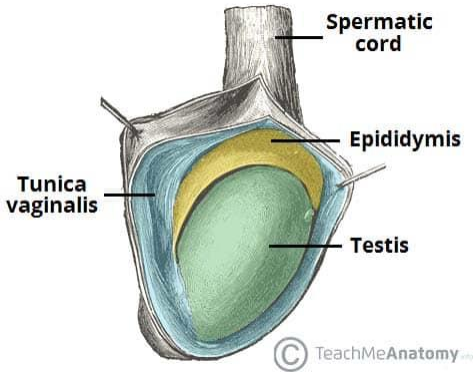
Behandling av symtom

- NSAID
- Högläge (handduk under skrotum)
- Eventuellt funikelblockad vid akut smärta under inneligg



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Behandling

Fråga 2

I vilka lägen behövs lång behandling?

- PSA sjunker i snitt 50% vid kontroll efter 3 mån – betyder det att klassisk akut prostatit förelegat? Nej!
- Epididymit recidiverar i ca 20% av fallen, klinisk kontroll för att avgöra behandlingslängd rekommenderas enligt EAU guidelines.
- Vid icke tömd abscess behövs sannolikt längre behandling än 14 dagar.
- Svullnad finns ofta kvar flera veckor efter avslutad behandling – inflammatorisk reaktion som sakta går i regress.

*EAU Guidelines. Edn. presented at the EAU Annual Congress Milan, Italy 2023. ISBN 978-94-92671-19-6
*Pilatz et al EUROPEAN UROLOGY 68 (2015) 428–435

Behandling av abscess

- Konservativ behandling oftast tillräcklig
- Dränering är rutin vid fluktuerande större abscesser

Bild med tack till Sven Resare, urolog NUS

*EAU Guidelines. Edn. presented at the EAU Annual Congress Milan, Italy 2023. ISBN 978-94-92671-19-6

17

Behandling av abscess

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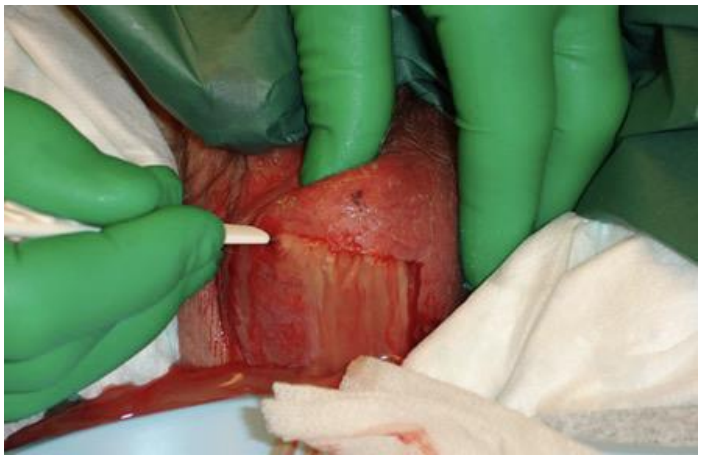

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Behandling av abscess

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Information

Informera om naturalförlopp

- Vanligt med kvarstående svullnad – 16% efter 3 mån*
- Vanligt med kvarstående ömhet
- Nedsatt fertilitet är en komplikation för män i fertil ålder – förebyggande åtgärder saknas

BJU International (1999), 84, 827–834

A double-blind, randomized, controlled multicentre study to compare the efficacy of ciprofloxacin with pivampicillin as oral therapy for epididymitis in men over 40 years of age

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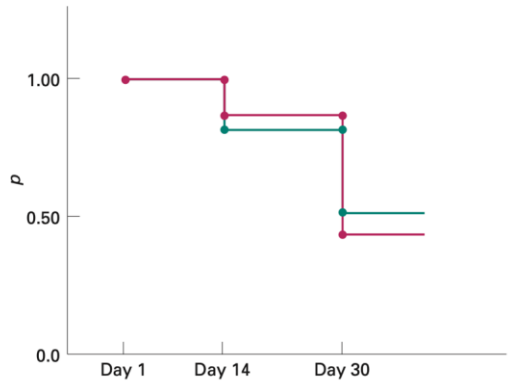


Fig. 3. The cumulative probability of complete freedom from symptoms in 110 patients treated successfully for epididymitis with no failure of treatment and no withdrawal according to treatment. (ciprofloxacin, green; pivampicillin, red; $P = 0.74$, Gehans test).

*Pilatz et al EUROPEAN UROLOGY 68 (2015) 428–435

Uppföljning

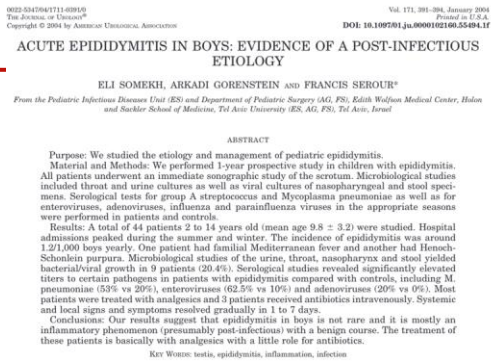
- Klinisk avstämning under antibiotikakuren – förlängd kur kan övervägas vid behandlingssvikt med kvarstående feber eller oförändrad svullnad och status.
- STI smittspårning och behandlingskontroll enligt lokal riktlinje
- Om inte testikeln kan palperas vid diagnos och om behandlingsresponsen är dålig kan senare ultraljud övervägas på misstanke om testikelcancer

Oklar akut skrotum hos barn

Fråga 3

Vad ligger bakom slaskdiagnosen ”viral epididymit” hos barn?

- Prospektiv studie av 44 barn 2-14 år vs kontrollgrupp med 40 barn utan epididymit
- Serologi visade signifikant förhöjda titrar av enterovirus, adenovirus och M. Pneumoniae i fallgruppen jämfört med kontrollgruppen
- Slutsats: epididymit förekommer som post-infektiöst inflammatorisk fenomen i åldersgruppen



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ACUTE EPIDIDYMITIS IN BOYS: EVIDENCE OF A POST-INFECTIOUS ETIOLOGY

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From the Pediatric Infectious Diseases Unit (ES) and Department of Pediatric Surgery (AG, FS), Edith Wolfson Medical Center, Holon and Sackler School of Medicine, Tel Aviv University (ES, AG, FS), Tel Aviv, Israel

ABSTRACT

Purpose: We studied the etiology and management of pediatric epididymitis.

Material and Methods: We performed 1-year prospective study in children with epididymitis. All patients underwent an immediate sonographic study of the scrotum. Microbiological studies included throat and urine cultures as well as viral cultures of nasopharyngeal and stool specimens. Serological tests for group A streptococcus and Mycoplasma pneumoniae as well as for enteroviruses, adenoviruses, influenza and parainfluenza viruses in the appropriate seasons were performed in patients and controls.

Results: A total of 44 patients 2 to 14 years old (mean age 9.8 ± 3.2) were studied. Hospital admissions peaked during the summer and winter. The incidence of epididymitis was around 1.2/1,000 boys yearly. One patient had familial Mediterranean fever and another had Henoch-Schonlein purpura. Microbiological studies of the urine, throat, nasopharynx and stool yielded bacterial/viral growth in 9 patients (20.4%). Serological studies revealed significantly elevated titers to certain pathogens in patients with epididymitis compared with controls, including M. pneumoniae (53% vs 20%), enteroviruses (62.5% vs 10%) and adenoviruses (20% vs 0%). Most patients were treated with analgesics and 3 patients received antibiotics intravenously. Systemic and local signs and symptoms resolved gradually in 1 to 7 days.

Conclusions: Our results suggest that epididymitis in boys is not rare and it is mostly an inflammatory phenomenon (presumably post-infectious) with a benign course. The treatment of these patients is basically with analgesics with a little role for antibiotics.

KEY WORDS: testis, epididymitis, inflammation, infection

Covid 19 och epididymit

frontiers in Endocrinology

SYSTEMATIC REVIEW
published: 27 May 2021
doi: 10.3389/fendo.2021.677701

Effect of COVID-19 on Male Reproductive System – A Systematic Review

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Fråga 4

Covid 19 och epididymit, hänger det ihop?

- Många fallbeskrivningar och ultraljudsscreening av inneliggande män på PubMed
- Virus återfinns ibland i epididymis men tycks inte finnas i sperma

Covid 19 och epididymit

Drygt 10 000 000 män över 12 år

- 663 000 med vaccin
- 663 000 utan vaccin
- Vaccin skyddade mot orchit/epididymit (OR = 0.568; 95% CI: 0.497–0.649; p < 0.0001).

Received: 19 September 2021 | Accepted: 7 October 2021
DOI: 10.1111/and.14281

SHORT COMMUNICATION

ANDROLOGIA WILEY

COVID-19 vaccination is associated with a decreased risk of orchitis and/or epididymitis in men

Chase Carto | Sirpi Nackeeran | Ranjith Ramasamy

Department of Urology, Miller School of Medicine, University of Miami, Miami, FL, USA

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Abstract

Vaccine hesitancy is a major public health obstacle to fighting the ongoing COVID-19 epidemic. Due to studies that show COVID-19 infection can affect sperm parameters and lead to orchitis, the public are concerned about the effect of the COVID vaccines on male reproduction. In this study, we investigated the association between COVID-19 vaccination and risk of developing orchitis and/or epididymitis outcomes in a cohort of men using a large, US-based, electronic health record database. After balancing for confounding variables, we found that receiving at least 1 COVID-19 vaccine is associated with a decreased risk of developing orchitis and/or epididymitis.

KEYWORDS
COVID-19, COVID-19 vaccine, epididymitis, male fertility, orchitis

Tack!

Epididymit

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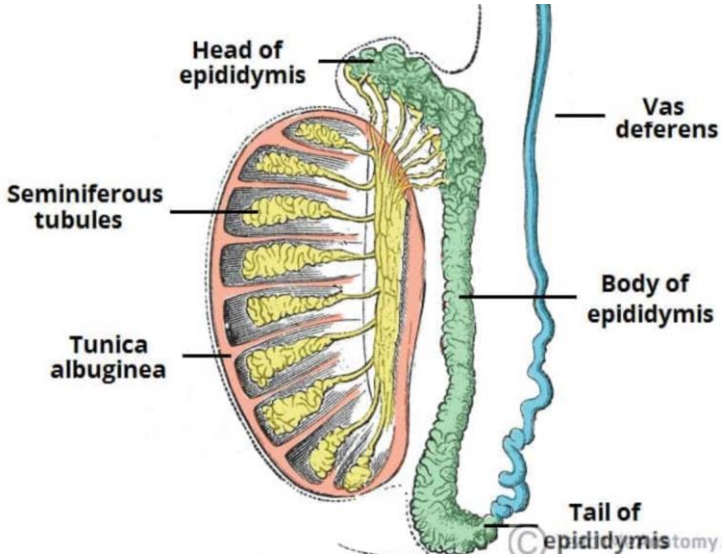
2023-09-12



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